The Internal Migration of Foreigners in Developed Countries: A Cross-National Comparative Study with Census Data[1]

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Abstract

The purpose of this paper is to describe different socio-demographic characteristics and explicative factors of the internal migration of the foreign population in various developed countries (Canada, France, Greece, The Netherlands, Portugal, Italy, Spain, United Kingdom and United States of America).

We intend to answer the following research questions: Are the demographic patterns of internal migration of foreigners similar to those of natives by age and sex? Do these migration patterns differ by origin? Are the observed demographic patterns by specific national groups always the same or do they differ according to the country of destination? How does the migration intensity of the foreigners or/and groups of foreigners vary in the different migration systems of the Western countries? And lastly, what are the effects of the individual characteristics on the internal migration of foreigners as we compare by country of residence?

The analysis is based on data from the IPUMS microdata files which provide information on individuals changing place of residence by basic demographic characteristics (citizenship, age, sex, country of birth, origin and destination of internal migration, duration of residence and level of education) and other similar sources. Following a descriptive analysis of migration patterns of foreigners and non-foreigners we will perform logistic regression models to explore some of the individual and aggregated characteristics that may have an influence on the differences in mobility among groups and countries.

Keywords: international migration, internal migration, Foreign born Census data, cross-country comparison.

Introduction

The massive arrival of foreign immigrants constitutes a very transcendental geo-demographic and social phenomenon in the developed countries. Among the numerous consequences that stem from this phenomenon we find the modification of the internal migration patterns of the native-born population. The limited interest this topic has motivated in the new destinations of this immigration, particularly located in the South of Europe – Spain, Italy and Portugal – contrasts with the situation in the Western countries with longer tradition on external immigration, such as the United States, Canada or Great Britain. In these latter countries the research on the internal migration patterns of the foreign or foreign-born populations has given rise to abundant literature from the late eighties. In this paper we are going to present some results of our research, for which we have focused our efforts on answering the following questions:

A) Are the demographic patterns of internal migration of foreigners similar to those of natives by age and sex?

B) Do these migration patterns differ by origin?

C) Are the observed demographic patterns by specific national groups always the same or do they vary according to the country of destination?

D) How does the migration intensity of the foreigners or/and groups of foreigners vary in the different migration systems of the Western countries

E) And lastly, what are the effects of the individual characteristics on the internal migration of foreigners as we compare by country of residence?

In brief, the objective is to study which demographic characteristics and individual factors take part in the internal mobility when we consider the behavior of the native-born population as the comparative element. At the same time, we calculate the standardization of these relative intensities on mobility through indicators such as the Courgeau's *K*.

Up to now, the studies carried out in Canada, the United States, Germany, Belgium and Great Britain have arrived to the following conclusions: immigrants[2] tend to be more mobile than natives because of their demographic and social characteristics, like their age and their life cycle stage

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[2] We define immigrant for this paper as a person born in another country. The reasons underlying this decision are based on the fact that some countries do not provide information by both approaches: country of birth and country of citizenship. Furthermore, this is a characteristic that remains unchanged with time.

when they entry the destination country, the duration of residence, the situation of the labour market and their academic attainment (Bartel, 1989; Bartel and Koch, 1991; Nogle, 1994). On the other hand, several authors have pointed out that foreign-born people show lower elasticity than native-born population to adapt to the factors of the regional market[3] that have a stronger incidence on the medium and long distance changes of residence, such as the unemployment levels, the salary differentials and the areas with higher employment growth (Liaw and Frey, 1998; Kritz and Nogle, 1994; Nogle, 1994). A highlighted result defends that social networks have an intense influence on the mobility of these collectives: the presence and territorial location of already existing communities of the same origin lessen the costs associated with the migration process.

These communities represent the immigrants' main source of information about the potential internal destinations (Frey, 1995; Gurak and Kritz, 2000). The concentration of the natives of a particular community in a specific region also constitutes an element of attraction for those of the same geographical origin. By integrating the effect of the contextual economic factors and the action of the social networks Gurak and Kritz (1998) show that immigrants move less frequently from regions with high economic growth rates, with high proportions of workers in the manufacture sector and with high concentrations of immigrants from the same national origin. Attending to these arguments, the concentration of nationals from a same country in a region acts, thus, as a break of the internal migration of these collectives. Newbold (1996) has stressed, in his work about Canada, the capacity of some regions to attract and keep foreign immigrants from other Canadian regions, result which is confirmed by the recent research by Krahn and Derwing (2005). In Spain and Italy, two countries that have recently become important receivers of international immigration, the developed researches show some similarities with the results highlighted by previous international literature about other destinations. However, these are countries with low internal migration intensity, where the differences in mobility between foreign-born and native-born populations are more noticeable than in countries with higher internal mobility, such as the United States and Canada.

Altogether, the international researches have collected a series of sociodemographic and economic variables that have a decisive impact on the foreign or foreign-born population mobility. For this work, we will tackle some of these aspects from a more comparative perspective. To achieve this objective, we will assess the demographic structure, the migratory intensity and the individual factors that have an influence on the mobility of the different foreign-born groups in the selected developed countries.

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[3] These results, however, have been obtained in countries with high mobility, where native-born population shows an intense migration response to the economic incentives, both at the individual and regional levels. We advance that the situation in the Mediterranean countries (Spain and Italy) is not the same.

Data and methodology

Data

It is difficult to compare Census data for different countries (Courgeau, 1973a and 1973b; Long and Boertlein, 1990; Bell, Blake et al, 2002; Bell and Rees, 2006; Bell and Muhidin, 2009). Realities of each context, priorities of the specific administrations and years of collection change, thus research questions and hypothesis to be tested have to be adapted to these disparities[4]. However, our effort to homogenize the data sets has been very much facilitated to a great extent by IPUMS international (Minnesota Population Center 2009), which has provided us with the harmonized data files for the countries we have included in the analysis for this paper.

Table 1. Characteristics of the data files

Country	sample fraction (%)	sample size	foreign-born subsample	foreigners	census date (d-m-yr)	major administr. unit	minor administr. Unit
France 1999	5	2,934,758	311782 (10.6%)	162595 (5.5%)	08-03-99	region	
Greece 2001	10	1,028,884	102466 (10%)	68109 (6.6%)	18-03-01	department	municipality
Italy 2001	5	2,990,739	117890 (3.9%)	70462 (2.4%)	21-10-01	region	municipality
Netherlands 2001	1.2	189,725	15998 (8.4%)	5636 (3%)	01-01-01	region	
Portugal 2001	5	517,026	32136 (6.2%)	11440 (2.2%)	12-03-01	subregion	municipality
Spain 2001	5	2,039,274	107394 (5.3%)	77631 (3.8%)	01-11-01	province	municipality
United Kingdom 2001	3	1,843,525	134892 (7.3%)		29-04-01	region	
Canada 2001	2.5	801,055	154280 (19.3%)	41988 (5.2%)	15-05-01	province	census district
United States 2000	5	14,081,466	1614057 (11.5%)	860866 (6.1%)	01-04-00	state	

Table 1 shows some basic characteristics of the data files. We observe important differences according to the share of the foreign-born population on the total, from the 3.9% of Italy in 2001 (figure that has significantly increased in the last years) to the 19.3% of Canada for the same year, as a result of diverse immigration histories. The cross-national gap for the foreign population is not so remarkable, although it is in Greece where the relative presence of this subpopulation is higher (6.6%). We have to bear mind, however, that these are sample percentages and that the samples for Canada, the USA and The Netherlands are weighted (the others are flat samples - Minnesota Population Center 2009). Nonetheless, results do not differ significantly as we use weighted instead of non-weighted data (The Netherlands shows the larger differences).

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[4] Apart from the differences in the socieconomic and demographic contexts, definitions on migration are much affected by the particularities of the spatial administrative division and the time intervals used in the census to obtain the category of migrants.

Regarding our specific research objectives, we also have to mention the approaches followed in the different countries with regards to the questions on mobility. In Canada, Italy, Greece, Portugal, The Netherlands and the United Kingdom the census inquired about the place of residence one year ago[5]. In France, information was collected about the place of residence in the last census (1990), that is, whether the person lived then in the same region or not. In the United States of America, the fixed interval was five years. For Spain, we have information about the last place of residence and the year of change of residence so, even if conceptually it is not exactly the same, we can still build up a proxy for the dependent variable that can be understood as the situation one year ago, like in the other mentioned countries. If we enlarge the period of reference, as for the USA, the risk of being measuring different phenomena increases, however, an attempt is also included in the analysis with aggregated data.

Greece deserves a special note since the intra-department mobility is (apparently) lower than the inter-department migration. If this was the case, it would be the only country where the intensity of short distance migration would be under the intensity of medium and long distance migration. We think that there exists a problem with the codification of the data and we have assumed for the following analyses that short is in fact long and the other way round. Even if we have not found literature (in English) on the topic with the 2001 Census data yet, we will try to solve this doubt in near future.

On the other hand, we have had to adjust our explanatory variables to the degree of detail supplied by each census, while maintaining the possibilities of cross-national comparisons. This has leaded us to a greater simplicity in the categorization of the covariates that we would have used for country specific models. Age-group has been reduced to that provided by the British sample, in which central ages are gathered into 15 years categories. Since educational attainment was not coded in the same way for The Netherlands and the United Kingdom as for the other countries, we have re-coded it in such a way that it allows comparison (for the re-codification we have previously studied the intra-variation with regards to our dependent variables). The most difficult explanatory variable to harmonize has been that referred to the place of birth. First of all, not all countries include information on this (The Netherlands and France just distinguish between native and non-native born populations). Secondly, those that do provide some sort of detail about geographical origin, emphasize the places of birth of their own interests, which are not necessary coincident across countries. So, even if our main research question focuses on the similarity or dissimilarity in the internal migration patterns by region of birth, we have to limit the number and types of categories to those available for all countries of study.

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[5] In some of these countries, information was also collected for some longer intervals. Since the similarity between migrants and migration movements is higher for short periods, we have kept the year interval as that of our interest.

Table 2. Incidence of migration by main individual characteristics. People aged 25 and over.

explanatory variables	Canada						Portugal						Greece						Italy					
	sample total		long-distance (%)		short distance (%)		sample total		long-distance (%)		short distance (%)		sample total		long-distance (%)		short distance (%)		sample total		long-distance (%)		short distance (%)	
	N[6]	F	N	F	N	F	N	F	N	F	N	F	N	F	N	F	N	F	N	F	N	F	N	F
sex																								
male	196930	60055	0.9	0.8	2.8	2.0	157092	10186	0.8	2.6	1.0	2.8	318010	34258	1,4	1,6	2,8	2,3	1015057	39991	0,9	1,9	1,5	3,8
female	210582	66130	0.8	0.7	2.5	1.8	177562	1171	0.8	2.2	0.9	2.4	339241	36889	1,2	1,8	2,4	2,0	1121794	48172	0,6	1,3	1,4	2,5
age-group																								
25-29	41364	8453	2.5	1.9	6.8	4.2	34166	5361	2.2	3.7	2.7	3.8	62347	13968	2,2	2,3	4,1	2,9	206952	13578	2,6	3,1	3,5	4,9
30-44	150375	40505	1.1	1.1	3.1	2.6	101421	9602	1.0	2.6	1.4	2.8	194590	31380	1,8	1,8	2,9	2,4	647773	44513	1,0	1,7	2,1	3,5
45-59	121416	39682	0.5	0.5	1.8	1.4	90169	3696	0.5	1.2	0.6	1.3	175227	13224	1,3	1,5	2,8	2,0	554954	16130	0,4	0,9	0,9	2,0
60-74	64840	25789	0.3	0.3	1.3	1.1	74584	1914	0.5	0.9	0.3	1.0	167915	6309	0,7	1,0	1,9	1,3	482588	8985	0,3	0,5	0,6	0,9
75+	29517	11756	0.3	0.3	1.0	1.0	34314	684	0.6	1.2	0.6	1.2	57172	6266	0,6	0,7	1,3	0,8	244584	4957	0,3	0,5	1,0	1,3
marital status																								
single	63778	13440	1.6	1.4	3.9	2.5	40822	5227	1.4	3.2	1.0	2.9	99674	13318	1,6	2,0	3,7	2,9	420249	20597	1,9	2,7	2,3	3,7
married/ in union	278599	92258	0.8	0.6	2.3	1.8	248742	14075	0.7	2.1	1.0	2.5	468016	48503	1,3	1,6	2,5	2,1	1397811	57373	0,4	1,3	1,1	2,8
separated/ divorce	39609	10746	1.0	0.9	3.5	2.3	12162	1101	1.7	3.0	2.0	2.9	24219	3188	2,0	2,7	2,9	2,7	88013	4945	1,0	1,4	3,4	5,1
widowed	25526	9741	0.4	0.4	1.4	1.3	32928	854	0.7	1.5	0.6	1.5	65342	6138	0,8	1,4	1,6	1,2	230778	5248	0,3	0,4	1,0	1,4
educational attainment																								
less than primary	6626	6852	0.3	0.3	1.8	0.8	195977	4448	0.5	1.6	0.5	1.7	87743	6040	0,5	0,7	1,1	1,1	170941	5654	0,2	1,5	0,7	3,4
primary completed	111693	30839	0.6	0.4	1.9	1.3	77542	6883	0.9	2.4	1.3	2.1	290907	23240	1,0	1,2	1,9	1,8	1220412	41031	0,4	1,3	1,2	2,8
secondary completed	200439	51966	0.8	0.6	2.7	1.8	35332	5352	1.5	2.4	1.9	3.2	184495	28713	1,8	1,9	3,4	2,2	575072	32427	1,2	1,9	2,1	3,3
university completed	88754	36528	1.5	1.2	3.4	2.7	25803	4574	2.3	3.5	2.4	3.3	94106	13154	2,2	2,4	4,5	3,1	170426	9051	2,0	2,0	2,2	3,2
housing tenure																								
owned	299701	89581	0.5	0.4	1.8	1.6	256277	14996	0.7	1.8	0.9	2.4	538586	28688	1,2	1,6	2,4	2,2	1588215	41748	0,6	1,1	1,3	2,5
not owned	106057	36293	1.9	1.5	4.9	2.5	72420	5632	1.1	3.8	1.0	2.9	117705	41660	2,0	1,7	3,3	2,2	528909	44407	1,0	1,9	1,9	3,6
employment status																								
employed	261427	73307	0.9	0.7	2.8	2.1	181526	15447	0.9	2.6	1.3	3.0	305174	41460	1,8	2,0	3,0	2,4	957344	49274	1,0	1,9	2,0	4,0
unemployed	16585	4994	2.2	1.8	4.7	2.7	11092	1072	1.4	4.4	1.3	2.4	26861	3975	1,4	1,7	3,2	2,6	140313	8091	1,1	2,1	1,6	2,7
inactive	129500	47884	0.6	0.6	2.0	1.5	142036	4738	0.6	1.5	0.5	1.3	325216	25712	0,9	1,1	2,1	1,7	1039194	30798	0,5	1,0	0,9	1,7

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[6] N: native-born, F: foreign-born

Table 2 (continuation). Incidence of migration by main individual characteristics. People aged 25 and over.

explanatory variables	Spain sample total		long-distance (%)		short distance (%)		The Netherlands sample total		long-distance (sample %/weighted %)		UK sample total		long-distance (%)		USA sample total		long-distance (sample/weighted %)		France sample total		long-distance (%)	
	N	F	N	F	N	F	N	F	N	F	N	F	N	F	N	F	N	F	N	F	N	F
sex																						
male	661965	36395	0,4	1,7	0,9	2,1	60614	5822	1,5/1.9	3,6/6.8	541928	46742	1,7	3,4	3718932	523770	8,2/8.8	9,1/9.5	806094	120808	9,5	7,1
female	717240	36614	0,4	1,2	0,8	1,9	63267	7056	1,4/1.6	3,5/6.3	599464	53157	1,4	3,0	4139558	563496	7,5/7.9	8,0/8.3	905378	121604	8,7	6,6
age-group																						
25-29	159677	13319	0,9	2,2	2,0	3,1	11676	1547	4,6/5.3	7,6/15.6	102599	12141	5,0	9,1	731710	123682	16,6/17.6	14,6/15.3	189572	13859	19,4	13,8
30-44	445054	35545	0,6	1,6	1,2	2,3	47403	5915	1,8/2.3	4,2/7.9	366597	38997	2,0	3,8	2688591	438276	9,8/10.3	10,6/10.9	546554	76995	12,2	9,6
45-59	347338	13725	0,3	0,9	0,5	1,4	40477	3733	0,8/1	2,0/3.0	316715	26140	0,9	1,3	2270735	293130	5,9/6.1	5,8/6	449066	79805	6,0	5,1
60-74	280842	7503	0,2	0,4	0,3	0,7	18510	1314	0,7/0.8	1,4/1.8	225217	16153	0,7	1,2	1358136	156636	4,8/4.9	5,1/5.2	344921	46906	5,4	4,7
75+	146294	2917	0,2	0,2	0,3	0,5	5815	369			130264	6468	0,7	0,9	809318	75542	3,8/4	4,3/4.3	181359	24847	3,5	3,9
marital status																						
single	292446	21704	0,6	1,8	1,0	2,4	21916	2218	3,5/3.8	7,9/13.6	225193	17532	3,2	6,8	1072583	153093	10,7/11.4	10,9/11.4	389162	36684	13,1	10,3
married/ in union	898490	42003	0,4	1,3	0,8	1,9	87355	8627	1,0/1.1	2,7/5	661958	63970	1,1	2,5	4788996	681819	7,3/7.8	8,2/8.5	1025363	163723	8,2	6,2
separated/ divorce	51395	5242	0,9	1,6	1,7	2,7	8305	1553	2,2/2.4	2,4/3.9	138867	11480	1,8	3,0	1314067	177503	9,2/9.5	9,5/9.7	128424	19062	10,4	9,1
widowed	128722	3528	0,2	0,4	0,4	1,0	6301	476	0,5/0.5	2,3/2.3	115374	6917	0,8	1,2	682844	74851	4,4/4.6	5,0/5.1	168523	22943	4,3	4,2
educational attainment																						
less than primary	246982	8423	0,2	1,4	0,3	1,5	747		0,4/0.2	1,8/4.6	330871	27925	0,7	1,5	89767	100962	3,4/3.8	4,9/5.2	304925	85180	4,7	3,7
primary completed	690809	30904	0,3	1,4	0,7	1,9	46425	6045	0,7/0.8	3,0/4.4	182789	8768	1,3	2,0	1017357	251183	4,4/4.6	6,1/6.3	907085	94165	6,8	6,1
secondary completed	330203	25150	0,6	1,4	1,3	2,3	51632	3880	1,5/1.8	3,5/6.7	228801	18761	1,9	3,4	4944161	496127	6,9/7.3	8,0/8.2	197671	23723	12,4	10,2
university completed	103059	8000	0,9	1,7	1,5	2,3	25030	2444	2,9/3.4	5,4/11.4	197879	32607	3,6	5,5	1807205	238994	12,4/13	13,8/14.3	301791	39344	18,2	13,6
housing tenure																						
owned	1174372	39863	0,3	0,6	0,8	1,6					843842	64599	1,2	1,8	5917436	648618	5,8/6.1	6,6/6.7	1067987	113447	5,9	5,5
not owned	196681	32614	1,1	2,4	1,1	2,6					279281	33919	2,4	5,3	1729147	425178	14,5/15.1	11,4/11.8	603828	120848	14,6	8,0
employment status																						
employed	620650	40775	0,5	1,6	1,1	2,4	77979	6392	1,8/2.2	3,1/5.2	646153	55337	1,8	3,8	4782500	623599	8,4/9	9,5/9.9	917736	115260	10,6	7,5
unemployed	87088	6960	0,8	2,4	1,0	2,3	1593	509	2,5/3.3	3,9/9.2	28621	4259	3,0	4,1	201927	37969	10,8/11.1	9,4/9.8	105683	24830	14,4	9,1
inactive	663315	24742	0,3	0,9	0,5	1,4	44309	5976	1,0/1	3,9/7.5	336354	33835	1,2	2,5	2874063	425698	6,6/6.9	7,1/7.3	688053	102322	6,3	5,5

Source: own elaboration based on IPUMS Census data

For some of these and the rest of the covariates, the problems have been related, not to the types of categories in which they are disaggregated, but to the universe each country considered for them. For instance, employment status and academic attainment have been treated differently in the various censuses. In order to avoid the biased missing data derived from it, we have constricted our initial database to people aged 25 and over.

In table 2 we present the figures for the sample sizes and percentages of migrants by main individual characteristics and place of birth (native born and non-native born populations). For instance, we observe that for medium-long distance migration 0.9% of native-born males in Canada lived in a different province a year previous to the 2001 Census, which decreases to 0.8% for non-native born males. In Portugal, the percentage is very similar (0.8%) for males born in the country, but it is considerably higher for those who were born abroad (2.6%). When samples include weights, percentages for both, weighted and non-weighted data, are shown.

Methodology

Based on the census data files mentioned above, we use different approaches to answer our research questions. First, we explore the data at an aggregated level and we calculate the *gross migration rate* (GMR) and *Courgeau's 'K*. We also build up the profiles by age and sex and estimate the effect of the duration of residence on the inter-regional mobility intensity for some countries. Then, we move to the micro perspective through some *logistic models*.

The gross migration rate is analogous to the gross fertility rate in that it is the sum of age specific migration intensities and it is interpreted as the mobility a person would experience in his life if he or she followed the pattern observed at a specific time point (by sex, age and whatever variables are considered to compute the rates). It measures the intensity of migration between two regions at a particular point in time (Willekens and Rogers 1986). In its simplest form it is defined as:

$$GRM = \sum_{x=0}^{z} m_{x,x+n} \, ,$$

where $m_{x,x+n}$ are the age-specific migration rates or transition probabilities[7]. Even if it is another way of standardizing age and gender structure, it is very sensitive to the starting and ending ages of summation (Bell, Blake et al. 2002).

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[7] In order to improve the robustness of the GRM estimations, tables 4 and 5, we have used ten-year groups from 0 to 80, with the only exception of Great Britain, for which we have adapted the structure provided by IPUMS. The data for Spain and the USA have been standardized to put them on the same level with the question about the residence one year before by applying different converters. Obviously, the GRM for the diverse groups are just comparable at an internal level, given that we do not have computed for them a standardization similar to that of the Courgeau's *K.*.

Then, in order to improve the cross-national comparison at the aggregated level, we apply Courgeau's *K* (Courgeau 1973a). Courgeau provides a way to test the differences in internal migration in various countries under the hypothesis that territorial units' areas and population densities are assumed to be independent. This hypothesis allows us to consider:

$$\frac{M(n)}{P} = K \cdot \log(n^2),$$

where *n* is the number of regions in the zonal system and *K* is the linear regression slope for various *n* and crude migration intensities $\frac{M(n)}{P}$. In order to obtain a comparative measure of the Courgeau's *K* we use the Crude Migration Intensity (*CMI*), calculated for different spatial disaggregation levels and places of birth. The *CMI* is defined as the number of internal migrants (*M*) in the time period established by the census question on migration over the risk population[8] (*P*). It is expressed as *CMI=1000*(M/P)*. Table 3 shows the territorial divisions considered in the various countries for which Courgeau's *K* has been calculated.

Table 3. Territorial divisions by country

country	type of territorial unit	Number of territorial units	source
Canada	Province Census District	11 288	IPUMS International
Greece	Departament Municipality	54 154	IPUMS International
Italy	Region Municipality	20 8101	IPUMS International
Portugal	Subregion Municipality	22 308	IPUMS International
Spain[9]	Province Municipality	52 8111	Microdata Population Register 2001 (EVR) - www.ine.es
United States[10]	States County	50 3130	US Bureau of Census www.census.gov/main/www/censo2000.html

Source: own elaboration

This measure permits to assess the intensity of migration at various spatial scales. This solution, however, is sensitive to the number of zonal units the countries are divided on. The finer the spatial

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[8] The risk population had to be carried back to the time interval the census question on migration is referred to. We thus avoid people born during this interval and those who arrived from abroad in the same period. Unfortunately, the census does not allow including the persons who emigrated to another country.

[9] In order to get a comparative aggregated measure on the migration during the previous year in Spain we have turned to the data on the flows from the registers of the Spanish population (EVR), using the continuous population registers (*Padrón Continuo*) as the denominator .

[10] The data for the USA come from the US Census Bureau (2003). The census question in the United States considers a time interval of five years. We have used a conversion coefficient for that question to put it on the same level with the question on a year before. The coefficient is 0.38 according to the comparative data on mobility in 1 and 5 years for the United States that Muhidin, Brown and Bell present (2007: 1)

mesh, the higher the migration intensity is expected to be, and the higher the reliability of the regression coefficients. The problem would arise, thus, if just a small number of territorial units are available (Bell, Blake et al. 2002).

We have also considered the effect of the duration of residence on the interregional migration rate, even though the proposed results are limited to those countries that have provided information about the year of arrival from abroad[11].

Finally, we centre our attention on the individual characteristics that have an effect on the probability of having changed residence with regards to that stated for the previous year (Canada, The Netherlands, United Kingdom, Portugal, Italy, Greece and Spain), five years ago (United States) or last census (France). In this case we are not measuring migration intensity, but focusing on the personal circumstances that may act as push effects for migrating. In particular, we are especially interested in grasping the differences of behaviour according to the geographical origin of the migrants and whether their patters are similar (or not) across countries.

For this purpose, we apply two sets of logistic models depending on the territorial unit under consideration. First, medium and long distance movements, defined by IPUMS International as changes between 'major administrative units' and, then, short distance movements, defined as changes between 'minor administrative units'. Information provided in the former case is available for a larger range of countries. We are aware that these minor and major administrative units differ with regards to their extension and population density, but since in this step we are studying individual propensities to move, instead of migration intensities, the territorial differences should not disturb our results too much.

Thus, our dependent variables will be:

Model 1: Migration status -1y/5y/last census. Same major administrative unit, value 0. Different major administrative unit, value 1. Obviously, people who lived abroad at the time point of reference are excluded from the data file.

Model 2: Migration status -1y/5y/last census. Different minor administrative unit within the same major administrative unit, value 1; value 0, otherwise. Obviously, people who lived abroad at the time point of reference are excluded from the data file.

The equations have the following form:

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[11] In the case of Italy this information is just collected for those individuals who were born abroad and who do not have the Italian citizenship.

$$\ln\left(\frac{p_i}{1-p_i}\right) = \beta_0 + \beta_1 \cdot sex + \beta_2 \cdot age-group_2 + \ldots + \beta_5 \cdot age-group_5 + \beta_6 \cdot place-birth_2 + \ldots$$
$$+ \beta_{10} \cdot place-birth_7 + \beta_{11} \cdot marital-status_2 + \ldots + \beta_{13} \cdot marital-status_4 + \beta_{14} \cdot academic-att_2 +$$
$$+ \ldots + \beta_{16} \cdot academic-att_4 + \beta_{17} \cdot house-tenure + \beta_{18} \cdot employ-status_2 + \beta_{19} \cdot employ-status_3$$

Research results. Aggregated level

In the following pages we present the current state of our research. The three following sections show the results about the demographic profiles for the migration rates by sex, age, type of movement and place of birth. We also present the demographic indicators for calendar and intensity, the application of the Courgeau's *K* that allows comparing the rates across countries, and the estimation of the effect of residence duration on the interregional migration.

Migratory profiles by sex and age

Demographers have observed the existence of important regularities in the age distributions of the migration rates in a considerably wide set of regions in the developed countries (Rogers and Willekens 1986). The most obvious ones are the high concentration of migrants among young adults, the high migration rates in the first years of life and the minimum in the intensity that is registered around the age of 16. Demographers have associated these regularities to the influence of different events and life cycle stages: job search, getting married and family formation, migration at dependent ages and low labour mobility from certain ages. Following this scheme, in the developed societies mobility grows sharply by the time the majority of adolescents that quit studies initiates the search of a job, or decides to continue their studies at university, time point that is situated around 16-18 years old. Up to 28-30 years, mobility augments because people who have finished their university studies join the labour market, although from those ages emancipation from the paternal home when getting married (dominant model in the emancipation) or the beginning of cohabitation acquire great importance. The global incidence of nuptiality explains that the maximum of mobility is situated, in general, very close to the mean age at marriage. For this reason, the maximum in the calendar of the female migration is always premature and very close to their mean age at marriage.

This migratory profile is characterized by the followings aspects:

    a) The higher mobility of young adults, between ages 20 and 39, linked to work, marriage and house searching.

b) The relevant mobility of children and teenagers (0-16 years old), that reflect their parents' mobility. It is more elevated during the first ages because they are often children of young parents that belong to the age segment with the highest mobility.

c) The low mobility after 40, when job searching and household formation are considerably reduced.

d) The likely appearance of a second mobility maximum, of minor intensity, around those ages in which people use to get retired.

One of our research questions is: to what extent does this general pattern remain as we consider the migration rates by places of origin and destination countries?

Graph 1 Internal migration calendar by sex, age and place of birth.
Selected countries. All regional classifications
Standardized age rates (sum equal to 1)
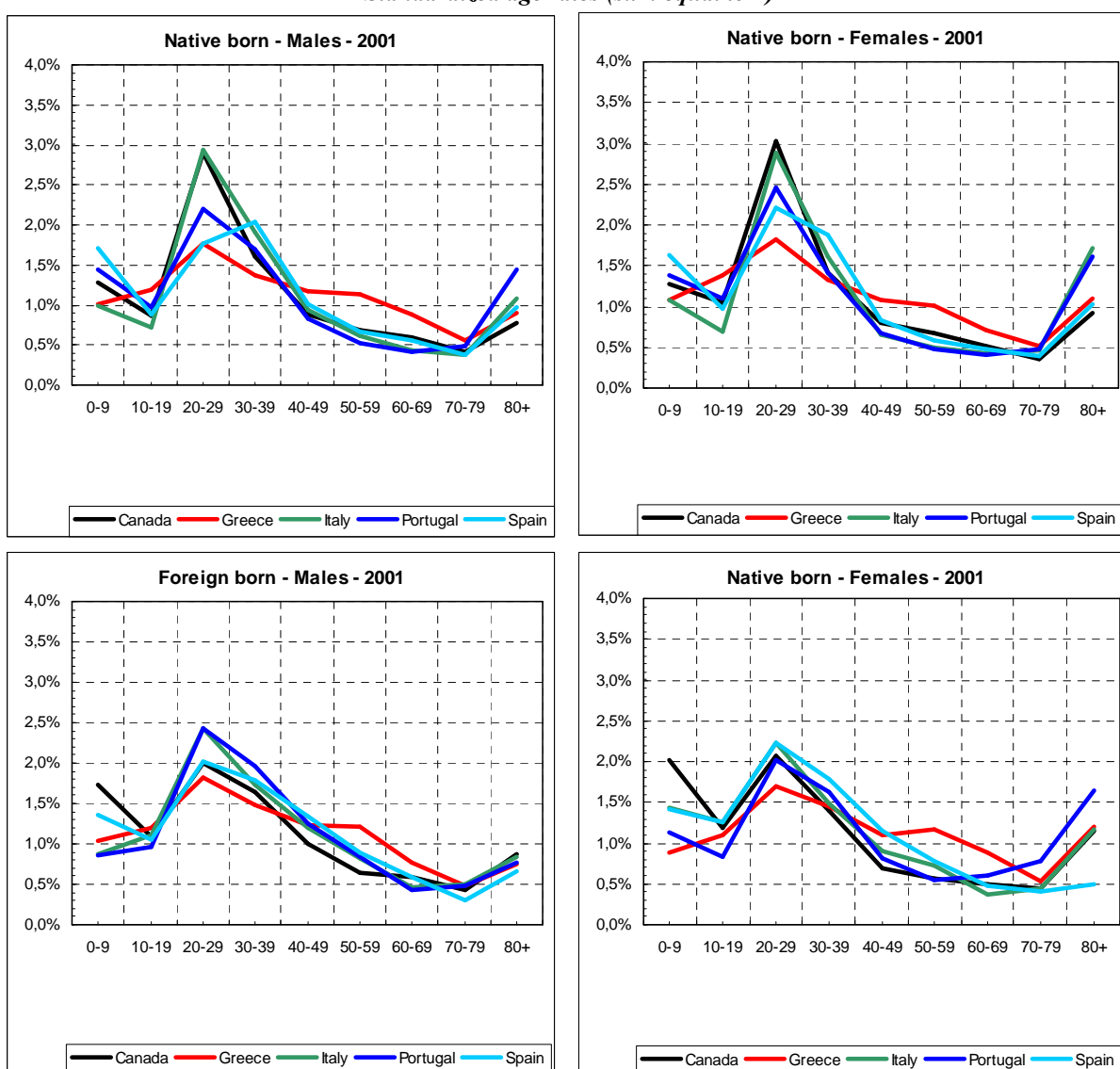
Source: IPUMS International. Own calculations.

In order to compare the distribution by age of the migration rates (calendar), we have to avoid the scale factor by obtaining the weight of each age group over the GRM total. As we can observe in graph 1, the migration calendar presents the following characteristics:

a) We observe significant differences between native and non-native born populations for all the five analysed countries[12] (Canada, Greece, Italy, Portugal and Spain)

b) Nonetheless, the most important differences are found in the calendar of the native-born population in the different countries.

c) On the other hand, the maximum of the young people mobility is more outstanding among the native-born population, spreading to a wider range of ages as we observe the foreign-born population, suggesting an extension of the factors that promote migration to different life-cycle stages of those collectives born abroad.

d) Finally, we do not find significant differences by sex regarding the calendar of native and foreign-born populations, although these results will be further explained through graphs 2.a-3.c.

In the graphs 2.a-3.c, rates by sex and age for the different kinds of migration are shown for the selected countries. Because of the reasons already stated in the methodological section, the results by group of origin are just comparables within each country. First, we present the migratory profile of the migration rates corresponding to the changes of residence that have taken place in the set of minor administrative units (graphs 2.a-2.b). In the graphs 3.a-3.c we do the same for the medium-long distance migration.

As it can be observed, the analysed groups present different migration profiles, both in intensity and shape. Canada and Greece are characterised by a higher migratory intensity of the native-born population as we check the short distance mobility. Furthermore, Canada shows the lowest gender differences among all the studied countries. It is a more consolidated immigration destination, thus we can interpret a higher stability of the immigrants' family structures that have a longer experience in the country and may have got their legal status and finished the family reunification process. In general, there exists higher gender equilibrium in the mobility cross-minor administrative units. In the United States, the mobility of the foreign-born people in medium-long distance is more notable, especially among Canadians and Africans. This is not the same for the Latin-American collective that, contrary to what it is observed for other countries, it is situated here in the last position with regards to the migration intensity in contrast to Spain.

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[12] These are the countries for which information is provided on the changes of residence for at least two types of territorial units.

Graph 2.a Internal migration rates by sex, age and continent of birth. Selected countries.
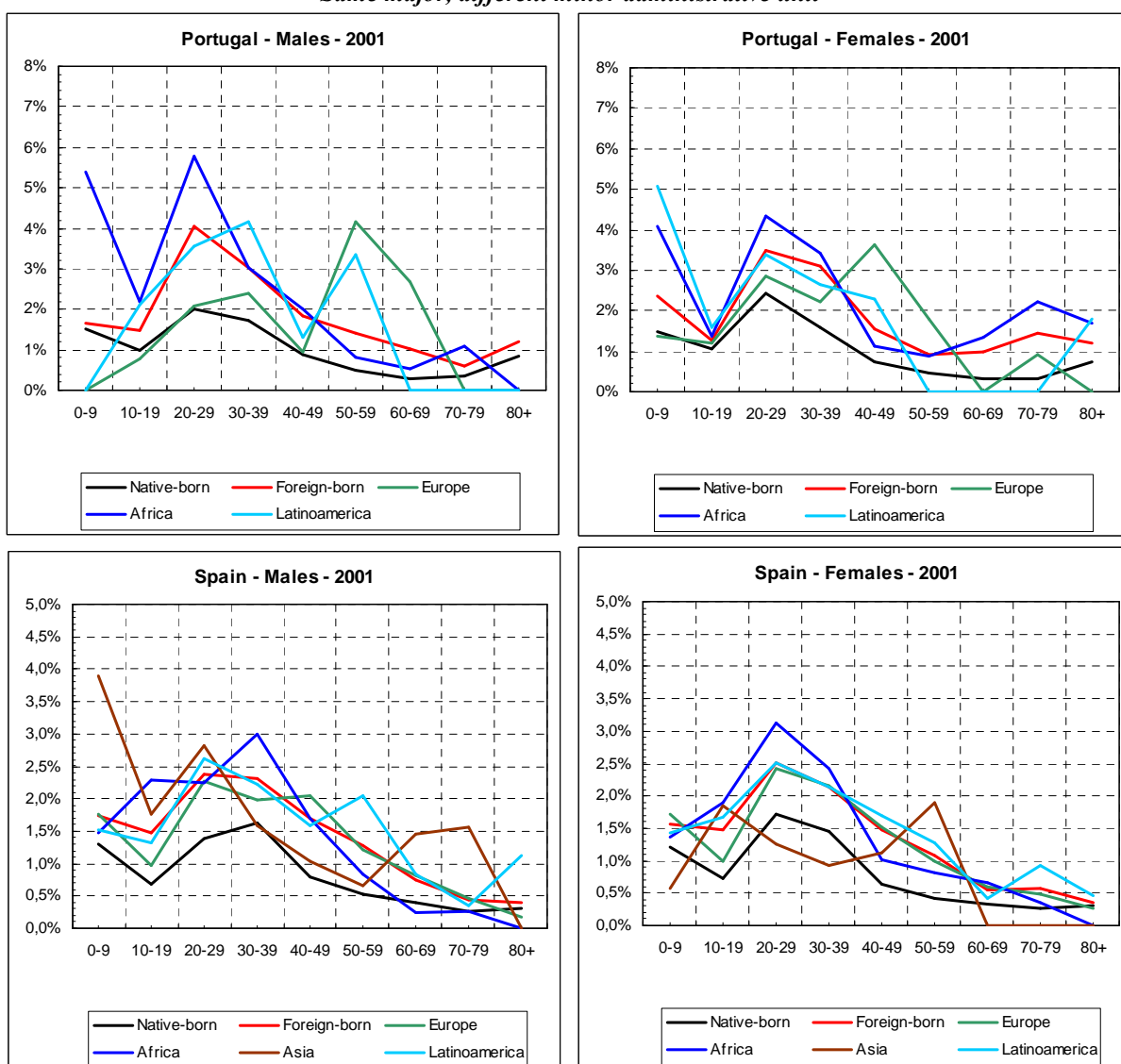
Same major, different minor administrative unit
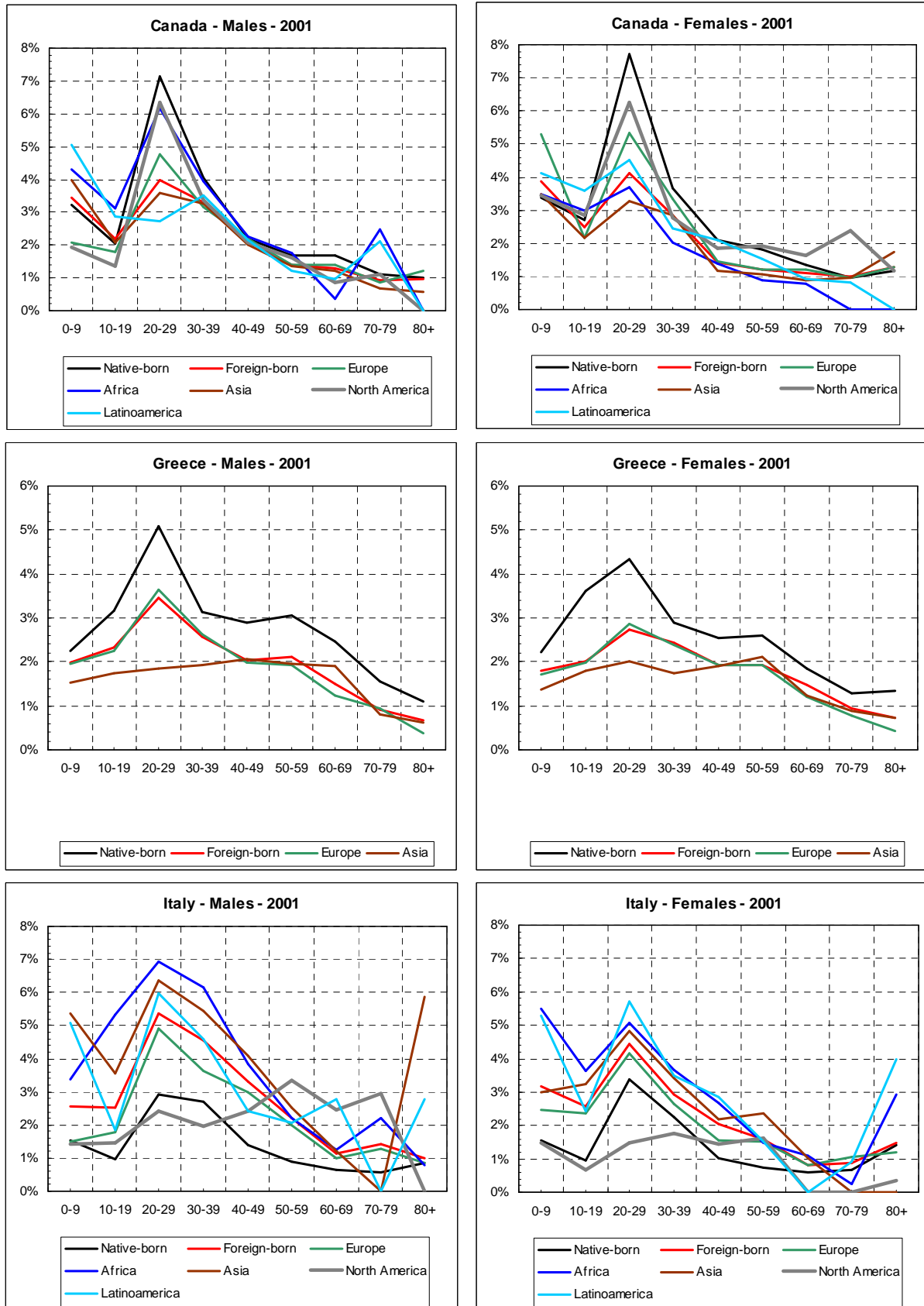
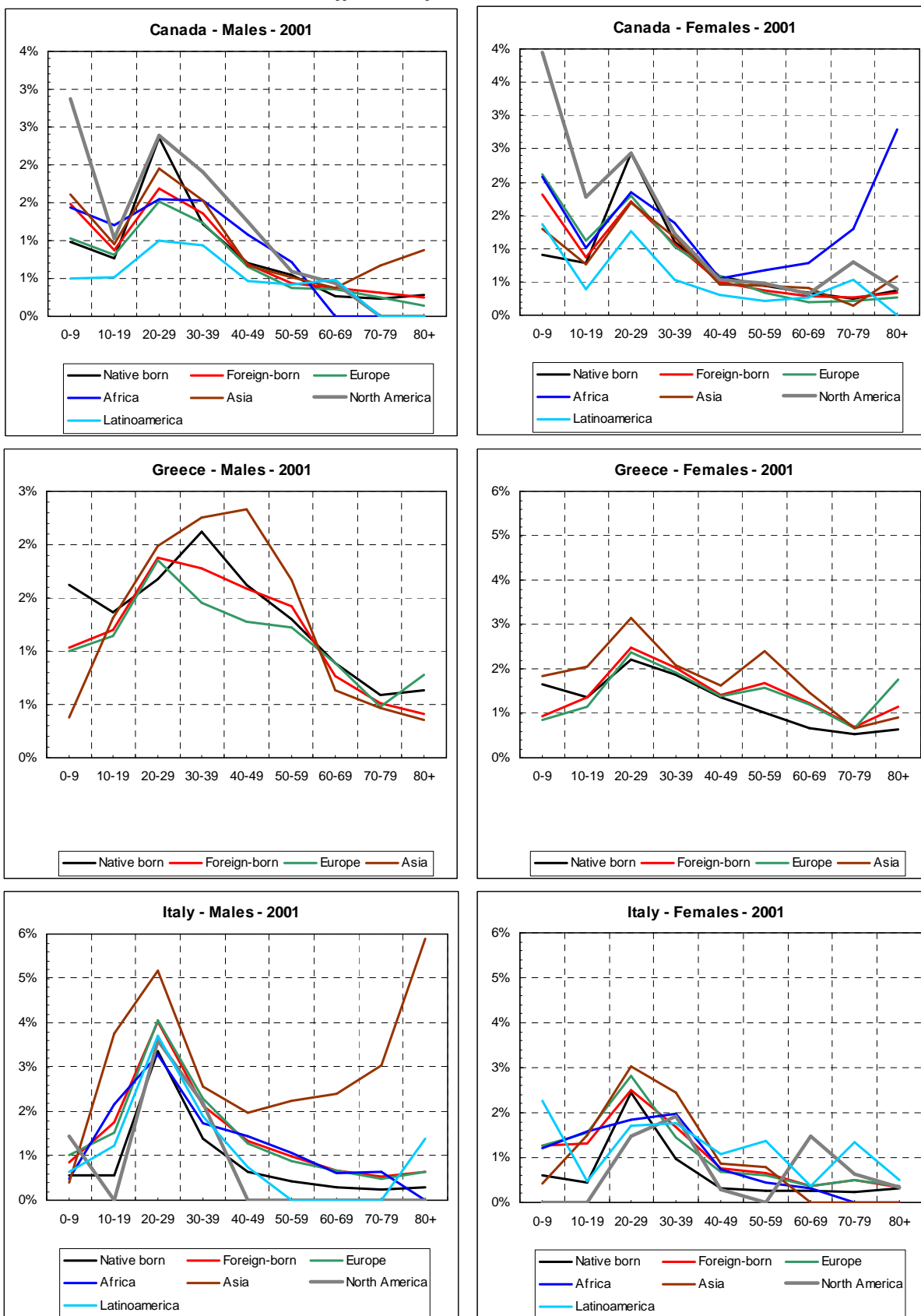

Source: IPUMS International. Own calculations.

Attending to the place of birth, we can argue that the Europeans reflect a very similar calendar to that of native-born population in most of the countries, with low differences by sex. The people with African origin manifest a patter which is predominantly masculine at all ages, especially in Spain and Italy, where there are remarkable differences by gender in the intensity. This factor is much more pronounced in the medium-long distance migration. The important mobility presented by the Africans, aged between 20 and 49, means the existence of a hyper-mobility pattern that contrasts with the migration profile that can be found in the most developed countries (Rogers and Willekens, 1986). The Latin-American pattern is characterized, on the contrary, by the major protagonist role of the females and their more outstanding trend towards family migration. The Asians, on their side, concentrate a great deal of the migratory intensity around the young people, with a higher presence of males in both types of mobility.

Graph 2.b.: Internal migration rates by sex, age and continent of birth. Selected countries.
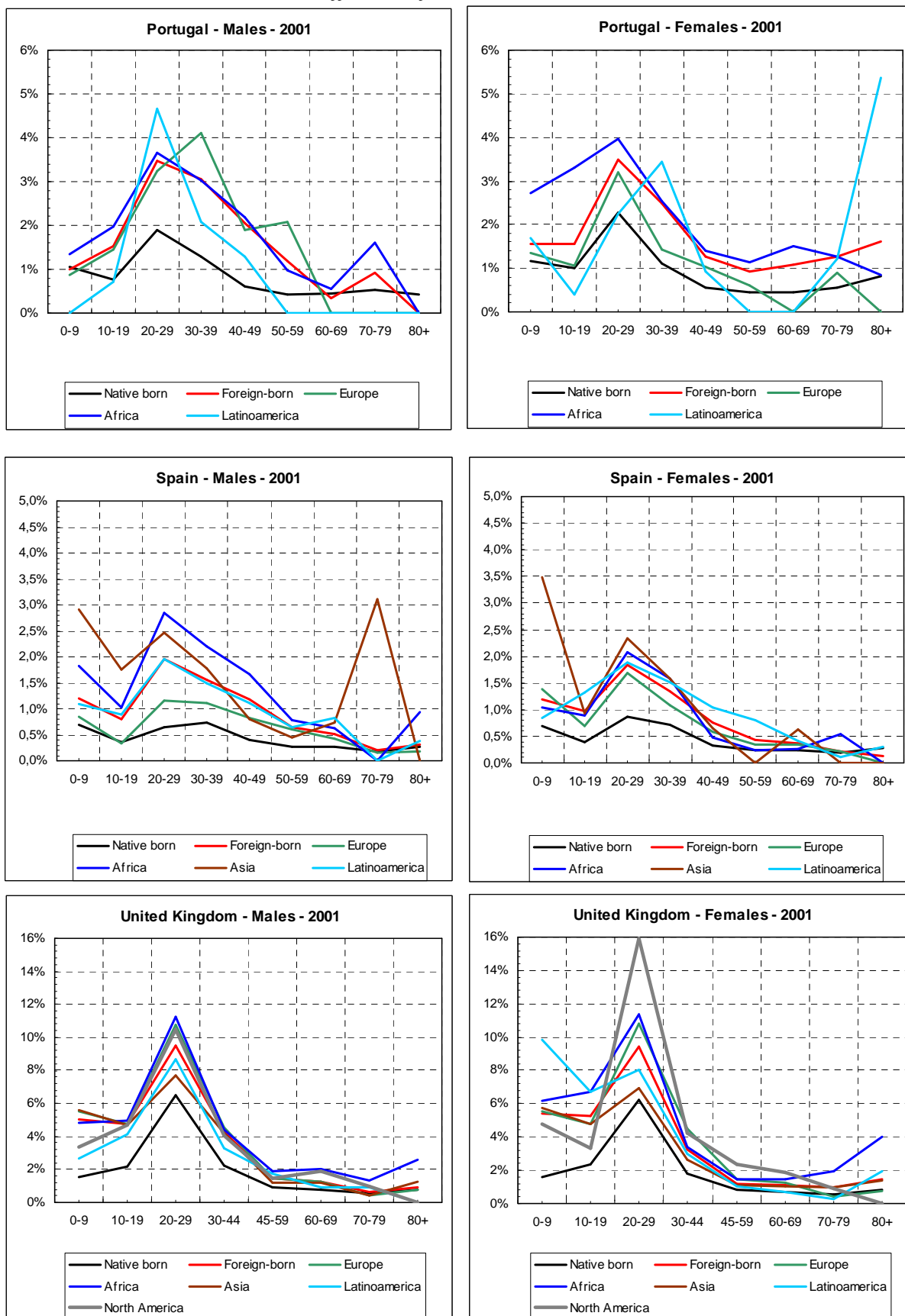*Same major, different minor administrative unit*

Source: IPUMS International. Own calculations.

Graph 3.a. Internal migration rates by sex, age and continent of birth. Selected countries
## *Different major administrative unit*

Canada - Males - 2001

Legend: Native born, Foreign-born, Europe, Africa, Asia, North America, Latinoamerica

Canada - Females - 2001

Legend: Native born, Foreign-born, Europe, Africa, Asia, North America, Latinoamerica

Greece - Males - 2001

Legend: Native born, Foreign-born, Europe, Asia

Greece - Females - 2001

Legend: Native born, Foreign-born, Europe, Asia

Italy - Males - 2001

Legend: Native born, Foreign-born, Europe, Africa, Asia, North America, Latinoamerica

Italy - Females - 2001

Legend: Native born, Foreign-born, Europe, Africa, Asia, North America, Latinoamerica

Source: IPUMS International. Own calculations.

Graph 3.b. Internal migration rates by sex, age and continent of birth. Selected countries
Different major administrative unit

Source: IPUMS International. Own calculations.

Graph 3.c. Internal migration rates by sex, age and continent of birth. Selected countries
Different major administrative unit
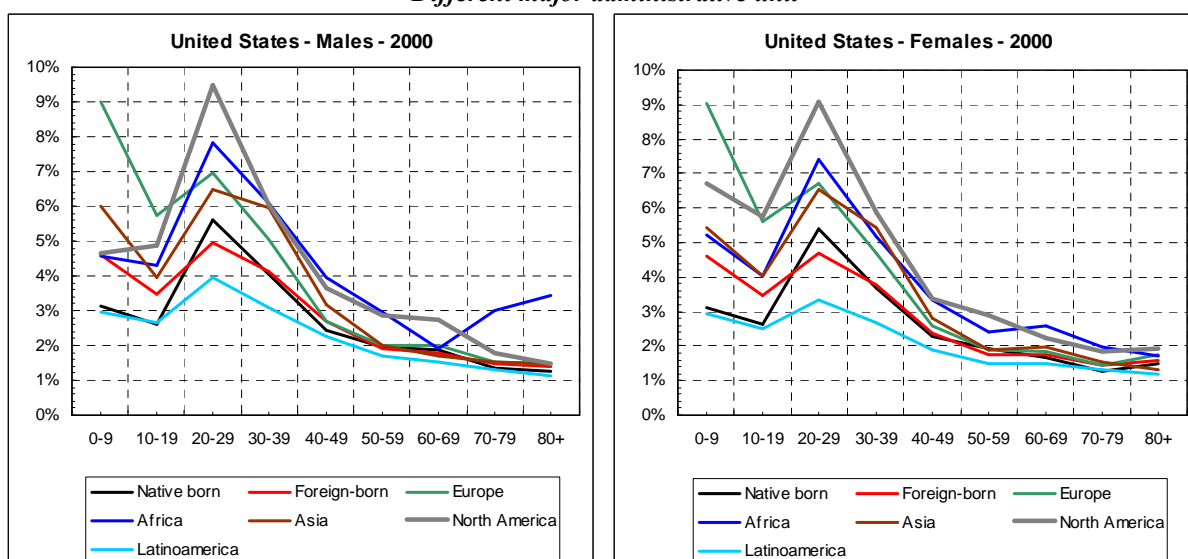
Source: IPUMS International. Own calculations.

Calendar and intensity indicators

The demographic indicators on internal migration of native and non-native born populations present very disparate values in their intensity and calendar (tables 4 and 5). Generally, the changes of residence by foreign- born population are appreciably more numerous than those by native-born individuals, with the exceptions of Canada and Greece for short distance migration (we do not have information for the United States on this sort of mobility), to which the United States joins as for the medium-long distance migration. If we exclude the Greek exception, the others are two countries with a long immigration tradition and notable mobility of their native-born populations. On the contrary, Italy, Spain and Portugal show significant differences in intensity between native and non-native born collectives in favor of the latter for both types of migration. Great Britain can be added to these previous countries as we take into account medium-long distance migration, although being a country of high internal mobility and long tradition on immigration (data on short distance migration is not available). Differences on mobility between native and foreign-born populations are always more outstanding in the medium and long distance migration.

Another important distinction is found in the extreme variation of the indicators as we consider the continents of origin. In sum, the population born abroad that change residence effectuates an amount of movements that is almost 20-30 per cent lower than that of native-born people in Canada and Greece in the short distance mobility and between 70-90 per cent higher than that of native-born population in Italy, Spain and Portugal for the same type of migration. These differences are slightly reversed as we focus on the changes of major administrative unit in Canada, Greece and the United States. For instance, in the latter country the mobility of those born abroad is 8 per cent higher. On the other hand, the previous differences in Italy and Portugal remain and are even more

highlighted now in countries like Spain, where long distance mobility of males born in another country is 2.12 times higher than that of the Spanish-born population.

Table 4. Type of migration: Same major, different minor administrative unit by continent of birth (2000-2001)

Country	Gender	Native-born	Foreign-born	Europe	Africa	Asia	North America	Latin America
				Gross migraproduction rate (GMR)				
Canada	Males	2.52	2.06	2.01	2.44	1.94	1.87	2.06
	Females	2.61	2.06	2.35	1.53	1.93	2.55	2.00
Greece	Males	2.58	1.83	1.73	2.18	1.51	3.08	0.84
	Females	2.40	1.67	1.56	1.79	1.45	3.54	1.30
Italy	Males	1.33	2.51	2.08	3.29	4.03	1.84	3.03
	Females	1.40	2.14	1.89	2.92	2.01	0.91	3.02
Portugal	Males	0.99	1.74	1.31	2.08	4.38	0.85	1.45
	Females	0.99	1.75	1.40	2.21	2.32	0.57	1.86
Spain	Males	0.76	1.29	1.19	1.21	1.47	1.17	1.47
	Females	0.74	1.21	1.14	1.17	0.76	1.46	1.30

Country	Gender	Native-born	Foreign-born	Europe	Africa	Asia	North America	Latin America
				Median age of migration (MAM)				
Canada	Males	33.3	32.7	34.9	31.5	31.0	33.6	31.3
	Females	32.0	31.3	29.8	25.4	32.1	34.8	28.6
Greece	Males	35.7	36.9	37.1	39.7	38.6	36.5	25.0
	Females	33.9	38.5	39.2	43.1	36.2	37.6	26.3
Italy	Males	34.5	35.1	36.6	33.2	33.0	45.1	33.0
	Females	34.4	32.3	33.3	30.0	29.9	32.7	31.4
Portugal	Males	31.8	34.9	45.5	26.9	30.9	22.5	35.1
	Females	31.0	35.5	36.1	34.5	20.6	32.4	25.9
Spain	Males	32.1	33.7	34.7	30.0	31.6	31.4	35.9
	Females	31.1	33.3	33.3	30.7	32.7	28.2	34.8

Country	Native-born	Foreign-born	Europe	Africa	Asia	North America	Latin America
			Sex ratio of GMR				
Canada	0.97	1.00	0.86	1.60	1.00	0.73	1.03
Greece	1.07	1.09	1.11	1.21	1.04	0.87	0.64
Italy	0.95	1.17	1.10	1.13	2.01	2.01	1.00
Portugal	1.01	1.00	0.93	0.94	1.89	1.48	0.78
Spain	1.03	1.07	1.04	1.03	1.93	0.80	1.13

Source: IPUMS International. Own calculations.

People born in the African continent, Latin-America (with the exception of this collective in Canada and the United States) and Asia present the highest mobility levels, significantly higher than those of the Europeans. North-Americans represent a special case, since they seem to transfer the high mobility in their countries of origin to the countries where they have emigrated to.

A second factor to bear in mind is the existence of important gender differences among the foreign-born population. Whilst among Europeans the mobility intensity is similar for males and females, the migrations of Africans and Asians show much higher intensities among men (tables 4 and 5). On the contrary, the women are those who change residence at higher intensity as we observe the Latin-Americans. In brief, the Asian and African continents present an internal mobility pattern

primarily masculine, fact that is reversed when we consider the Latin-American and European populations. Nonetheless, the composition by nationalities of the considered groups in the countries of destination has important effects on these results. In Italy, where the Albanians are the most represented European origin, the gender differences are more obvious and do favour males, especially in the medium-long distance migration. The reasons of these interactions between place of birth and destination will be further studied in future research in which we will try to get a more thorough insight, as far as possible, about the place of birth and year of arrival to the country.

To sum up, internal migration of the foreign-born population responds to the following demographic characteristics:

a) Their mobility is, generally speaking, significantly higher than that of the native-born population, with the exception of Canada and Greece. Important differences on intensity are found among the foreign collectives. People born in the Asian and African continents present intensities that are regularly higher.

b) Male mobility predominates in the African and Asian countries, but this trend is reversed for the Latin-American population. The European countries do not show significant differences by gender.

c) The profile of the age rates of the Europeans and native-born population are quite similar. On the contrary, for the African collective there is basically a masculine predominance that is centred on the young adults. The maximums of mobility appear more clearly marked in the countries of highest mobility (Canada, United States and Great Britain).

d) The collectives that come from less developed continents enlarge their internal mobility through all active age groups, in contrast to the migration pattern of the more developed continents, which are distinguished for having more pronounced mobility peaks.

Table 5. Type of migration: different major administrative unit by continent of birth (2000-2001)

Country	Gender	Gross migraproduction rate (GMR)						
		Native-born	Foreign-born	Europe	Africa	Asia	North America	Latin America
Canada	Males	0.76	0.77	0.65	0.75	1.00	1.05	0.43
	Females	0.76	0.76	0.79	1.52	0.76	1.23	0.49
Greece	Males	1.25	1.10	1.09	1.00	1.17	1.91	0.38
	Females	1.20	1.41	1.46	1.10	1.71	1.81	1.58
Italy	Males	0.80	1.35	1.35	1.14	3.33	0.72	1.10
	Females	0.62	0.97	1.00	0.81	0.90	0.65	1.14
Portugal	Males	0.79	1.36	1.36	1.53	1.05	0.52	0.88
	Females	0.91	1.69	0.96	1.95	2.33	0.43	2.06
United States	Males	2.55	2.78	3.80	4.16	3.38	3.91	2.16
	Females	2.49	2.70	3.74	3.56	3.24	4.16	1.99
Spain	Males	0.41	0.87	0.58	1.28	1.40	1.43	0.88
	Females	0.42	0.74	0.63	0.71	0.96	0.59	0.85
United Kingdom	Males	1.78	3.16	3.32	3.89	3.02	2.97	2.47
	Females	1.71	3.17	3.20	4.29	2.79	3.66	3.54
Country	gender	Median age of migration (MAM)						
		Native-born	Foreign-born	Europe	Africa	Asia	North America	Latin America
Canada	Males	31.2	30.3	31.1	27.3	33.2	26.1	33.3
	Females	31.5	28.1	25.8	37.3	30.9	25.6	29.9
Greece	Males	37.4	35.8	34.9	35.9	39.0	27.8	42.0
	Females	35.9	36.8	35.7	43.3	38.2	42.0	37.4
Italy	Males	32.0	33.7	33.3	34.0	41.2	24.1	30.2
	Females	31.7	31.7	30.8	27.6	29.6	44.7	36.4
Portugal	Males	33.7	34.6	33.0	35.4	33.0	12.3	29.5
	Females	33.4	36.5	31.3	32.9	38.3	29.9	37.8
United States	Males	34.6	32.9	28.6	35.6	31.5	33.4	34.5
	Females	34.3	32.7	28.4	33.7	31.8	31.5	34.6
Spain	Males	33.5	32.8	34.8	32.0	36.1	35.5	33.2
	Females	32.6	30.2	28.6	30.7	22.3	40.4	32.4
United Kingdom	Males	31.2	28.3	27.5	31.4	27.8	30.0	29.9
	Females	30.7	27.9	28.4	30.4	27.5	29.5	23.4
Country		Sex ratio of GMR						
		Native-born	Foreign-born	Europe	Africa	Asia	North America	Latin America
Canada		1.01	1.02	0.82	0.49	1.32	0.85	0.89
Greece		1.04	0.78	0.74	0.91	0.69	1.06	0.24
Italy		1.29	1.39	1.35	1.40	3.68	1.11	0.96
Portugal		0.86	0.80	1.42	0.78	0.45	1.20	0.42
United States		1.02	1.03	1.02	1.17	1.04	0.94	1.09
Spain		0.96	1.17	0.92	1.81	1.46	2.41	1.03
United Kingdom		1.04	1.00	1.04	0.91	1.08	0.81	0.70

Source: IPUMS International. Own calculations.

A comparison between the levels of mobility of native and foreign-born populations

The differences in the migration intensity observed between countries for the general mobility are explained to some extent by the unequal number of zonal units that take part in the measure of migration. As very wisely Courgeau underlined in his pioneer work (1973a), the shape of the administrative regions and the population distribution also affect the propensity to move. Courgeau stated that, if there is a relationship between migratory intensity and distance of the movement, there must also be a relationship between the level of mobility and the number of spatial units in which the territory is divided. This formal relation that has been introduced in the methodological section offers a simple way to appreciate the "real" intensity differences in migration. His proposal consists of comparing the slope of the line drawn by the internal migration rate (CMI) for each area (graph 4). This is the value of K in the equation modeled by Courgeau (1973b). Despite the fact that this result cannot be considered as definitive, the logic that pervades the interpretation of K (the slope of the regression line) suggests that a high value of K implies higher migration intensity. Table 6 shows the numerical results of this analysis. On one hand we present the coefficient of the regression slope forced to have an intercept equal to zero and the determination coefficient (R^2) as a measure of goodness of fit. Results indicate an excellent fit in all countries for the different collectives (figures for R^2 are close to 1), with the exception of Greece, where R^2 is below 0.8 for four regions of birth.

Table 6. Courgeau's K and R^2 for selected countries by continent of birth. One Year Migration Interval(1)

	Courgeau's K							
Country	Native-born	Foreign-born	Europe	Africa	Asia	North America	Latin America	Total
Canada	3.685	2.532	2.104	3.196	2.676	2.806	2.638	3.437
Greece	3.513	3.370	3.389	2.986	2.968	5.157	4.501	3.500
Italy	1.293	2.665	2.397	3.188	3.573	1.484	2.723	1.345
Portugal	1.769	4.212	3.596	4.670	3.715	2.214	3.978	1.910
Spain	1.234	4.561	2.616	4.533	3.434	1.722	8.105	1.299
United States	4.452	3.855	3.613	5.777	4.683	4.552	3.373	4.393
	R^2							
Country	Native-born	Foreign-born	Europe	Africa	Asia	North America	Latin America	Total
Canada	0.956	0.970	0.957	0.982	0.982	0.986	0.936	0.958
Greece	0.751	0.831	0.812	0.797	0.906	0.779	0.864	0.759
Italy	0.999	1.000	0.997	0.994	0.998	0.985	0.998	0.999
Portugal	0.992	0.995	1.000	0.993	0.993	0.988	0.988	0.993
Spain	0.997	0.999	0.997	0.990	0.987	1.000	0.999	0.998
United States	0.999	1.000	0.999	0.993	0.999	0.992	1.000	0.999

Source: IPUMS International. For Spain: Microdata Population Register 2001 and Residential Variation Statistics (EVR). For USA: US Bureau of Census (2003). Own calculations.

The results of this analysis complement those obtained previously for each country in particular, but now we can affirm that they are completely comparable across nations. United States, Canada and Greece are the most mobile countries if we consider the population total. In an intermediate position we observe Portugal, and finally Italy and Spain are situated at the bottom level of migration

intensities. These findings are based, essentially, on the position that native-born population mobility occupies, since its weight in the total population drags the whole. As we just consider the foreign-born population the ranking varies notably. Spain and Portugal, countries of recent immigration, show higher migration intensity of those born abroad than the same population in the United States and Greece, located in an intermediate position, and Canada and Italy, situated around intensities which are quite lower. Which places of birth contribute to these differences?

Among the people born in Europe, the differences in the slopes are of minor entity. We can derive from this that it is the foreign-born group with the lowest internal mobility among all analysed continents. United States, Portugal and Greece achieve the maximum mobility of this collective, contrasted with the group of minor intensity composed by Spain, Italy and Canada.

Mobility of population born in Africa differs much according to the country of residence. It is in the United Sates where the Africans acquire the maximum mobility. An intermediate group, at a significant distance and with the lines almost overlapped is formed by Spain and Portugal. On the contrary, at a considerable distance Italy, Canada and Greece are found, with a lower migratory intensity for the Africans.

The Asians make up the collective with the lower cross-national differences. The United States stands out because of the maximum mobility, against Greece and Canada where the mobility of this group is the lowest. Spain, Italy and Portugal maintain an intermediate position with very discrete intra-group differences.

The population born in Latin-America constitutes the group that presents the more manifest distance between migration intensity in the country that leads the ranking, Spain, and the rest of the studied countries, which are closely grouped. Italy and Canada show the lowest migration intensity, slightly over that of the United States, whilst Portugal and Greece would constitute another group of higher mobility although distanced from Spain.

These results suggest some questions that deserve attention in our forthcoming works on the topic. Up to now we have found some evidence that migration intensity varies considerably according to the different groups of analysis by destination country. This result should be subjected to a new test that includes two factors that we presume of great importance: the internal group composition by nationalities and the duration of residence in the country. We can point out some preliminary results related to this latter aspect in graph 5, given the limited information on this variable in the IPUMS data sets.

Graph 4: Courgeau's *K* for selected countries by continent of birth. One Year Migration Interval(1)
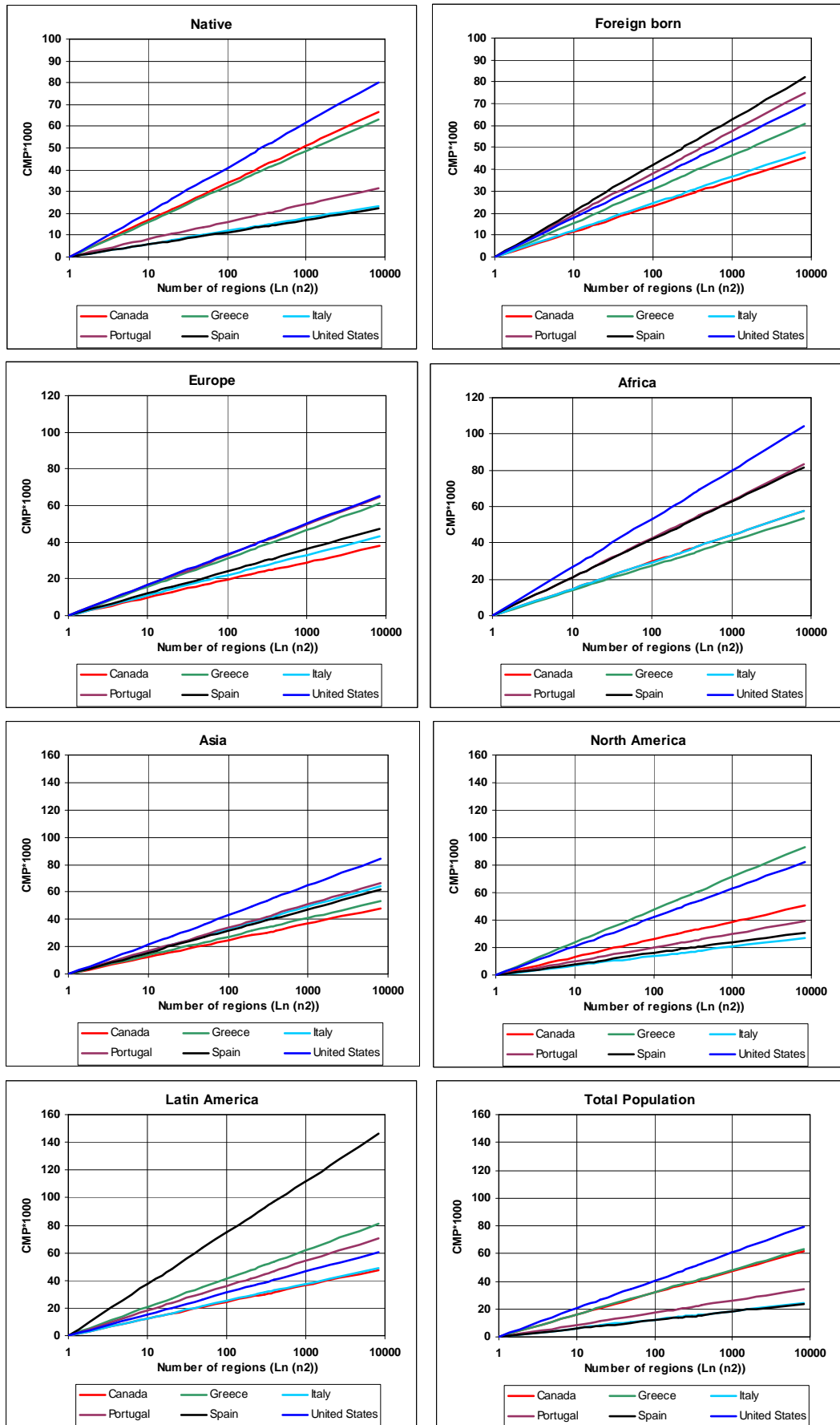

Source: IPUMS International. For Spain: Microdata Population Register 2001 and Residential Variation Statistics (EVR). For USA: US Bureau of Census (2003). Own calculations

A brief note about the effect of the duration of residence on the mobility

With the census data we have been able to study the effect of the duration of residence on the geographical mobility of the foreign-born population in some countries. Graphs 5 and 6 present some preliminary results on the impact of the duration of residence in the destination country on the medium and long distance mobility.

As it can be observed in graph 5, the intensity of the internal migrations decreases exponentially during the first five years of residence. This pattern is somehow similar to other more general ones that include all types of migrants (Courgeau, 1988; Land, 1969) and would explain the high number of internal migrations by foreigners that are registered in some countries of recent immigration, where the immigrants have a low mean of duration of residence. The result is general: the longer the duration of residence, the lower the migration intensity. However, the role of the duration of residence on the migration intensity of the foreign-born population changes by country of settlement. Canada shows the most outstanding reduction in the migration intensity, followed by Spain. On the contrary, the behaviour of the foreign-born collective in Italy and Greece is characterised by a poorer elasticity between both variables.

Graph 5. Duration of residence and interregional migration of foreign-born population(1)
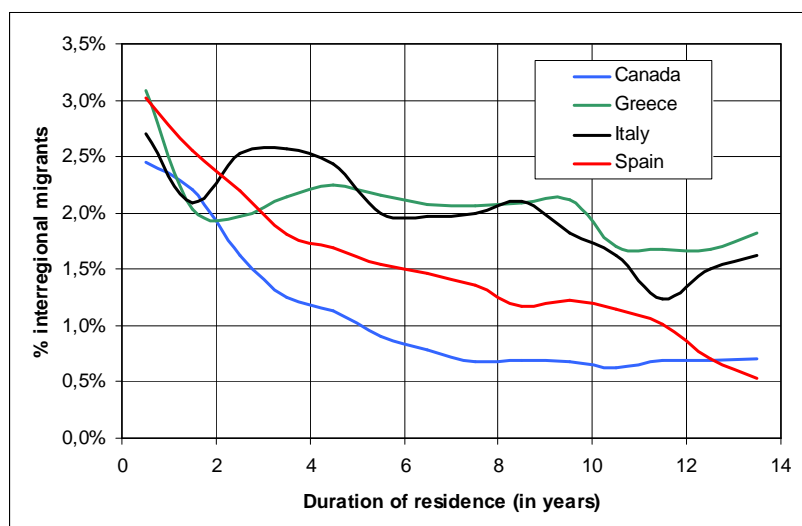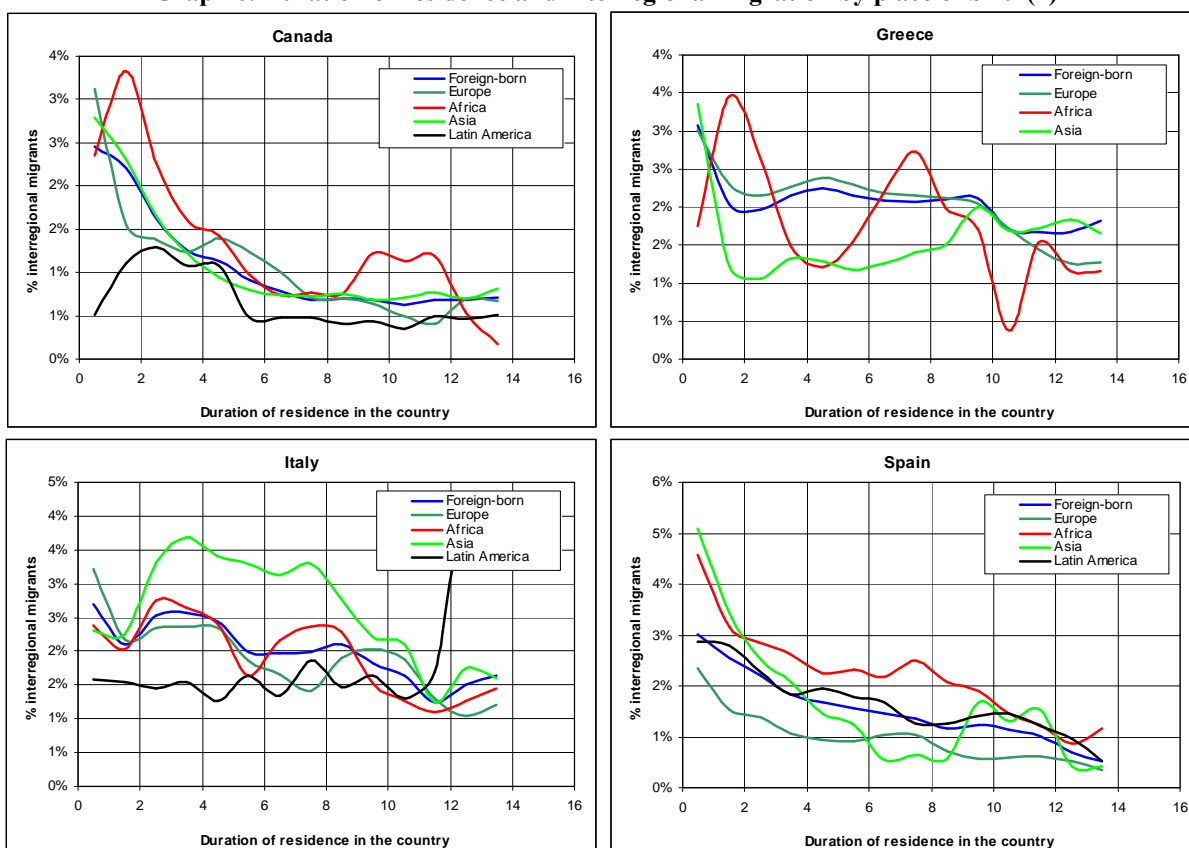

Source: IPUMS International. Own calculations.
(1) In Italy just people who do not have the Italian citizenship.

Furthermore, the effect of the duration of residence can vary in each country according to the group of place of birth, which is equivalent to admitting the hypothesis that there are patterns of segmented geographical assimilation (graph 6). This final result will be object of deeper analysis in future works, where we will integrate a more detailed approach by countries of birth in each continent.

Graph 6. Duration of residence and interregional migration by place of birth(1)

Source: IPUMS International. Own calculations.

Research results. Individual level

Medium-long distance migration

The results obtained from the micro perspective confirm those previously discussed for the aggregated data (tables 7 and 8) for sex, age and place of birth. The general pattern of most of the covariates is similar across-countries when we study medium-long distance migration (table 7), although the magnitude of the coefficients varies. The probability of having experienced this sort of mobility in the previous year is always lower for females than males, although Italian women move much less than those in the rest of the countries (around 69 females for every 100 males). At the other side we find Greece females, with a behaviour which is very close to that for males. This differential, however, is not replicated in the models for short distance mobility (table 8), where the coefficients do not change much by gender.

As we showed before, with the aggregated data, younger group (25-29) is more likely to move for all of the time intervals considered and the probability of having migrated in the previous year/s decreases with age. The gap between the baseline category and the following one (30-44) is lower

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in Greece, Spain (regarding migration in the last year), USA (for the last five years) and France (since last census). It is also in the Mediterranean countries of Greek and Spain where estimators for people over 74 are higher, probably explained by a highest incidence of strategies associated to entry in widowhood and the search of geographical proximity (if not cohabitation) to any of the children. Also return movements of former inter-regional emigrants could have some weight on this group, but this partial effect should explain more about propensity to move of people aged 60-74, at least in the countries were the time point reference is one year ago.

Attending the place of birth, we observe that the geographical origin does not affect exactly in the same way as we compare by country of residence. Generally, nonetheless, the trend observed with the aggregated data for most of the analysed countries of a higher mobility of the non-native born people persists after controlling by other socio-demographic variables. Asians propensity to emigrate in the last year is higher than that of the rest of the origins in Italy and Portugal, and it is also quite high in Spain, but it does not even equal the migration behaviour of native born population in Canada. In fact, it is in Canada where people born in the country are more likely to move than people born anywhere else (although immigrants from North-America and Oceania show a very similar pattern to them). The history of immigration in each destination helps to clarify the differences. In Canada immigration flows are not as recent as in the majority of Southern-European countries, for instance. Even though, as we include the information on the year of arrival in the models (results no included in this paper), the coefficients for Canada continue to be under the unity (although closer to 1 for those arrived after 1996), reaffirming the lower mobility of the non-natives. In any case, the longer the time spent in the country, the lower the likelihood to change region of residence (graphs 4 and 5 above).

Mobility of people born in Africa doubles that of people born in Spain, and almost doubles that of people born in Portugal (despite the fact that major collectives in this category are, for both destinations, originally from different African countries), but it is below that of native-born population in Canada, Greece, and very close to that in the United States. We cannot affirm, thus, that groups sharing this continent of birth have the same internal migratory patterns in the countries where they live.

Europeans tend to migrate less than native-born population in Canada and Greece, although this is not the case in the rest of the countries. We have to take into account that, due to the variability on the data sources, we have not been able to disaggregate more the categories of the place of birth. Europe, as the rest of continents (except maybe for North America and Oceania) groups a heterogeneous profile of immigrants from very diverse origins. In Spain, for instance, where their mobility is somehow higher than that of natives, the presence of foreign-born people from Western European countries that change residence for reasons frequently associated to better their quality of life (climate, etc) share category with the so-called labour immigrants from Eastern countries of birth.

Table 7. Models for migration status-medium/long distance

			1 year ago					5 years ago	last census
	Canada	**Greece**	**Italy**	**Portugal**	**Spain**	**The Netherl.**	**UK**	**USA**	**France**
Sex									
male									
female	,858*	,932*	,687*	,861*	,893*	,890*	,871*	,890*	,873*
age group									
25-29									
30-44	,569*	,744*	,518*	,555*	,692*	,529*	,524*	,622*	,765*
45-59	,319*	,574*	,233*	,265*	,376*	,223*	,272*	,364*	,397*
60-74	,184*	,411*	,170*	,280*	,335*	,126*	,242*	,304*	,342*
75+	,157*	,374*	,164*	,275*	,344*	,000		,224*	,189*
place of birth									
native-born									
non-native born						3,332*			,718*
Africa	,664*	,796**	1,315*	1,789*	2,283*		1,323*	1,070*	
Latin-America	,456*	1,170	1,271*	1,558*	1,869*		1,114	,747*	
North-America & Oceania	,961**	1,215**	1,149	,691	1,378		1,277*	1,548*	
Asia	,744*	1,067	2,107*	1,971*	1,769*		1,311*	1,095*	
Europe	,764*	,852*	1,551*	1,540*	1,253*		1,325*	1,066*	
marital status									
single/never married									
married/in union	1,061*	1,286*	,500*	1,092**	1,000	,545*	,799*	1,261*	1,181*
separated/divorce	1,101*	1,799*	,925*	2,140*	1,693*	,947*	1,088*	1,317*	1,324*
widowed	1,243*	1,530*	,706*	1,593*	1,123	,903*	,856*	1,218*	1,065*
educational attainment									
less than primary completed									
primary completed	1,455*	1,443*	1,091**	1,510*	1,217*	1,028		1,067*	1,642*
secondary completed	1,985*	2,068*	1,905*	2,384*	1,792*	1,652*		1,647*	2,785*
university completed	3,437*	2,609*	3,944*	4,091*	2,683*	3,239*		3,398*	4,260*
housing tenure									
owned									
not owned	3,199*	1,350*	1,529*	1,689*	3,372*		2,271*	2,469*	2,223*
employment status									
employed									
unemployed	2,124*	,785*	,936*	1,682*	1,614*	1,776*	1,289*	1,214*	1,447*
inactive	1,357*	,851*	1,305*	1,300*	1,123*	1,944*	1,103*	1,272*	1,560*
constant	,005*	,010*	,017*	,008*	,004*	,032*	,015*	,056*	,048*

*p<0,05; ** p<0,1
Source: IPUMS International. Own calculations

Latin-Americans mobility is particularly outstanding in Spain, after controlling for the rest of the explanatory variables, followed by those located in Portugal. But, as we saw for Africans, in Canada it is the group with the lowest level of medium-long distance migration (the estimated odds are half of those for native-born individuals). It is interested to go back to the results for aggregated data that manifested a certain anomalous behaviour of this collective in Spain, where their mobility is over-dimensioned.

The results suggest a relationship between timing of incoming flows and propensity to effectuate a medium-long distance internal movement. Spain, Italy and Portugal, countries of recent and very intense international immigration, obtain in general the highest estimators for most of the places of origin. At a micro level, year of arrival is of vital importance. The longer the stay, the more stable the situation in the country of destination, thus the lower the probability to have moved in the last year (results of the models are not included in the paper, but an aggregated vision was offered in the previous section – graphs 4 and 5). Finally, intra-continent differences would also explain part of these cross-national divergences. We will try to deep into these divergences by specific country of birth in future research on this topic.

The effect of marital status differs across countries. Relationships within the family do vary depending on the cultural norms prevalent in the different contexts. Single population are more willing to move in the The Netherlands, Italy and the UK, but separated or divorce subjects have a higher probability in almost all countries of having experienced a medium-long distance migration in the last year, maybe often as a consequence of their entry in this status. After them, the widows get the highest values, probably because of the same reason. Maybe they have fewer commitments that link them to the place of residence or maybe it is the change in their marital condition which implies the new mobility.

Also generalized it is the fact that the higher the academic attainment, the higher the probability of having emigrated in the period considered. People with a university degree move four times more (all other variables set to zero) than people with no completed studies in Portugal, Italy and France and around three times more in the rest of the countries, for which Spain and Greece show the smallest differences between the extremes. It is interesting to highlight this effect of education since inter-regional migration in certain countries, such as Italy and Spain, was in recent past associated to labour mobility, following to some extent the same patterns than international immigrants would eco years after. In 2000-2001, controlling by the rest of the explanatory variables, medium and long distance migration is more frequently experienced by those who are best prepared in terms of formal education.

Not owning the dwelling has a relatively important positive effect across the selected countries. Ownership of the house is the most relevant explanatory element in Spain (although in Canada the estimator is quite close), country where on the other hand the incidence of owned dwellings is particularly high, and also in the UK. Having a property prevents from emigrating to another major administrative unit. In Portugal, Italy and Greece the obtained figures, although above one, are the lowest.

People who are unemployed or inactive at the time of the Census are, in general, more likely to have migrated (medium-long distance) in the previous year than employed people. It is reasonable to state that persons who have a stable employment situation would be more reluctant to change province/region of residence (unless it is a job requirement) than a person who is jobless or have not that sort of tight to place (students, retired people, etc). Still we find that Greece is the exception and those in these situations are less mobile (for the period considered) than employees. Something similar happens in Italy for the unemployed, although the coefficient is quite proximate to unity, indicating that differences are modest.

Short distance migration

Results for short distance mobility do not differ much from those for medium and long distance (table 8). Women still move less, although in general (Greece is the only exception) the estimators are now closer to one, pointing out that the gap with regards to men has shorten. Assuming that this kind of migration is mainly associated to the residential mobility, this result was quite expectable.

Something similar is observed for the influence of age groups. They follow the general trend already discussed for inter major administrative unit migration, but we also find slight differences for older groups in Italy and Portugal that reveal the increase in the probability of having changed municipality of residence during the previous year of those aged 75 and over, in relation to the precedent category. That is, maybe a situation of more dependency explains this discrete augment in their mobility. Residential strategies linked to a deterioration of the health conditions may be one of the main reasons for this finding: people moving to one of their children's home or getting a place to live that it is closer to them. Once more, Greece behaves differently in the sense that coefficients are all higher, denoting that age is not quantitatively so important and, furthermore, the increase of the value is observed from the group 30-44 to the group 45-59.

With regards to place of birth, we obtain that in Canada foreign-born people are less prone to move than native-born people, as we already got in the model for longer distances. However, the ranking of the origins have changed, Europeans' pattern is now more similar to that of Canadian-born population and also the position of Latin-Americans has been modified and, comparing to them, Africans and Asians have in this case lower estimators. Latin-Americans move, controlling by the rest of the covariates and compared to the other continents of births, more at short than long-distances. In Greece, as in Canada, all groups are less likely to move than people born in the country and, again as in Canada, Africans and Asians have the smallest coefficients.

Table 8. Models for migration status-short distance

| | | 1 year ago | | | |
	Canada	Greece	Italy	Portugal	Spain
sex					
male					
female	.875*	,868*	,919*	.904*	,911*
age group					
25-29					
30-44	.509*	,786*	,575*	.487*	,512*
45-59	.297*	,888*	,254*	.225*	,232*
60-74	.220*	,728*	,195*	.136*	,179*
75+	.156*	,502*	,259*	.228*	,164*
place of birth					
native-born					
Africa	.585*	,633*	2,153*	1.678*	1,958*
Latin-America	.678*	,905	1,696*	1.612*	1,796*
North-America & Oceania	.850**	,905	,851	.614	1,080
Asia	.656*	,565*	1,934*	1.485	1,124
Europe	.848*	,718*	1,391*	1.194**	1,690*
marital status					
single/never married					
married/in union	1.130*	,867*	,920*	1.994*	1,511*
separated/divorce	1.505*	,968	2,431*	3.563*	2,765*
widowed	1.357*	,903*	1,420*	2.698*	1,874*
educational attainment					
less than primary completed					
primary completed	1.076	1,689*	1,166*	1.498*	1,269*
secondary completed	1.368*	2,756*	1,434*	2.285*	1,936*
university completed	1.770*	3,742*	1,771*	2.989*	2,175*
housing tenure					
owned					
not owned	2.124*	1,192*	1,235*	1.175*	1,339*
employment status					
employed					
unemployed	1.414*	1,014	,632*	1.011	,944**
inactive	1.191*	1,157*	,788*	.772*	,854*
constant	.031*	,016*	,029*	.010*	,010*

*p<0,05; ** p<0,1
Source: IPUMS International. Own calculations

The role of Africans is especially interesting since, being quite settled in Canada and Greece, it is the group with highest probabilities of having moved in Italy, Spain and Portugal. Again, we stress that the chronology of the incoming flows and the different cultures and origins those Africans represent in the various contexts considered help to understand these disparities. For instance, if Egyptians stand out to be the most present African nationality in Greece, Moroccans constitute, by far, the first in Spain. Also in the three countries (Portugal, Spain and Italy), Latin-Americans have high probabilities of moving. Europeans, on the other hand, are more likely to change municipality in Spain, whilst Asians are more mobile in Italy. In general, however, these three Western-Mediterranean countries (Portugal, Spain and Italy) show more similar patterns.

As we saw for medium-long distance, marital status does not have the same influence across countries. Single people are more likely to move in Greece, but in the rest of places the all other situations are more prone to have experienced a recent short distance migration. In fact, the divorced and separated are the ones with highest coefficients in all countries, as we suggested before, mobility in these cases could be partially understood as a consequence of a change in the marital status.

There is no doubt (despite the differences in the magnitudes across countries) about the influence of the academic attainment. It is for long distance mobility, but also for short distance, that those who are more likely to migrate are the best prepared. The differences are more noticeable in Greece and Portugal and less relevant in Canada and Italy, but the results are really consistent for all data sets and territorial perspectives of analysis. The higher the formal education received, the higher the chance to migrate, regardless place of birth, sex, age, etc. This break a trend that characterized some of these countries in recent periods in past, when labour migration would affect persons with low qualifications.

Being the ownership of the house (totally or not) prevents from moving, since it is normally a result of a more stable situation at the place of residence. Even though, coefficients are in general lower for non-owners than in the case of medium-longer distance, indicating that those who do not own the dwelling have higher probability to be living in a different major administrative unit a year ago than to be living in a different minor administrative unit, the rest of variables kept constant. Obviously, part of the explanation relies on the fact that part of the inter-municipal mobility is an effect of the acquisition of a house. The difference between owner and non-owners is more remarkable in Canada, where the coefficient almost doubles those for the Mediterranean countries.

Finally, the behavior observed according to the employment status, as before, is not the same for all countries. People who are unemployed by the time of the Census data collection are more likely to have experienced a short distance migration in Canada, but estimators are really close to one in Portugal, Greece and Spain (showing not relevant differences with regards to employed population) and even lower to one in Italy. Short distance migration, as we have mentioned before, is not so much related to the labour market demand as in the medium-long distance, so it is somehow predictable that change of residence within the major administrative unit in the countries where these units do not imply much distance correspond more often to people who are employed and can afford a new house. In Canada, where the territorial units of reference are much more extensive, migration may be also much related to change in labour situation (search of a new job), thus implying the higher mobility of the unemployed persons.

To sum up, the logistic models show that:

a) General patterns by place of birth, after controlling for other socio-demographic characteristics, are similar to those already discussed for aggregated data.

b) Females tend to move less and gender differences are higher for medium and long distance migration. In Italy, the gap between females and males for this sort of mobility is the most noteworthy.

c) The effect of educational attainment is regular across countries of residence: the probability of having experienced a change of residence in the period considered increases with the academic level, both at short and medium-long distance mobility.

d) Also the fact of being a house owner diminishes the likelihood of having migrated in all selected countries and this influence is relatively higher for inter-major administrative unit mobility.

e) Marital status and employment status have a less homogeneous behavior as we compare the different countries. Single people are more likely to move in The Netherlands, Italy and the UK as we study changing in major administrative units, but the importance of the separated and divorced people is outstanding in the rest of the countries. In fact, as we refer to short distance this is the group more prone to migrate.

f) In general, unemployed have moved more than employed people at long distances, but this relationship differs by country of residence as we focus on the short distance migration. We have to bear in mind that short-distance mobility is more associated to the housing market, whilst long-distance responds more often to other reasons, such as job searching.

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