

PARTICIPATION OF IMMIGRANTS IN THE EUROPEAN UNION'S NATIONAL LABOUR MARKETS IN A CONTEXT OF COMPLEMENTARITY: SUBSTITUTION AND COMPETITION WITH LOCAL LABOUR FORCE*

Paper for session "Economic determinants and effects of international migration" (chair: Turgay Unalan)

EAPS EUROPEAN POPULATION CONFERENCE 2006

Liverpool, 21-24 de junio de 2006

Authors:

Elena VIDAL**

Fernando GIL***

Andreu DOMINGO****

Centre d'Estudis Demogràfics

E-08193 Bellaterra, Barcelona, Spain

E-mail: evidal@ced.uab.es, fgil@ced.uab.es, adomingo@ced.uab.es

* This paper is a product of the R+D project SEJ2004-00846 / SOCI, funded by the Spanish Ministry for Education and Sciences, through the "Plan Nacional de Investigación Científica, Desarrollo e Innovación Tecnológica".

** Elena Vidal is an assistant researcher at the Centre d'Estudis Demogràfics (CED) of Barcelona.

*** Fernando Gil is a researcher at the CED and holder of a "Juan de la Cierva Program" grant for doctors, funded by the Spanish Ministry for Education and Sciences. He is also coordinator of the research group "Grup d'Estudis de Demografia i Migracions" (GEDEM) within the CED, funded by the Autonomous Government of Catalonia (ref: 2005SGR00930).

**** Andreu Domingo is a researcher at the CED, and director of the research group GEDEM.

1. INTRODUCCIÓN: COMPLEMENTARITY AND INTERNATIONAL MIGRATION IN EUROPE

1.1 *International immigration in a context of ageing and dual labour markets*

In the last decade, European Union countries have gone through very different experiences concerning migratory flows in an economic context of increasing globalisation of capitals and labour markets (Baldwin-Edwards, 1997; Arango, 2003; Castles and Miller, 2003; Balch, 2005). Almost all the Member States currently have positive migratory growths; however the size of the arriving flows is extremely diverse. In recent years the most paradigmatic case can be seen in southern EU countries (Spain, Greece, Italy and Portugal), that have recently evolved from emigration countries to immigration ones with a sudden increase in the number of non-EU citizens arriving to live and work in them (Baldwin-Edwards and Arango, 1999; Cornelius, 2003; Ribas-Mateos, 2004).

Frequently these recent migratory flows have been interpreted in terms of purely demographic replacement, i.e. the immigrant population is substituting the national one, which is in process of ageing (European Commission, 2002). From this point of view, the newcomers are completing the decreasing age cohorts of the host population in order to maintain the stability of their age structure. This concept is known as “replacement migration” and it comes from a study published under this title by the United Nations Population Division (2001), with the aim to estimate the number of immigrants that would be necessary, in a series of countries, to maintain the size of the total and the working-age population, as well as the ratio between old dependent and working age population (Population Division, 2001). Although the main message of the study is that international migration is not the solution to compensate ageing due to the magnitude of this process –and therefore other social policy measures are needed to face this challenge–, and in spite also of the criticisms that it has deserved (Coleman and Rowthorn, 2004), the arrival of foreign immigrants continues to be frequently interpreted in terms of filling labour shortages caused by changes in the age structure of the host population due to ageing.

Nevertheless, demographic trends are not the only factor explaining the growing importance of international migration; socio-economic factors also intervene, as the entry of big amounts of immigrants in southern EU Member States –in parallel to the existence of relatively high unemployment levels in specific sectors of activity and regions– demonstrate (Abad, 2002). The development of dual labour markets where immigrant workers hold those jobs that native workers try to avoid, is behind this reality, as Piore’s segmented labour market theory explained long time ago (Piore, 1979). The need to fill the bottom positions in the job hierarchy and the emergence of new activities linked with domestic reproduction (mainly caring for children and the elderly) in a context of growing female participation in the labour market, are much more decisive to explain the arrival of foreign immigrants than general labour shortages. These trends are fuelled in some of these host countries by the quick development of low-regulated, low-paid and unstable activity sectors like personal services, the tourist sector, intensive agriculture or the building industry, where a significant share of the immigrants work.

1.2 *The concept of complementarity between foreign and national labour forces*

Labour force segmentation has specially been significant in southern EU countries (see Martinez Veiga, 1999; Vitale, 2000; Parella, 2003; Solé and Parella, 2003; and Garrido and Toharia, 2004, for the Spanish case), where incorporation of the national young cohorts (especially young women) to the labour market has been accompanied with their social promotion, as their education level is much higher than that of older generations (Domingo and Houle, 2004; Domingo, forthcoming). Though this process is not new and has already been experienced and studied in other countries (Dickens y Lang, 1988; Enchautegui, 1998),

the situation in southern EU countries is especially interesting due to the immigration growth that this social process is promoting and that is being materialised in a very short period of time. The pull effect of increasing the educational level of the native population, especially among younger female generations, on international migration has previously been analysed for Western Europe (Jennissen, 2003), and should also be considered as one of the most significant explicative factors of the international migration waves in those southern countries (Domingo, 2002; Carrasco, Jimeno and Ortega, 2004). In this sense, some authors have underlined the complementary role of the foreign immigrant population in relation to the autochthonous population as the former fills in the vacancies left by the latter's educational, social and labour promotion (Domingo and Houle, 2004).

In brief, we use the concept of *complementarity* to describe the role of foreign immigration in the native population's social promotion. This concept does not only refer to the labour area. Other contexts that can be understood as markets and that imply social mobility of those involved, such as the marriage market or residential market, should also be explored. However, the area where this phenomenon has been better investigated, and in which we will also focus, is the labour market. More concretely, differences among activity sectors and territories within the EU will be the central points of our research.

Up to now, our research group has analysed complementarity in Spain, focusing on the role played by the foreign population in relation to the Spanish one (Domingo and Houle, 2004; Domingo and Houle, 2005; Gil and Domingo, 2006). Now, we want to apply this framework in other European countries, taking into account that the complementarity of the foreign population in the labour market does not probably work in the same way in each country. Moreover, this conceptual framework calls for an analysis by activity sector. In this way, and starting from the Feld's proposal (2000), we will verify that in certain sectors this complementarity process implies a virtual *substitution* of the national population by the non national one while in other sectors there is a *competition* between them. Finally, other sectors continue to be practically reserved to the national population of each one of the EU Member States (Gil and Domingo, 2006).

1.3. Objectives and structure of the paper

Our starting hypothesis is that the process of *complementarity* between the immigrant and the national labour forces is more related to the socio-demographic trends of the host societies and the dynamics of their labour markets than to the characteristics of the immigrants. This paper is going to check, using LFS data, if processes occurring in the host countries such as the decreasing size of birth cohorts entering the labour market due to fertility decline, the general improvement of educational levels (especially those of women), and the increasing participation of women in the labour market, are generating a demand for (mainly poorly qualified) main d'oeuvre that the national population is not able to fill.

A second aim of this paper will be the analysis on how *complementarity* between national and immigrant labour forces works across activity sectors in the EU Member States, showing differences and similarities between them. With this aim, we will select three representative sectors with a high presence of foreign workers and we will group the 15 countries in three clusters to obtain more robust data. This territorial and sectorial analysis will allow us to differentiate *substitution* (where the immigrant labour force smoothly replaces the national one) and *competition* (where foreign and national workers incorporate in the same activity sector) dynamics by studying some socio-demographic characteristics –sex, age and educational level– of both native and non-national populations. Especial attention will be devoted to the analysis of education and participation levels for both native and non-national populations.

This diversity of objectives will be reflected in the paper's structure. After this first introductory section, the second part will present the data source: the European Union Labour Force Survey. The third section will analyse the evolution of the working age population in the EU countries to check if the current increase in the number of foreign immigrants is due to demographic factors that would cause shortages in the labour market. The fourth part will analyse the evolution of the educational level of national people in host EU societies as well as the labour market participation levels of both nationals and non-nationals. This section will allow us to know how *complementarity* works in each country. After clustering the 15 countries into three big groups, the fifth section of the paper will finally present this process in three activity sectors with high foreign immigrant participation: construction, hotels and restaurants, and domestic service. *Competition* and *substitution* dynamics will in this way be differentiated through a sectorial and territorial analysis.

2. PRESENTATION OF THE DATA SOURCE: THE E.U. LABOUR FORCE SURVEY

The European Union Labour Force Survey, usually known as the LFS, represents, without any doubt, the key tool to study the evolution of the labour market at the European Union level. It provides population estimates for the main labour market characteristics, such as employment, unemployment, inactivity, hours of work, occupation, or economic activity, as well as important socio-demographic characteristics such as sex, age, education, type of household, and region of residence. The methodology used follows mainly the Recommendation of the 13th International Conference of Labour Statisticians, convened in 1982 by the International Labour Organisation⁵. The results are therefore harmonized and internationally comparable.

The LFS currently covers all the territories of the Member States of the European Union⁶, the EFTA countries (excluding Liechtenstein), as well as Bulgaria, Croatia and Romania, although in our research we have only used data for the 15 Member States that formed the EU before the 2004 enlargement. This is because we wanted to compare data corresponding to three different years (1995, 2000 and 2005) and only data for the former EU-15 was available for the whole period. Geographical homogeneity was also desirable so the new Member States have therefore been excluded of our paper. Moreover, most of these countries still have very different trends concerning immigration and labour market characteristics compared with the former 15 Member States.

This survey is currently a quarterly household sample survey, but prior to 1998 it was carried out annually in spring. For this reason, we have selected Quarter 2⁷ data for the three selected years in order to make results as comparable as possible.

Is the LFS an adequate instrument to measure the labour market participation and characteristics of foreign immigrants living in the EU? We think so, given the population coverage of the survey and its sample size. The LFS results cover the total population usually residing in Member States, except persons living in collective or institutional households (many few immigrants are in that situation). While demographic data are gathered for all age groups, questions relating to labour market status are restricted to persons in the age group 15 years or older except for Spain, Sweden (before 2001), and the United Kingdom, where this age limit is 16 years. In total, the LFS sample size across the EU

⁵ For instance, the division of the population into employed, unemployed and inactive persons follows the International Labour Organisation definition. Other concepts also follow as close as possible the recommendations of ILO.

⁶ Data for France do not include the overseas departments (DOM).

⁷ Estimates of EU aggregates are located in the second quarter and are calculated using 'Spring data' which for most countries is Q2, except Austria and France which is Q1. From 2003, the survey in Luxembourg provides data for the whole reference year only. In the absence of quarterly results, the same yearly figures are repeated in each quarter.

is about 1.7 millions individuals. We consider that such a large number allows to study the main characteristics of the foreign population and their comparison with the national one. Nevertheless, a quality check is previously needed to assure the reliability of the LFS data on foreign immigrants. For this reason we have proceeded to compare the number of non-national citizens living in the EU-15 Member States provided by LFS data with the figures on the same subject coming from the Eurostat migration database⁸ (Table 1).

TABLE 1. Percentage of Non-national population: LFS (1995, 2000 and 2005 data) and Eurostat migration database (last available data). EU-15 Member States.

Country	LFS Non-national pop +15 years old 1995	LFS Non-national pop +15 years old 2000	LFS Non-national pop +15 years old 2005	Eurostat migr. database Non-national pop total population (last year available)
B	8.1	8.5	8.7	8.3 (2000)
DK	2.0	3.0	3.5	5.0 (2004)
D	8.1	8.1	8.8	8.9 (2004)
EL	1.3	2.7	4.9	6.9 (2001)
E	0.7	2.3	8.3	6.6 (2004)
F	6.1	6.0	5.3	-
IRL	3.0	3.6	6.9	5.4 (2003)
I*	0.5	0.8	6.0	2.3 (2002)
LU**	32.5	36.8	-	38.6 (2004)
NL	4.4	4.7	4.3	4.3 (2004)
A	7.9	8.0	9.3	-
P	1.0	1.7	2.6	-
FIN	0.8	1.2	1.5	2.0 (2004)
S	4.9	4.9	5.0	5.3 (2004)
UK	3.8	4.5	5.6	4.7 (2003)
EU	4.3	4.7	6.6***	5.9 (2004)****

* Italian data refers to data by country of birth (% of people born in other countries), as data by nationality is not available. ** 2005 annual data for Luxembourg was not available when this table was made (quarterly LFS data are not provided by this country). *** EU total for 2005 does not include data from Luxembourg. **** Percentage calculated by the authors from countries with available data.

Source: Eurostat – EU Labour Force Survey and migration database.

Both types of data are not fully comparable: LFS data are survey data referred to the population aged 15 years old and older, whereas the information found in the Eurostat migration database corresponds to the whole population, but referred to different years and from diverse sources (and figures are not available for several countries). Nevertheless, the magnitude of the foreign population in the EU countries measured by both sources is similar. In general, as LFS results for 2005 are more recent than the data from Eurostat migration database, the proportions of non-nationals are a bit higher. The exceptions are the Scandinavian countries (Denmark, Finland and Sweden) plus Greece, where LFS data seems to underestimate the number and proportion of foreign people. The opposite situation appears in Spain and Ireland, but the rapid increase of foreign immigrants in those countries justifies the higher proportions of non-nationals in the LFS wave corresponding to 2005 Quarter 2⁹. As LFS data on immigration seem credible, we therefore think that the Labour Force Survey is a valid instrument to analyse the characteristics of international immigrants.

⁸ The Eurostat migration database shows information on migratory flows of the EU countries coming from different types of sources (national or municipal registers, administrative files on labour or residence permits, censuses, estimations...) collected annually by Eurostat from the national statistics institutes. Due to its origin and characteristics, these data are not completely comparable but give us an approximation to the magnitude of migration flows in these countries.

⁹ The Spanish *Padrón continuo* (municipal continuous registers) indicates, for instance, that in this country the 8,5% of the registered population had a foreign nationality on 1/1/2005 (source: Spanish

3. WORKING AGE POPULATION AND LABOUR SHORTAGES IN THE E.U. MEMBER STATES

3.1. The foreign working age population: Current size and recent evolution

LFS results show that the number of the non-national population aged 15 and over in the EU-15 has passed from 12.9 million in 1995 to 14.5 in 2000 and 20.8 million in 2005. These figures mean that the proportion of foreigners living in the former European Union has evolved from 4.3% in 1995 to 4.7% in 2000 and 6.6% in 2005 (Table 1). Therefore this proportion is in 2005 1.5 times higher than ten years before. However, we have seen in Table 1 that this growth has very different magnitudes across countries. Italy and Spain have experienced the most important increase in the proportion of the non-national population, which has multiplied by around 12 in ten years. These two countries are followed by the other southern EU Member States and Ireland, where the share of non-nationals has been multiplied by 2 to 4. At the other end of the scale, countries like Belgium, Germany, Austria, Netherlands and Sweden have experienced very low increases in foreign population, under the average for the EU-15. In France the share of non-nationals has even decreased, although this trend may be a consequence of a high rate of naturalisation. To avoid this possibility, we have analysed the growth of foreign-born population in the EU Member States using LFS data (Table 2).

TABLE 2. Percentage of foreign-born population: LFS (1995, 2000 and 2005 data) and Eurostat migration database (last available data). EU-15 Member States.

Country	LFS Foreign-born pop +15 years old 1995	LFS Foreign-born pop +15 years old 2000	LFS Foreign-born pop +15 years old 2005
B	9.9	11.0	13.0
DK	4.2	5.7	6.7
D	-	19.2	18.0
EL	4.0	4.6	6.7
E	2.1	3.7	10.1
F	12.5	12.6	11.7
IRL	5.4	7.2	10.3
I	0.5	0.8	6.0
LU*	32.5	36.8	-
NL	9.5	12.8	12.6
A	11.7	11.6	14.9
P	3.8	4.6	6.0
FIN	0.1	0.5	2.6
S	7.2	10.6	11.4
UK	7.7	8.7	10.4
EU	6.3	7.4	10.0**

* 2005 annual data for Luxembourg was not available when this table was made (quarterly LFS data are not provided by this country). **EU total for 2005 does not include data from Luxembourg.

Source: Eurostat – EU Labour Force Survey.

When the criterion of “nationality” is replaced by that of “country of birth”, then the relevance of international immigration increases: LFS data shows that in all the Member States the proportion of people born abroad is higher than the percentage of non-nationals. The

National Statistics Institute). This is a proportion very similar to that provided by the LFS 2005 Q2 for Spain.

importance of naturalisation in some countries and the antiquity of the migratory movements have partly modified the ranking of the countries with more immigrants. For instance, France appears among the top positions, whereas the southern Member States are now at the bottom of the ranking. However, the latter countries show a clear increase in the share of foreign-born population, whereas certain Member States with a long history of international immigration show less significant growths and even, in the cases of France and Germany, a recent reduction in the proportion of persons born abroad.

3.2. Has the EU an ageing and decreasing national working age population?: An analysis of the demographic structure and its links with immigration growth

LFS data for the period 1995-2005 shows that the volume of foreign working age population has increased more in Southern Member States plus Ireland than in other countries where the volume was previously higher. As a first hypothesis, this diverging evolution may be caused by different national demographic structures among Member States: those countries which are currently receiving more immigrants would be those where the working age population is decreasing and/or ageing faster. LFS data analysis shows that this hypothesis is not true: the demographic factor by itself does not explain the volume of immigrants arriving to each country. The main results of this analysis are three: a) national working age populations have not decreased in the EU; b) they have even grown in the southern Member States and Ireland; and c) these countries are the least affected by ageing.

a) National working age populations have not heavily decreased during the 1995-2005 period: When analysing population aged 15-64 by nationality, only Germany has experienced a very small decrease in its national working age population (data for Italy does not exist). The other EU countries do not show a significant variation (Greece, United Kingdom) or even small increases. Only Ireland (+18%) and France (+7%) present relatively more important growths in the size of their working age populations (see Table 3, first column).

It could be argued that the working age population with national citizenship has not decreased because a large number of foreign-born immigrants have obtained the nationality of the host country. To avoid any doubt, the same analysis about the growth of the "national" population aged 15-64 has been done using the country of birth as criteria to differentiate national and foreign working age population. The previous results are somewhat modified when analysed by country of birth¹⁰: variations in the national working age population are more important and negative growth is found in more countries. The size of the national born working age population has somewhat diminished in Belgium, Denmark, Italy, Austria, Sweden and United Kingdom (data for Germany is not available) between 1995 and 2005. These decreases are however very small and only Italy shows a more important diminution (-7%). The growth of the national born working age population is also moderate in those countries with positive evolution (Germany, Greece, Spain, Portugal, Finland), and only Ireland (+17%) and France (+7%) show again more important increases (see Table 3, second column).

¹⁰ Variations are more important in countries where acquisition of citizenship is easier. High naturalisation rate seems to explain why in some of these countries the size of the population aged 15-64 born in the country has decreased whereas the number of national citizens of this age group has grown.

TABLE 3. Growth of the national working age population during the period 1995-2005. EU-15 Member States (except Luxembourg).

Country	National w.a.p growth 1995-2005 (1995=100)	National born w.a.p growth 1995-2005 (1995=100)	National pop. aged 20-29 1995-2005 (1995=100)	National pop. aged 55-64 1995-2005 (1995=100)	Ratio national pop. aged 20-29 to pop.aged 55-64 2005
B	102	98	91	103	1.10
DK	101	99	79	143	0.85
D	99	101**	87	88	0.93
EL	100	101	102	88	1.14
E	102	101	90	107	1.32
F	107	107	94	114	1.14
IRL	118	117	119	137	1.60
I	100*	93	81*	103*	1.01*
NL	105	100	81	134	0.95
A	102	99	79	118	0.98
P	103	102	109	100	1.27
FIN	103	105	105	134	0.93
S	104	97	87	138	0.87
UK	100	99	79	122	0.94
EU	102	100	88	107	1.04

* Italian data refers to total working age population, as data by nationality is not available. ** German data refers to the period 2000-2005, as data by country of birth is not available for 1995 (in 2000 and 2005 persons born outside Germany have been identified as those classified in the column "no answer").

Source: Eurostat– EU Labour Force Survey.

Using therefore both criteria (nationality or birth country) results demonstrate that the national working age population has maintained quite stable during the last 10 years in most of the EU countries, and the observed variations are not very significant.

b) Within this general evolution, Southern Member States and Ireland -the countries receiving more immigrants- have experienced a positive growth of their national working age population, even very positive in the case of Ireland. As a consequence, the existence of a decreasing national working age population is not the argument explaining the arrival of large numbers of immigrants to these countries. The only exception seems to be Italy, where the decrease of the population aged 15-64 has been so important (-2.7 millions) that has not been compensated by the arrival of immigrants during the period 1995-2005 (+2.6 millions).

c) The ageing process affects national working age population in all the EU countries, but in a lower degree in those Member States receiving more immigrants. The average age of the national working age population has grown in all the EU Member States during the last decade, passing from 39.07 in 1995 to 39.98 in 2005 (Italy and Luxembourg data not included), so an increase of 0.91 years, if only persons with the own nationality of each member state is included. Increases range between 0.05 years in Germany and 1.94 in Denmark. If the citizenship criterion is replaced by that of birth country, then the average age of the population aged 15-64 and born in their country of residence has experienced an even more important growth: 1.22 years (data from Germany and Luxembourg not included), from 38.58 in 1995 to 39.80 in 2005. The ageing of the national working age population does not show clear territorial patterns, as countries with different demographic and migratory trends like Denmark, Netherlands, Ireland, Spain or Italy are among those experiencing a more steep growth in their average age, whereas Germany, France, Greece and Portugal are found at the other extreme.

Nevertheless, the ageing of the working age population –and its potential influence on immigration trends– is not only determined by the internal distribution of the population by age, but also by the increasing or decreasing size of the birth cohorts entering or exiting the 15-64 age group (European Commission, 1998: 14). Relative ageing may be caused by a decreasing number of people in the age group 20-29¹¹ (those entering in the labour market and then occupying empty jobs) or an increasing number of people in the age group 55-64 (those exiting the labour market and therefore creating job opportunities for the young). Both trends, implying an increase in vacant jobs, should theoretically determine a growing demand for immigrants to fill them, demand that should be added if both trends occur at the same time in the same country. As we are going to show, results are in the opposite direction than expected.

The evolution of the age groups 20-29 and 55-64 in the last decade is shown in the third and fourth columns, respectively, of Table 3. LFS data show that, at EU level, the size of the 20-29 is decreasing (-12% between 1995 and 2005) and the volume of the 55-64 age group is increasing (+7%). This is not strange in a context of ageing. However, differences between countries are important: Member States like Ireland, Portugal or Greece have experienced a growth in the age group 20-29, whereas the population aged 55-64 shows a decrease or an increase below the EU average in Greece, Portugal or Italy.

A combination of both indicators is the ratio “national population aged 20-29 to 55-64 in 2005” (Table 3, fifth column). It can be considered a working age population replacement or substitution index: if the ratio is >1, population cohorts entering in the labour market are larger than those that are exiting; if the ratio is <1, the opposite is occurring. Results show that Ireland (1.60), Spain (1.32), Portugal (1.27) or Greece (1.14) have a relatively younger national working age population in terms of substitution (EU average 1.04). The opposite situation can be found in Denmark (0.85), Sweden (0.87), Finland or Germany (0.93). Similar results are found if the citizenship criterion is replaced by the country of birth criterion in order to define the “national” working age population¹².

Therefore, LFS data demonstrate that Southern Member States (with the exception of Italy) and Ireland, which are receiving the biggest amounts of foreigners aged 15-64, are however the countries the least affected by the ageing of the national workforce, as entries in the labour force (corresponding to the age group 20-29) are, in these countries, more important than exits in the age group 55-64. This surplus of potential workers in Southern Member States and Ireland contrasts with the deficit observed in the other EU countries. However, the latter are currently receiving less foreign immigrants in active age than the former.

In conclusion, the arrival of immigrants is not determined by a national working age population which is decreasing or ageing. Results of this part even show the opposite situation: during the last decade, the EU countries which are receiving more immigrants are those characterised by having a relatively younger and growing national working age population.

¹¹ The age group 15-19 has not been included as the activity rate in this group is not very important in the European Union.

¹² At EU level, the national population aged 20-29 would experience a decrease of 15% instead of 12%, the 55-64 age group a growth of 11% instead 7%, and the corresponding ratio would be 1.06 instead 1.04.

4. EDUCATION AND ACTIVITY LEVELS: A PANORAMA IN THE EU-15 MEMBER STATES

4.1. Education levels of the national population

Growth in the size of the active population in Europe during last decades has been mainly stimulated by the increase of women's labour force participation. This increase has been especially significant in countries with low educational levels in old generations and where there has been an important educational improvement in young generations, mainly for women. In order to understand the importance of that educational shift within the 15 countries, we have compared the percentages of national men and women with low, medium and high education for two age groups: 20-29 and 55-64 years olds.

TABLE 4. Educational level* of the national population aged 20-29 and 55-64, by sex. Former EU-15 Member States. LFS data, year 2005 Quarter 2**

		20-29					55-64		
		Low	Medium	High			Low	Medium	High
Belgium	Male	21%	54%	25%	Belgium	Male	47%	29%	24%
	Female	12%	52%	36%		Female	56%	25%	19%
Denmark	Male	19%	60%	21%	Denmark	Male	19%	55%	25%
	Female	16%	60%	24%		Female	27%	46%	27%
Germany	Male	20%	70%	10%	Germany	Male	10%	58%	32%
	Female	20%	68%	12%		Female	26%	60%	14%
Greece	Male	20%	66%	15%	Greece	Male	60%	25%	15%
	Female	12%	68%	20%		Female	74%	19%	7%
Spain	Male	40%	31%	29%	Spain	Male	70%	11%	18%
	Female	28%	33%	39%		Female	81%	10%	9%
France	Male	18%	51%	31%	France	Male	42%	41%	17%
	Female	14%	47%	39%		Female	53%	32%	15%
Ireland	Male	18%	55%	27%	Ireland	Male	63%	21%	17%
	Female	12%	50%	38%		Female	59%	26%	16%
Italy	Male	31%	61%	8%	Italy	Male	66%	25%	9%
	Female	22%	65%	12%		Female	76%	18%	6%
Luxembourg	Male	17%	61%	22%	Luxembourg	Male	35%	46%	19%
	Female	17%	60%	23%		Female	59%	35%	6%
Netherlands	Male	27%	56%	17%	Netherlands	Male	35%	41%	24%
	Female	20%	58%	22%		Female	57%	29%	14%
Austria	Male	9%	79%	12%	Austria	Male	19%	60%	21%
	Female	10%	77%	14%		Female	38%	55%	7%
Portugal	Male	60%	33%	8%	Portugal	Male	86%	7%	7%
	Female	44%	38%	19%		Female	89%	4%	7%
Finland	Male	16%	74%	10%	Finland	Male	39%	33%	28%
	Female	12%	69%	20%		Female	38%	35%	27%
Sweden	Male	12%	68%	20%	Sweden	Male	31%	47%	22%
	Female	8%	63%	28%		Female	26%	46%	28%
United Kingdom	Male	9%	58%	33%	United Kingdom	Male	23%	49%	28%
	Female	10%	52%	38%		Female	35%	39%	26%

*Educational level: ISCED classification (three positions).. **In Luxembourg and the Netherlands LFS data on this issue are from the 2000 wave.

Source Data: Eurostat– EU Labour Force Survey 2005.

In most EU countries, we can observe an improvement in the education level of both young men and women, compared to that of 55 to 64 years old men and women (see Table 4). Older generations present high levels of low education and small percentages of people with high education. In contrast, younger age groups have small percentages of low education, a majority of people with a medium education level and significant percentages of those with high education. However, this general pattern is not followed in the same way by all the analysed countries. Some of them present high educational levels in the older age group and, in consequence, the improvement, if any, is less notorious. This is the case of Germany, Finland, Denmark, Sweden and United Kingdom, although even these countries present a reduction of low levels in young generations and a clear increase in medium levels.

The opposite situation can be found in the following countries: Spain, Ireland, Greece, Italy, Portugal and Luxembourg. In these countries, the majority of the 55-64 year olds has low educational levels and reduced percentages of medium or high levels, especially within the

female population. Young generations have clearly improved their education: although their percentages of low education are still high compared to the rest of countries, they have been reduced in favour of medium and high education.

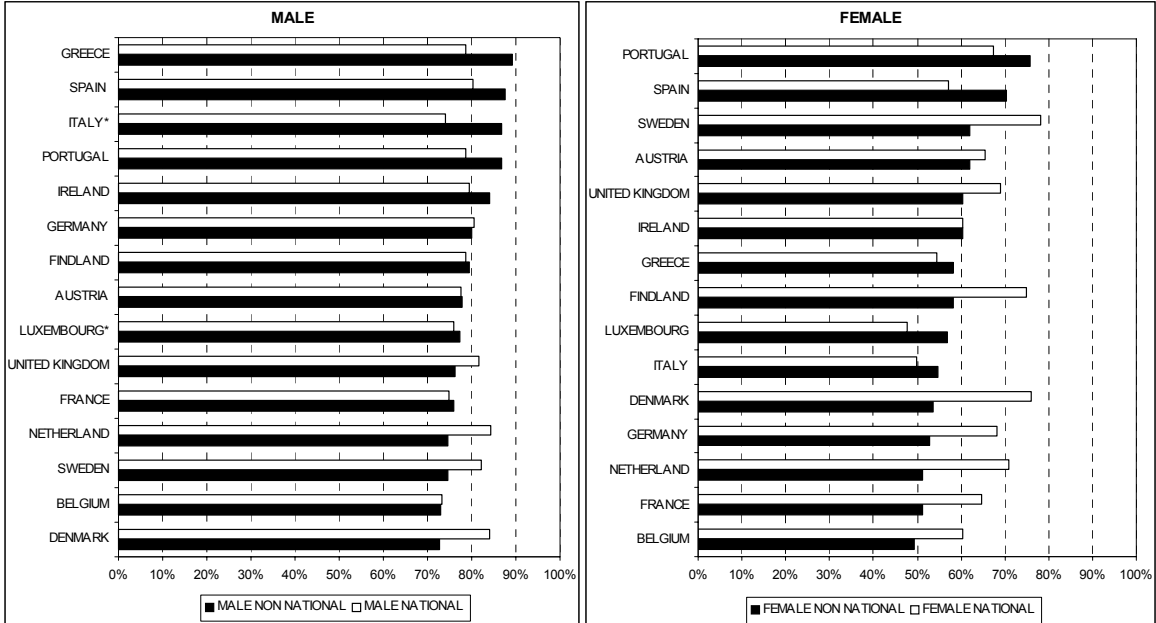
An intermediate situation may be identified in Belgium, Austria, the Netherlands and France. In general, these countries have a better educated senior generation than those of the second group of countries but, compared with those of the first group of countries, the improvement in the younger age group is more significant.

Finally, there is a common pattern in all the EU-15 countries: the extraordinary increase in female education has resulted in higher proportions of high education among women aged 20-29, and similar or lower levels of low education, compared with young men. In comparison women aged between 55 and 64 present higher percentages of low education and smaller percentages of medium and high education, with the exception of Sweden, where mature women are better educated than men, and Finland where, levels are similar. The higher educational levels in young women therefore indicate an extraordinary generational improvement, which is very significant in a gender sense and that has been especially relevant in southern EU countries, Ireland and Luxembourg.

4.2. Activity levels of national and foreign populations

Figure 1 shows the ranking of the EU-15 Member States by foreign population activity levels for both males and females, and also includes the activity rates for nationals.

FIGURE 1. Activity rates by sex and nationality. Former EU-15 Member States. LFS data, year 2005 Quarter 2



*Italy doesn't include the nationality question. Instead, in this graph we use the information on the country of birth.

Source Data: Eurostat– EU Labour Force Survey 2005.

In the male case, we found the Southern countries situated at the top positions of foreign activity: Greece, Spain, Italy and Portugal. It is not as clear for foreign women: two Mediterranean countries are again at the top of the activity levels, Portugal and Spain, but Italy and Greece present lower activity levels. At the other end, traditional immigration countries like France, Belgium, Netherlands and Denmark show the lowest participation

rates of non-nationals (and Germany, but only for women). The fact that international immigration is a recent trend in Southern EU countries, and therefore foreign population is relatively younger than in classical countries of destination, may be behind these differences in participation rates of non-nationals.

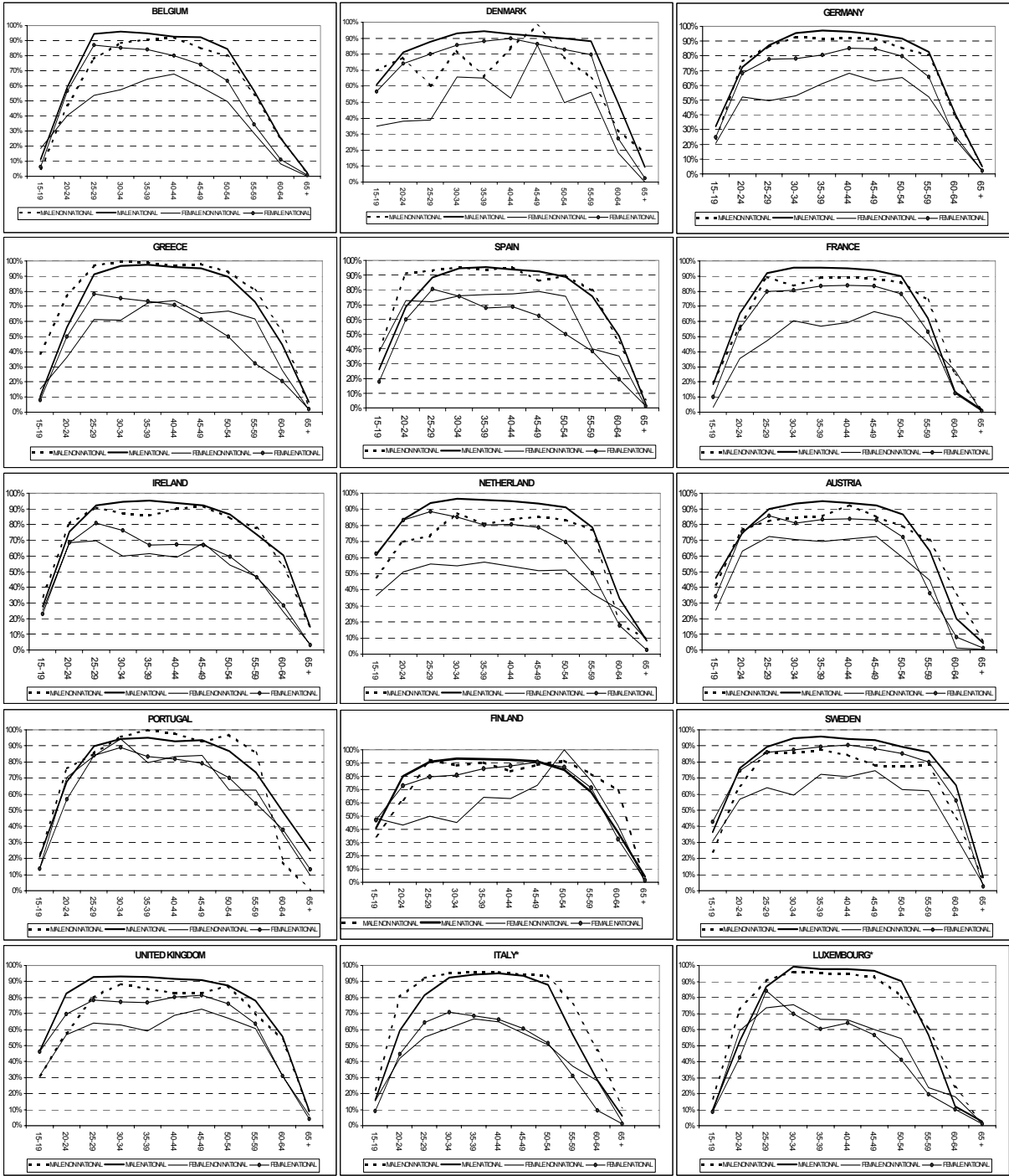
In the figure it can also be observed that those countries with higher activity levels for their foreign population are, in general, those with lower activity levels for their national population. In the case of males an almost inverse ranking of activity levels for nationals can even be seen. This aspect is slightly less clear for women. However, those Member States placed at the bottom of the foreign female activity rate ranking such as Denmark, Germany, Netherlands, France or Belgium, are among the countries where the participation of national women in the labour market is higher. The exceptions are Sweden, where both national and foreign women present high activity levels, and Luxembourg and Italy, with relatively low percentages of activity for both female groups.

Figure 2 shows the sex and age-specific activity rates of both national and non-national populations of the 15 former EU countries. We can observe that participation follows the same age pattern in all countries: it rises from the 15-19 age group to the 25-29 or 30-34 age groups, it maintains high levels until the 50-54 age groups and then starts to decrease up to retirement ages. Another common characteristic in almost all countries is that national men present the highest activity levels, followed in this order by non-national men, national women and non-national women. Nevertheless, this general pattern has some interesting exceptions. Young foreign men in Denmark, Spain and Ireland have higher activity levels than young national men. In Greece and Italy foreigners are more active than nationals in all age groups, tendency that is only broken in Portugal from the 60-64 year old group, where the activity of foreign men decrease below not only that of national men but also that of national and foreign women.

In general terms, national and foreign women have lower activity rates than men. However, sex differences in participation differ between countries, age groups or nationality, creating different geographical patterns:

- Portugal, Austria, Sweden and the United Kingdom: Female activity patterns are very similar to those of men for both national and non-national populations. Finland shows similar characteristics, but the atypical activity pattern of non-national women, with higher participation levels in mature than in younger ages, may indicate the existence of a problem with data.
- Belgium, Germany, France and the Netherlands: national women have similar participation levels and age patterns to those of national and non-national men, but foreign women have markedly lower rates in all ages, especially in young ages.
- In Denmark nationals present a pattern of high participation (both males and females) while the pattern for non-nationals (again both sexes) is characterised by relatively lower activity rates.
- Luxembourg and Ireland also present two differentiated patterns, but defined by sex: males (both nationals and non-nationals) have high participation rates whereas females (again without distinction of nationality) have lower activity levels, especially in mature ages.
- Greece, Spain, and Italy compose a final group of countries where participation levels are still lower for both national and non-national women compared with those of men, but where high activity rates in young national women (due to a recent massive incorporation to the labour market) differ from low rates in mature ages. In contrast, foreign women don't follow this evolution: they maintain relatively higher activity rates until near the retirement age, exceeding in Spain and Greece the participation levels of national women in ages over the mid-thirties.

FIGURE 2. Activity rates by age, sex and nationality. Former EU-15 Member States. LFS data, year 2005 Quarter 2



**Italy doesn't include the nationality question. Instead, we use in this graph the information on the country of birth.*

Source Data: Eurostat– EU Labour Force Survey 2005.

4.3. *Employment levels by activity sector*

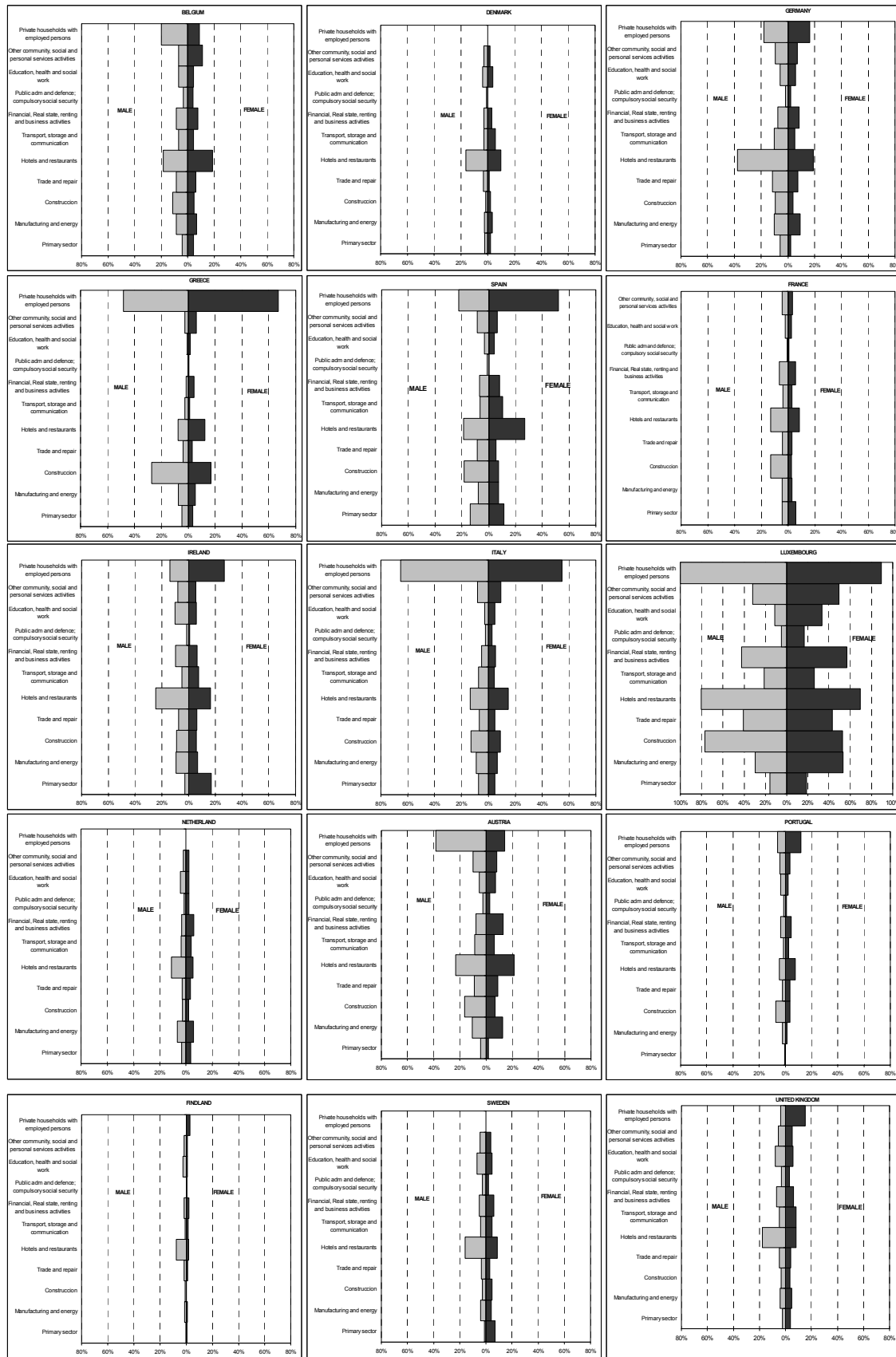
Up to now we have described the important educational improvement experienced by European young generations, especially women, and the most relevant trends in activity levels by age, sex and nationality. In order to test our initial hypothesis about complementarity between immigrants and national workers in the host labour market, we think that, as a first step, it is necessary to describe where immigrants work. Figure 3 shows the percentage of non-national workers in each activity sector for both sexes, highlighting the sectors where immigrants are over-represented in comparison to autochthonous workers. Obviously the amount of immigrants working in different sectors will differ considerably between countries as they are heavily determined by the proportion of foreign population within the total. However, taking into account the different labour characteristics associated to each economic sector, we consider more interesting to focus our attention in finding out which are the sectors that concentrate high percentages of foreign labour force than in comparing sectorial percentages between countries.

At first glance, the most significant proportions of immigrant labour force are found in three sectors: Hotels and Restaurants, Private Households with employed persons, and Construction.

- High proportions of foreigners in Hotels and Restaurants are common to all countries, although the highest percentages are found in Belgium, Denmark, Germany, Spain, Ireland, Austria, Sweden and United Kingdom. This sector has higher proportions of non-national male workers than of the female's ones in countries like Germany, Sweden or United Kingdom. However, in southern countries (Greece, Spain, Portugal or Italy) the balance between sexes is higher, or females are even more present than their male counterparts.
- Immigrants employed in Private Households show the highest percentages in Greece, Spain, Italy and Austria. In absolute numbers, most of the workers in this sector are women. However, the share of male or female foreigners varies depending on the country. Whereas in some countries the proportion of foreign women working in private households is higher than that of men (Spain, Greece, United Kingdom) in others the situation is the opposite (Italy, Austria, Belgium, Germany).
- Although Construction –a mainly masculine sector– also accumulates an important proportion of immigrants, percentages differ from one country to another. For example, in Greece, Spain, France, Italy and Austria concentration is significant whereas in other countries immigrant presence is practically non-existent.

Finally, it is necessary to highlight the elevated presence of immigrants in all sectors in Luxembourg, in correspondence with the high percentage of foreign population in the country.

FIGURE 3. Percentages of foreign workers by activity sector and sex. Former EU-15 Member States. LFS data, year 2005 Quarter 2



Source Data: Eurostat– EU Labour Force Survey 2005.

In summary, the analysis of educational and activity characteristics within the national and foreign populations has shown that there are significant differences between the EU Member States in this terrain. Countries with similar characteristics seem to be geographically grouped. For instance, in southern European countries demographic factor seems to play a minor role in foreign worker demand, which seems to be especially promoted by: a) the increase in educational levels in the youngest generations and more specifically that of women; b) the higher female participation in the labour market in comparison to older generations; and c) the existence of certain activity sectors with a high demand for foreign workers. In these southern EU countries, complementarity would translate into a labour and therefore social promotion of the national population, especially in the case of women, that would generate a demand for foreign workers to cover the less remunerated jobs as well as child and elderly care, that had formerly been carried out by women. In the following section we will see how this process takes place in several activity sectors.

5. SUBSTITUTION AND COMPETITION OF IMMIGRANT AND LOCAL WORKERS IN EU-15 NATIONAL LABOUR MARKETS: AN ANALYSIS BY ACTIVITY SECTOR

5.1. Differences in complementarity across EU Member States: clusters of countries

In our initial hypothesis we argued that the participation of immigrants in host labour markets is complementary with that of the national workers. Complementary is done in the measure that immigrant workers hold those secondary jobs that nationals avoid –mainly, of course, those with poor labour conditions and low wages, but also those under their upgrading expectations. These jobs tend to concentrate in sectors such as agriculture, construction, hotels and restaurants, domestic service,, where productivity is low and the cost of labour has made profitability marginal (Reyneri, 2004). We tried to observe complementary processes in the previous section, where although we found differences within the EU15, our results confirm that immigrants tend to concentrate in more “flexible” sectors. However, to understand how complementary process works in every country, it would be necessary to analyse in greater depth some of the immigrants’ specific jobs and work conditions and compare them with those for nationals

What happens when nationals and non-nationals coincide in same sectors and jobs? Is there a competition between them or does the foreign labour force substitute the national one? In order to answer these questions, we will focus our analysis in the national and the non-national active populations that work in three sectors where immigrant main d’oeuvre is very relevant: *Construction, Hotels and Restaurants* and *Private Households with employed persons* (domestic service). Given the fact that within these activity sectors there are different sort of jobs and work conditions we limited our analysis to less qualified occupations of the LFS classification (*‘elementary occupations’*) more probable to be held by immigrants according to dual market theory. It is in these positions where we suppose that processes of competition or substitution occur. Our hypotheses are the following: if there is a competition process we will find national and foreign workers with the same age, sex and educational characteristics in the same labour positions; if there is a substitution process, national and foreign workers will be in the same sector but will have different personal characteristics regarding sex, age and education. For example, if in a given sector national workers are generally older than non-nationals, this means that the latter are substituting the former in this particular sector.

We have grouped the former 15 European Union countries through a cluster analysis using two variables which reflect the pull effect of growing educational level of women on international immigration: 1) increase in the proportion of foreign population between 1995 and 2005, and 2) difference in percentages of women with low education between the same two years. We have obtained 3 final clusters of countries.

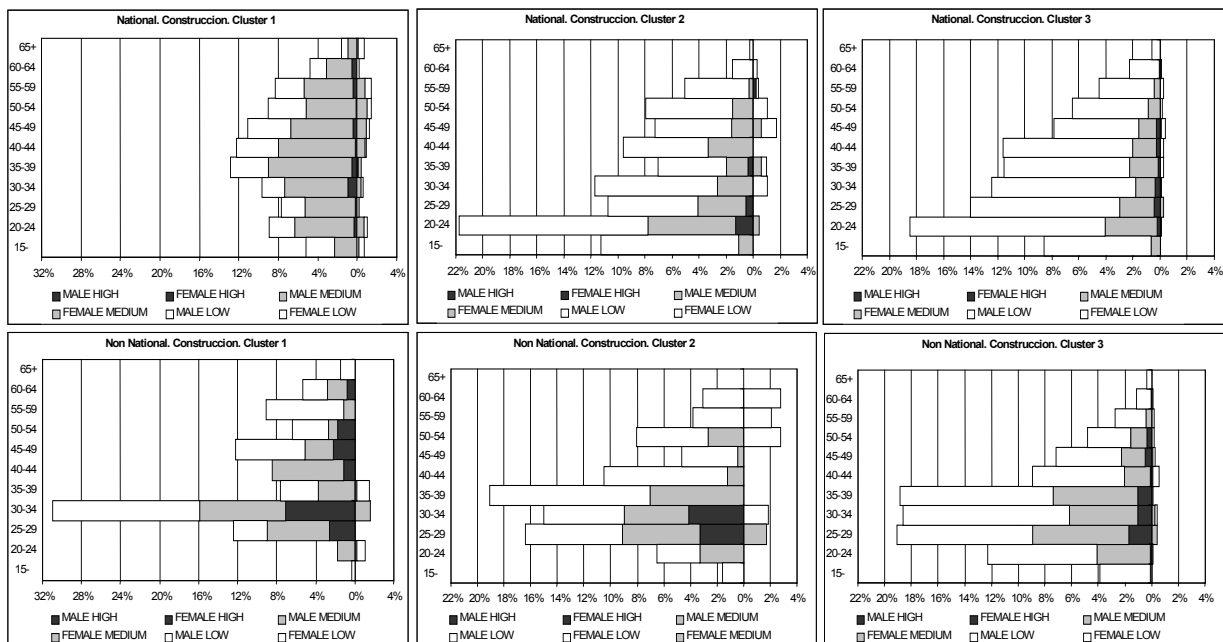
- ❑ Cluster 1: Austria, United Kingdom, Finland, Denmark, Germany, and Sweden.
- ❑ Cluster 2: France, Netherland, Belgium, and Portugal.
- ❑ Cluster 3: Spain, Italy, Ireland, Luxembourg, and Greece.

Cluster 3 is the most differentiate group of countries. This fact confirms again the specificities of Mediterranean countries (plus Ireland and Luxembourg, being Portugal the exception) in the last decade regarding international immigration and female empowerment (in this case in relation to education), trends that we have seen in previous pages. Then we have compared, for the three clusters of countries, the socio-demographic characteristics of active national and non-national populations employed in the three sectors mentioned before.

5.2. Construction sector

In Figure 4 we can see the sex, age and educational structure of nationals and foreigners working in ‘*elementary occupations*’ within the Construction sector. A common characteristic is the male character of this activity sector, where the presence of women is residual. In Cluster 1 it is possible to identify a substitution process as there is a concentration of foreigners in the younger age groups (mainly in the group 30-34) and of nationals in the older age groups, as very few young nationals are interested in working in this sector. Non-nationals mainly have low education; only about 7% of them have high education and around 10% a medium level. Nationals working in these positions are also less qualified than the national average.

FIGURE 4. Age, sex and educational structure of nationals and non-nationals working in elementary occupations in the construction sector. Former EU-15 Member States. LFS data, year 2005 Quarter 2



Source Data: Eurostat– EU Labour Force Survey 2005.

In contrast, Cluster 2 and Cluster 3 present a young age structure for both groups of main d’oeuvre. However, there are important differences between nationals and foreigners. While in the former group the highest percentage of actives is found in the 20-24 age group,

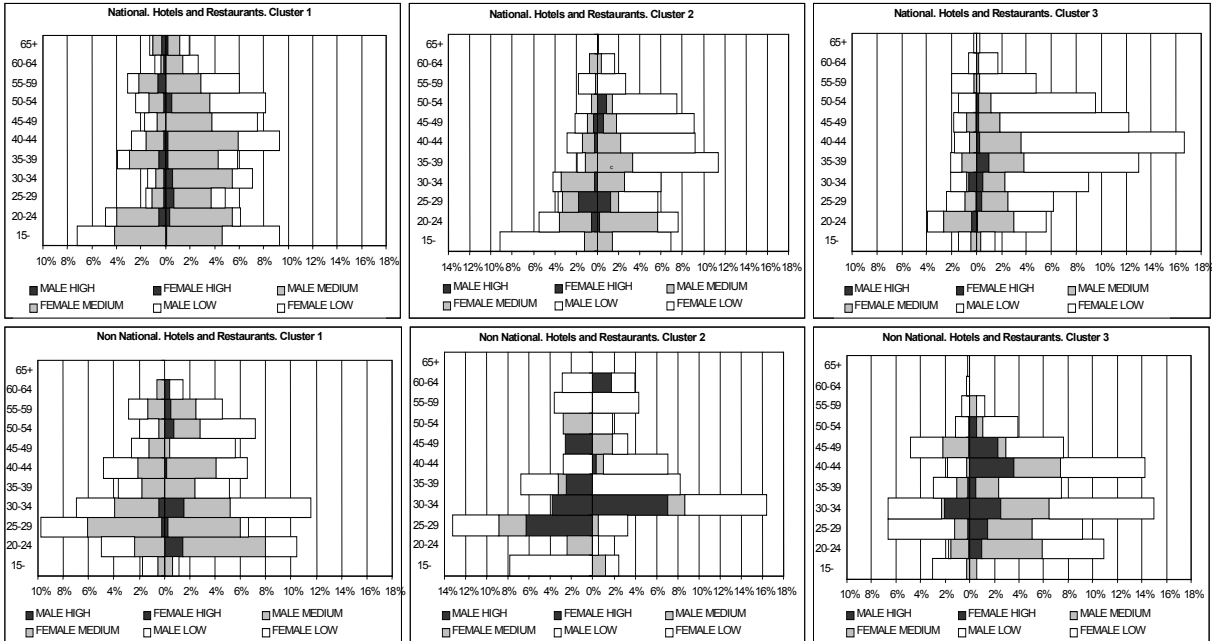
decreasing in older age groups, immigrant workers are especially concentrated in the age groups 20-24 until 35-39. Furthermore, the fact that young immigrants are more overqualified than nationals in these positions could explain that, although young nationals compete with immigrants, this competition mainly affects those nationals who are less qualified. Therefore, if Cluster 1 countries showed a substitution dynamics in the construction sector, countries belonging to clusters 2 and 3 present competition processes between low educated young nationals and young foreign workers who are on average better educated.

5.3. Hotels and Restaurants sector

Figure 5 shows the demographic and educational structures of the population working in elementary occupations in the Hotels and Restaurants sector. The gender structure is in all three clusters of countries more balanced than in the previous sector, especially within non-nationals, whereas there is a higher female presence within national workers.

In Cluster 1, for instance, the number of national women employed in hotels and restaurants is higher than that of men, whereas foreign workers show a more balanced proportion. Regarding education levels, there is no significant difference between nationals and non-nationals –both have a small presence of high educational levels. The most interesting difference between these two groups is in the age structure. Nationals, men and women, hold these occupations when they are young, from 15 to 24, and then percentages decrease in older age groups, especially in the male case, while women between 40 and 54 present again significant proportions. In contrast, immigrants that work in those occupations are mainly aged from 20 to 34, playing a complementary role of the national adult generations, that have a lower participation in hotels and restaurants. We are therefore in the presence of a substitution process in this sector, but with a “niche” for young nationals, who are in competition with immigrants.

FIGURE 5. Age, sex and educational structure of nationals and non-nationals working in elementary occupations in hotels and restaurants sector. Former EU-15 Member States. LFS data, year 2005 Quarter 2



Source Data: Eurostat– EU Labour Force Survey 2005.

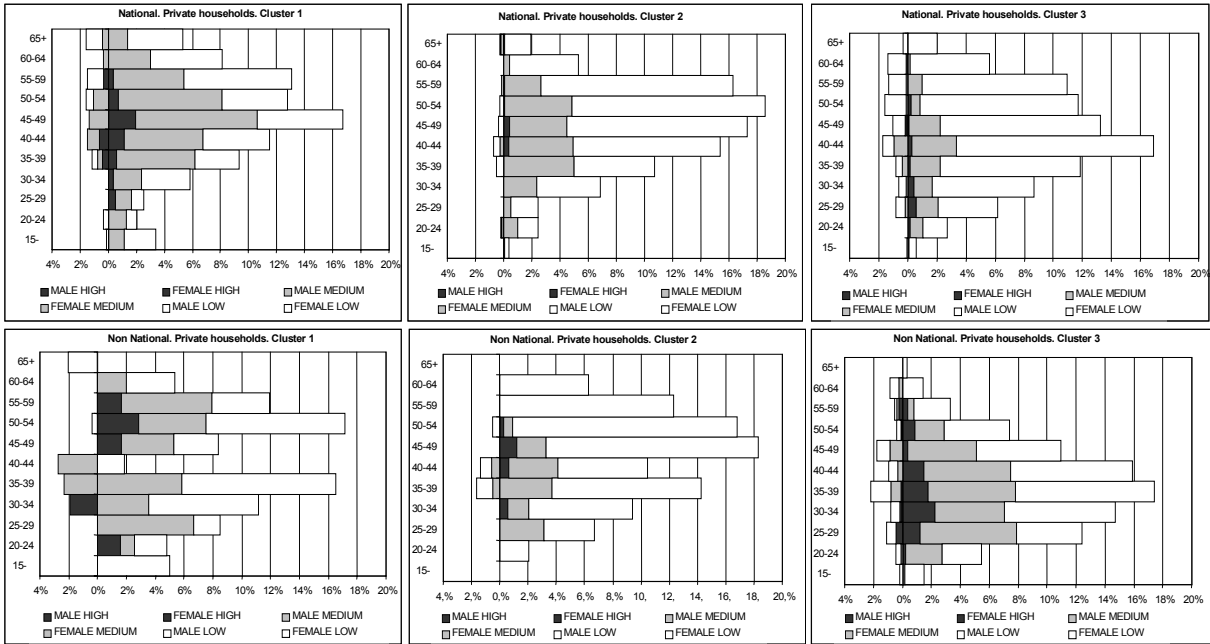
Cluster 2 repeats the same characteristics than Cluster 1 (including substitution + young competition dynamics), with only one exception: differences in the educational levels between nationality groups are here more evident. Here, young adult immigrants who work in this sector are more highly qualified than nationals.

Finally, in Cluster 3, both national and non-national women are much more widely represented in this sector than men. However, differences between these two groups of nationalities are evident. National women working in these occupations are mainly aged over 35 whereas percentages of immigrant women are important from the age of 20. These differential trends indicate a substitution of the national labour force by the foreign one in this sector. Another characteristic of these countries is that men are barely present in these labour positions whereas immigrant males are more present, especially in young adult ages. In contrast with clusters 1 and 2, young nationals are not very numerous in this sector in Cluster 3 countries. Finally, as in Cluster 2, immigrants present higher educational levels than nationals.

5.3. Domestic work sector

The last activity sector analysed is domestic work (private households with employed people) which, according to its gender structure, is a feminine sector (Figure 6). Here, in the three clusters, nearly all those employed are women, and this affects both national and non-national employees. Starting by Cluster 3, there is a clear example of substitution of the national by the foreign labour force. National women working in these positions are mainly aged over forty and their educational level is low. The age structure of foreign women is, in contrast, much younger and their educational level is higher than that of nationals working in the same sector.

FIGURE 6. Age, sex and educational structure of nationals and non-nationals working in elementary occupations in private household sector. Former EU-15 Member States. LFS data, year 2005 Quarter 2



Source Data: Eurostat– EU Labour Force Survey 2005.

In contrast with the process of substitution that we have just seen, in Cluster 2 a competition dynamics can be observed between national and non-national adult women as the sex, age (predominantly aged 40-59 years old) and educational structure (mainly low educational level) of national workers are almost the same as that of non-nationals. Finally, in Cluster 1 we find a mixed situation: national women occupied in the domestic service are once again mainly over forty whereas there are two groups of foreign women: those aged between 45 and 64 and those aged between 25 and 39. Therefore, competition and substitution processes are simultaneously present in this sector in the EU Member States belonging to this cluster.

As we have seen, the competition and substitution dynamics work in different ways depending on the activity sector and the cluster of countries. However, generally speaking, substitution processes seem to have gone further in western and northern European countries. This would mean that they are more mature labour markets where immigrants have been present for longer. This presence is more recent in the Mediterranean countries, and Ireland and this generates more job opportunities for migrants but also more competition with the local labour force and especially with those workers with a lower education level. Finally, we should underline differences by sex. In the construction sector, competition, between the non-national and the low educated national populations is mainly established among men, whereas the same occurs among women especially in the domestic service sector but also in the hotel and restaurant sector.

6. CONCLUSIONS

South EU countries, and others like Ireland, that are characterised by late but very intense demographic changes within the so called Second Demographic Transition (specially regarding marriage, fertility and ageing) are presently going through a migratory revolution. These old emigratory countries have recently become worker importers, process in which economic development and institutional factors have played an important role. The growth of the tertiary sector and the specificities of the Welfare State in the new immigratory countries should for instance be mentioned. However, other influences such as socio-demographic factors, especially the improvement of the educational level in the younger generations and the change in gender roles with a higher female participation in the labour market, have not been less relevant.

From this point of view, the role played by the foreign population in the social promotion of autochthonous workers in Southern countries is not very different from what happened in the sixties in countries which traditionally imported workers. What is extremely different is the intensity and speed of the phenomenon. We have tried to explain these specificities within the complementarity framework.

As it has been said, complementarity as a general framework to understand the social role presently reserved to international immigrants and their impact on the social and labour autochthonous population implies situations that, in the labour market, can be defined as *substitution of* and *competition with* the national labour force. As the previous section has demonstrated the pre-eminence of one or the other varies depending on the country, the activity sector and even sex. In general terms, when there is low proportion of jobs covered by young nationals, substitution dynamics are more important than competition ones. However, we want to insist in the fact that what is true for a whole sector does not necessarily have to be so at the individual level. Even the opposite situation may be found.

For instance, in a sector such as the domestic service in the Mediterranean countries, it is substitution that acts at a sectorial level as the most elderly and less educated autochthonous female workers are being replaced by younger foreign ones. However, at

individual level, mature national workers may feel that there is a strong competition with non-nationals for the same jobs. On the other hand, in a sector such as construction, competition between young people independently from their origin, especially in the less qualified and paid jobs, may coexist with the professional promotion of the national workers, simply because of positive discrimination due to nationality preference. This mechanism is similar to what happens when a sector becomes feminine; men that do not leave are promoted by positive discrimination towards them. Finally, in the hotel and restaurant sector, where dynamics seem to be more complex depending on the countries' clusters, competition between the national and foreign young should also be interpreted in terms of permanence and promotion within the sector.

This has only been a first analysis and we realise that a lot has yet to be precised and analysed within the complementarity framework. Firstly, many professional and salary situations that can be found within sectorial aggregates need still to be studied in greater detail. Secondly, activity is a good way to have a first insight in the subject; however, the analysis of occupation and unemployment should also be carried out as differences between nationals and non-nationals are probably very significant. Finally, we should observe the evolution of these processes throughout time, as we are really talking about social mobility and it is difficult to understand it without a longitudinal analysis.

As we have been seeing in these pages, the massive arrival of foreign immigrants to Southern EU countries and Ireland in the last decade has taken place in a non favourable demographic context –the working age population of these countries has not yet been reduced due to their late incorporation to the transitional process in relation to other EU countries. However, this reduction is about to happen from now on and therefore demand for international workers may increase in the next decade. This new demand will add to that already generated, firstly by the complementary role played by foreign immigrants in relation to the autochthonous population's social promotion, and secondly by the increasing numbers of immigrants generated both by inertia of the present flows and family regrouping of the established foreign population.

BIBLIOGRAPHY

ABAD, L. (2002), "La paradoja de la demanda adicional en mercados con exceso de oferta, in F.J. García Castaño and C. Muriel López (ed.) *La inmigración en España: contextos y alternativas*. Volumen II: 459-468, Granada: Laboratorio de Estudios Interculturales,

ARANGO, J. (2003), "Inmigración y diversidad humana. Una nueva era en las migraciones internacionales", *Revista de Occidente*, 268: 5-21.

BALCH, A. (2005), "Immigration as a labour market strategy. Spain", in J. Niessen and Y. Schibel (ed.), *Immigration as a labour market strategy – European and North American Perspectives*, Migration Policy Group, Brussels, June 2005.

BALDWIN-EDWARDS, M. (1997), "The Emerging European Immigration Regime: Some Reflections on Implications for Southern Europe", *Journal of Common Market Studies*, 35-4: 497-520.

BALDWIN-EDWARDS, M. and ARANGO, J. (1999), *Immigrants and the Informal Economy in Southern Europe*. London: Frank Cass.

CACHÓN, L. (1997), "Segregación sectorial de los inmigrantes en el mercado de trabajo en España", *Relaciones Laborales*, 10: 49-73.

CARRASCO, R. (2003), "Inmigración y mercado laboral", *Papeles de Economía Española*, 98: 94-108.

CARRASCO, R., JIMENO, J.F. and ORTEGA, A.C. (2004), "The effect of immigration on the employment opportunities of native-born workers: some evidence for Spain", in *Current Research on the Economics of Immigration*, organised by Fundación Ramón Areces, Madrid.

CASTLES, S. and MILLER, M.J. (2003), *The Age of Migration. International Population Movements in the modern world*, Houndmills: Palgrave Macmillan.

CHRISANTHAKI, T. (1999), *Population, migration and census in Eurostat - A guide to existing data and publications*. Eurostat working papers 3/1999/E/nº17, Luxembourg: Eurostat.

COLEMAN, D. and ROWTHORN, R. (2004), "The Economic Effects of Immigration into the United Kingdom", *Population and Development Review*, 30-4: 579-624.

DICKENS, W. T. and LANG, K. (1988), "The Reemergence of Segmented Labor Market Theory", *The American Economic Review*, 78-2: 129-134.

DOMINGO, Andreu (2002) "Reflexiones demográficas sobre la inmigración internacional en los países del sur de la Unión Europea". *Actas del 3 Congreso de la Inmigración en España*, Vol 2, Granada: 2002, pp. 197-212. Also in *Papers de Demografia*, núm. 215.

DOMINGO, A. and HOULE, R. (2004), "La actividad de la población de nacionalidad extranjera en España, entre la complementariedad y la exclusión", Paper presented at the *IV Congreso sobre la Inmigración en España*, Girona, 10-13 November.

DOMINGO, A. and HOULE, R. (2005), "The Economic Activity of Immigrants in Spain: Between Complementarity and Exclusion", paper presented at the *IUSSP International Population Conference*, Tours, 18-23 July.

DOMINGO, A. (forthcoming), "Internacionalització de la immigració i població estrangera a Catalunya", en *II Jornades de població. La població a Catalunya*. Bellaterra: Centre d'Estudis Demogràfics.

ENCHAUTEGUI, M. E. (1998), "Low-skilled Immigrants and the Changing American Labor Market", *Population and Development Review*, 24-4: 811-824.

EUROPEAN COMMISSION (1998), *Demographic Report 1997*, DG for Employment, Industrial Relations and Social Affairs, Luxembourg: OPOCE.

EUROPEAN COMMISSION (2002), *The social situation in the European Union 2002*, DG for Employment and Social Affairs & Eurostat, Luxembourg: OPOCE.

FELD, S. (2000), "Active Population Growth and Immigration Hypotheses in Western Europe", *European Journal of Population*, 16- 1: 3-40.

GARRIDO, L. and TOHARIA, L. (2004), "La situación laboral de los extranjeros según la Encuesta de la Población Activa", *Economistas*, 99: 74-86.

GIL, F. and DOMINGO, A. (2006), "La complementariedad de la actividad de españoles y extranjeros: análisis sectorial y diferencias territoriales", paper presented at the *X Congreso de la Población Española*, Pamplona, 29 June – 1 July.

JENNISSEN, R. (2003), "Economic Determinants of Net International Migration in Western Europe", *European Journal of Population*, 19: 171-198.

MARTÍNEZ VEIGA, U. (1999), "Immigrants in the Spanish Labour Market", in M. Baldwin-Edwards and J. Arango (ed.) *Immigrants and the Informal Economy in Southern Europe*, London: Frank Cass: 105-128.

PARELLA, S. (2003), *Mujer, inmigrante y trabajadora: la triple discriminación*, Rubí: Anthropos.

PIORE, M. (1979), *Birds of Passage: Migrant Labor and Industrial Societies*. New York: Century University Press.

POPULATION DIVISION (2001), *Replacement migration: is it a solution to declining and ageing populations?*, New York: United Nations.

REYNERI, E. (2004), "Immigrants in a segmented and often undeclared labour market", *Journal of Modern Italian Studies*, 9-1: 71-93.

RIBAS-MATEOS, N. (2004), "How can we understand Immigration in Southern Europe?", *Journal of Ethnic and Migration Studies*, 30-6: 1045-1063.

SOLÉ, C. and PARELLA, S. (2003), "The labour market and racial discrimination in Spain", *Journal of Ethnic and Migration Studies*, 29-1: 121-140.

VITALE, S.V. (2000), "El status de la mujer migrante. Las marroquíes en España", *Investigaciones Geográficas*, 20: 97-110.