

# 6

## Immigration and Labour Market Segmentation in the European Union

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### 6.1 Introduction

Although not historically unprecedented, Europe is going through a time of intense change in terms of both the intensity of immigration and the public perception of this demographic phenomenon. This chapter aims to analyse the labour market participation of immigrants in the European Union, both from a national comparative perspective and from a European point of view. With that aim, the chapter is organized as follows. Section 6.2 deals with several methodological issues linked to the study of immigration, particularly regarding the specificities of the Jobs Project database. In order to provide a background to the current migration flows, the Section 6.3 discusses how the current immigration levels compare to previous waves both in the Old Continent and in other regions of the world. The following section presents a demographic and economic characterization of immigrant population in the European Union. The backbone of the chapter, Section 6.5, addresses the different patterns of participation of foreigners in national labour markets, including the allocation of migrants along the national job structures and the incidence of over-qualification among this group. Finally, Section 6.6 concludes and summarizes the main findings of the chapter.

### 6.2 Methodological issues

Several remarks must be made in order to guide the reader through the chapter regarding the definition of immigrant and the time period considered in the analysis. Some of the issues are controversial and in most

cases our choice is determined by the possibilities and characteristics of the database.

First, there is no standardized definition of who is an immigrant. In fact, in most states, this concept simply does not exist in legal terms. However, beyond anthropological considerations, there are basically two major criteria to define who is to be considered an immigrant in applied Social Sciences research: nationality and country of birth. Both methodological choices involve advantages and disadvantages. On the one hand, the former criterion is almost always preferred to the latter because naturalization laws vary a great deal depending on nationalities and across host countries.<sup>1</sup> Therefore, two foreign-born workers with the same time of residence in a European country might receive a different treatment in the analysis depending on their country of birth.<sup>2</sup> On the other hand, using nationality often allows us to distinguish returned emigrants and expatriates, as well as to assess the effects of naturalization in relation to specific economic outcomes.<sup>3</sup> There are some practical limitations that must also be taken into account; for instance, the choice of the criterion based on country of birth often contributes to enlarging the available samples, an advantage that also applies here.

The approach followed in the chapter is essentially eclectic and empirically oriented: while certain international organizations, statistical institutes, surveys and national or international public authorities adopt one definition, other institutions and databases – exclusively – use the other one; where possible, we have tried to favour the criterion based on the place of birth, but, when it is not possible to carry out such a strategy because of the mentioned data limitations, we have instead used the citizenship criterion. We believe that this choice is reasonable for practical considerations and better than the alternative which would be to largely restrict our analyses. A specific case can exemplify the issue. While the United Nations Population Division allows the use of both criteria, OECD databases usually favour the country-of-birth criterion and Eurostat, the approach based on citizenship. In addition, in the Jobs Project database, based on the European Labour Force Survey, there is not a uniform criterion either. The particular variables used for each country are presented in Table 6.1. While the data available for most countries allow the researcher to use the country-of-birth criterion, this is not possible in others (Germany and Ireland) where citizenship has been employed instead. In spite of these caveats, fortunately, the correlation between citizenship and country of birth is remarkably high, making the results obtained in the analysis robust to

both methodological choices. Using the Jobs Project database the correlation between the number of foreign people and foreign-born people in a certain job and country is roughly 95 per cent.

Another different – and controversial – issue is whether all non-native-born people should be treated in the same way in the analysis. The consideration of who is an ‘immigrant’ according to the popular perception in OECD countries is often linked to the arrival from less-developed regions. Nevertheless, the level of disaggregation available in the Jobs Project database does not allow us to consider in depth this issue in the analysis, as it is only possible to distinguish between EU and non-EU-born individuals. Brücker et al. (2002), when exploiting the European Community Household Panel data, analyse people born in the European Union (which at that time comprised 15 members) jointly with natives. This perspective is appealing, but, since our data cover years before and after the EU enlargements of 2004–2007, in order to work with a time-consistent concept of the foreign-born population we have considered all those workers born abroad as immigrants. The alternative – to completely exclude EU citizens from the category of migrants – does not strike us as reasonable or sensible as it would lead to us ignoring foreign-born groups as important as the Romanians in Spain, Poles in Ireland and the UK and so on. To consider Finns in Sweden or EU civil servants in Brussels as (highly qualified) migrants may stretch our standard preconceptions of what a migrant worker is but such an approach does nonetheless offer a more coherent and comprehensive approach than excluding such workers from the migrant category.

The third methodological problem has to do with the temporal dimension: not all annual waves contain information on country of birth or nationality, so the analysis has to necessarily restrict itself to the available information. As explained in detail by Fernández-Macías and Hurley (2008), the database suffers from some structural breaks (e.g. methodological changes in occupational or sectoral taxonomies). When using data by job quintiles from a dynamic perspective, we dealt with such problem using the procedure suggested by these authors: to compute both the change until the year just before the structural break and the variation of employment from that year onwards. Finally, in two Eastern European countries, the Czech and the Slovak Republics, immigrants account for less than 2 per cent of total working population. Therefore, we have decided not to include these two countries in the analyses, given the small sample sizes and the – inherent – complexity of presenting, organizing and reading data from more than

*Table 6.1* Methodological issues in the analysis of the Jobs Project database

Country	Structural breaks	Migration variables	
Austria	2003–2004	Country of birth (1995–2006)	
Belgium		Country of birth (1995–2006)	
Cyprus		Country of birth (1999–2006)	
Czech Republic		Country of birth (2002–2006), <2% of foreign-born workers	
Germany	2001–2002	Nationality (1995–2006)	
Denmark		Country of birth (1995–2006)	
Estonia		Country of birth (1998–2006)	
Spain		Country of birth (1995–2006)	
Finland		Country of birth (1997–2006), <5% of foreign-born workers	
France		2003–2004	Country of birth (1996–2006)
Greece			Country of birth (1995–2006)
Hungary			Country of birth (2001–2006), <2% of foreign-born workers
Ireland		1997–1998	Nationality (1998–2003 and 2006)
Italy		2003–2004	Country of birth (2006)
Lithuania	Country of birth (1998–2006)		
Luxembourg	Country of birth (1995–2007)		
Latvia	Country of birth (2004–2006)		
Netherlands	Country of birth (1999–2006)		
Sweden	Country of birth (1997–2006)		
Portugal	1997–1998 & 2000–2001		Country of birth (1999–2006)
Slovenia			Country of birth (2002–2006)
Slovak Republic			Country of birth (2003–2006), <2% of foreign-born workers
United Kingdom	2000–2001		Country of birth (1995–2006)

*Source:* Authors' analysis from Jobs Project database.

twenty countries. In order to focus on the more relevant cases, we have excluded these two states from analyses.

The definition of migrant and time period considered for each country are presented in Table 6.1.

### 6.3 Migration in Europe

Migration is the great absentee of the current process of globalization. During the previous globalization wave, from the mid-1850s to the beginning of World War I, financial movements, trade and people underwent similar trends in terms of increasing transnational mobility. During that period, in a context of virtually free movement of people, massive migration led to dramatic demographic changes (Hatton

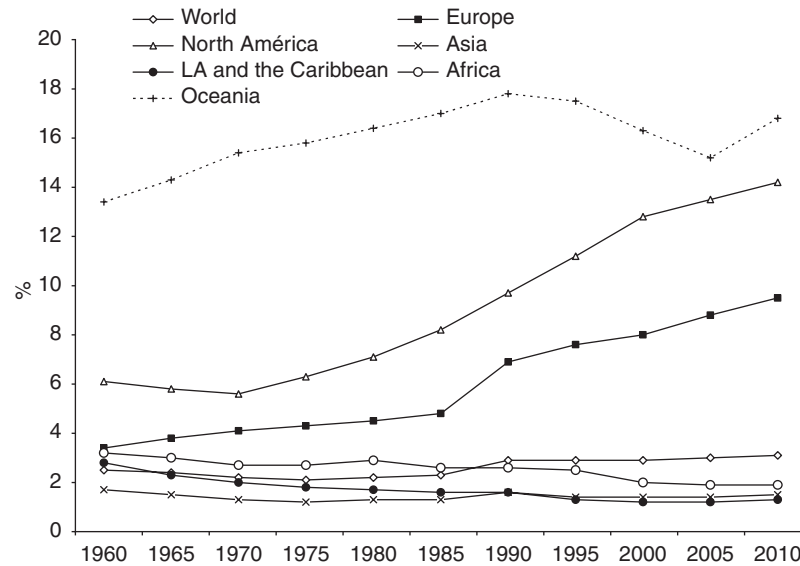


Figure 6.1 Immigrants as percentage of total population, by region, 1960–2005

Note: Immigration figures (generally) refer to the foreign-born population.

Source: Authors analysis from United Nations (2009).

and Williamson 1998). In contrast, the world immigration rate (immigrants/total population) has remained basically stable since 1990, at a relatively low 3 per cent.<sup>4</sup> Nevertheless, this stability hides an important change in terms of the direction of the immigration flows. As depicted in Figure 6.1, since 1985 there has been an increase in the importance of Europe as a receiving region. In fact, in 2010, included in the analysis, Europe as a continent hosted more immigrants than North America (69.8 million compared to 50 million); traditionally the immigrants' promised land (United Nations 2009). In this context, during the last decade, while many of the classic European host countries such as Belgium experienced a period of immigration stability, other states – for instance, Spain and Ireland – experienced sudden immigration flows of very high intensity, comparable in scale to that experienced by the US at the turn of the last century.

### 6.3.1 Immigration in Europe: major facts

The diversity of the Old Continent also applies to their migration patterns, since the percentage of foreign-born population varies a lot

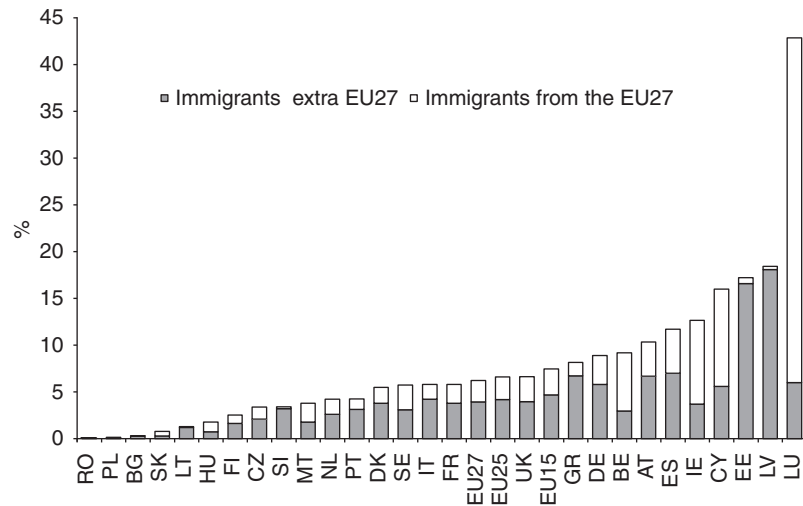


Figure 6.2 Foreign population as percentage of total population in EU countries, 2008

Source: Authors' analysis from Eurostat database.

across EU Member States (Figure 6.2). In this respect, Luxembourg, as a country where almost half of its population is immigrant, stands clearly out from the rest. The next three countries at the top of ranking – two Baltic countries plus Cyprus – have far lower percentages of immigrant stock than does Luxembourg. Their position reflects very specific national circumstance. While in the Baltic countries these figures are mainly associated to workers arriving from the Soviet Union in the second half of the 20th century (Schmid 2004), in the Cypriot case this outcome is the result of a more dynamic economy and a more open immigration policy at the beginning of the 1990s (Trimikliniotis and Demetriou 2005). A second group of countries, composed of Ireland and Spain, was until relatively recently better known as sending than receiving countries. After them, there is a continuum of traditional host countries, such as Belgium, Germany, France and Sweden, while the bottom of the spectrum is predominantly composed of new Member States (other than the Baltic Member States, for reasons indicated above).<sup>5</sup>

The second major fact is associated with the existence of very different time patterns of immigration among the EU countries. According to Figure 6.3, which reproduces the stock of immigrants as the percentage of total population from 1960 (or 1990, depending on the countries) to 2005, one can distinguish four different groups of countries:

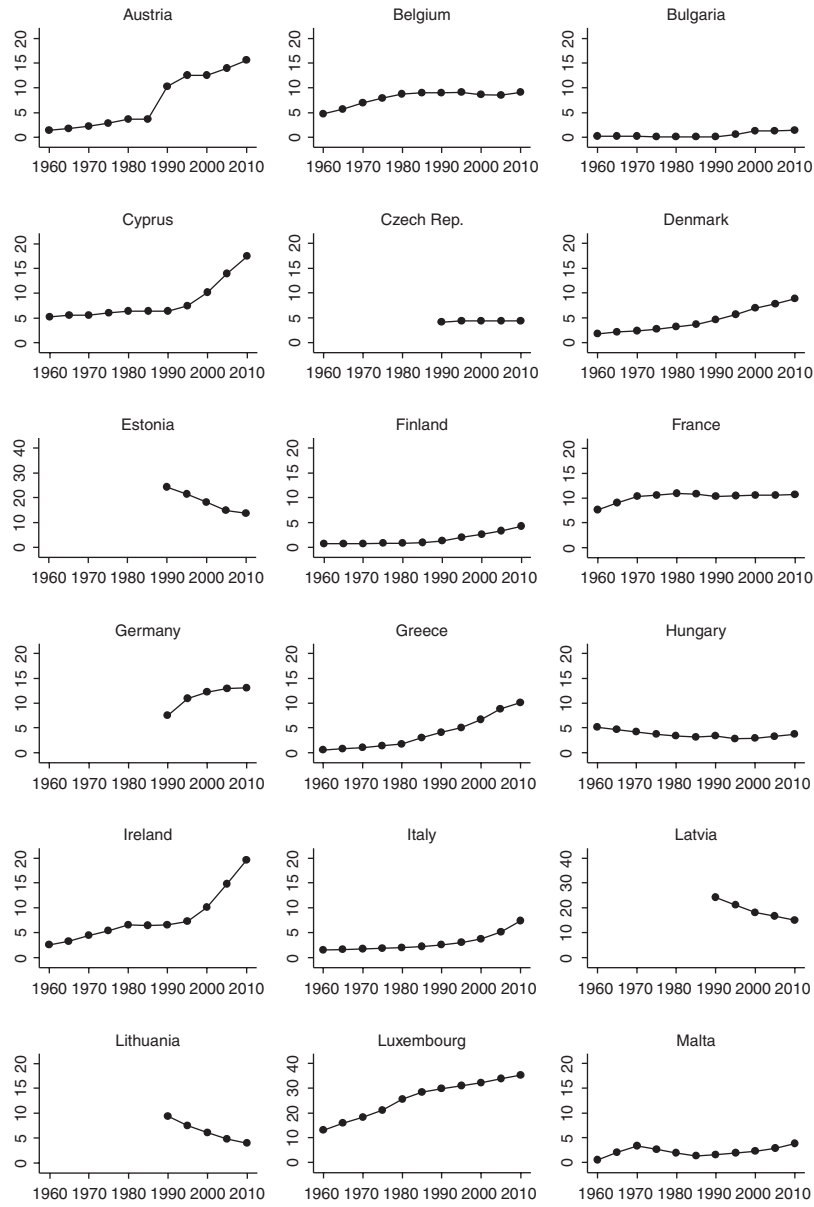


Figure 6.3 Continued

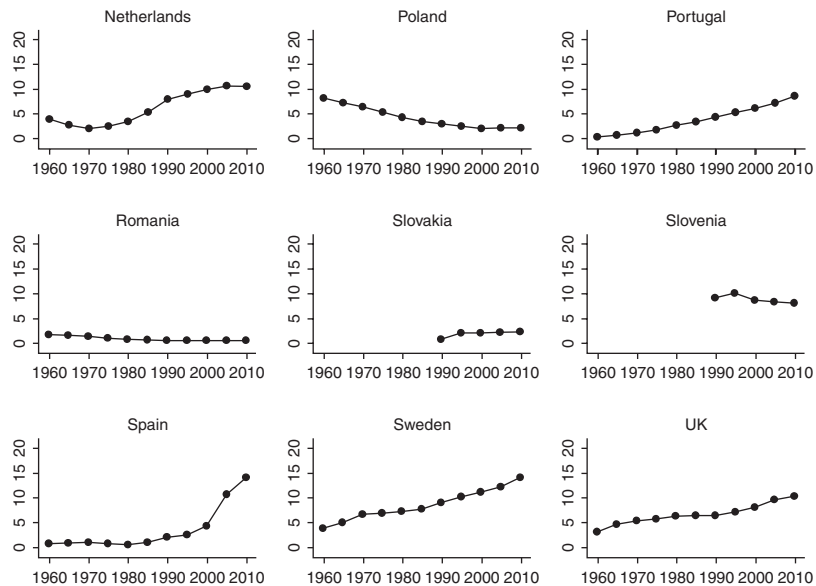


Figure 6.3 Time patterns of immigration; percentage of foreign-born population in the EU27, 1960–2010

Source: Authors' analysis from United Nations (2009).

- *Group A*, comprising all eastern European countries with the exception of the Czech Republic, Slovakia and Bulgaria, with decreasing immigration rates.
- *Group B*, classic host countries, including Belgium, France, the Netherlands and Germany, where immigration rates rise very early, reaching a *plateau* in the 1980s or 1990s, depending on the case, and remaining relatively stable since then (or even decreasing as in the case of Belgium).
- *Group C*, with the latecomers, that is, Spain, Greece, Ireland, Italy, Cyprus, Finland and probably Austria, showing a late but steep rise in their immigration rates.
- *Group D*, involving countries as different as Sweden and Portugal, showing, for very different reasons, a continuous, almost linear increase of immigrant rates.

The existence of such a different time pattern is important, as the type and rate of labour market integration of immigrants might be very different for those immigrants newly arrived (as in Spain) compared to immigrants with many years of residency in their host country.



A third major fact relates to the different origins of the immigrant population in Europe. Depending on the timing of the immigration waves, the geographical location and the cultural and historical links of the countries, the EU Member States differ widely in terms of the country of origin of their immigrants. As shown in Figure 6.2, while some countries – such as Luxembourg, Cyprus and Ireland – host mostly non-national EU citizens, in others the majority of the foreign population comes from outside of the EU. This is the case, for example, in Latvia, Germany, Austria and Spain. Detailed data of the foreign-born population by country of origin (Table 6.2) show the relevance of geographical proximity and of cultural, historical and linguistic relations as well as the role of immigrant networks in the development of such specific patterns of migration.<sup>6</sup> For instance, Austria receives its extra-EU immigrants mostly from the former Yugoslavia and Turkey, France from the countries of the Maghreb (almost 1/3 of immigrants are from Algeria, Morocco and Tunisia), Greece from Albania (36% of immigrants), Poland from Ukraine (40%), and Spain from South America. Even the United Kingdom, with a broader diversity of immigrants in comparison with the rest of the EU countries, shows an important concentration of immigrants from India, Pakistan and Bangladesh.

#### 6.4 Characteristics of immigrants: age, gender, education and employment

The analysis of immigrants' performance in the European labour markets must be necessarily preceded by a brief review of the main socio-economic characteristics of this population group, particularly, when compared to locals. The following pages, which present a descriptive analysis of the foreign population by age, gender, employment status and educational level, aim to accomplish such an objective.

*Age structure.* Immigrants are to a large extent young people. This is unsurprising if one considers migration as an investment decision where this demographic segment can expect higher benefits (more years ahead to recoup the investment and better physical conditions, among other reasons) and faces lower costs (e.g. lower attachment to their home countries). According to Eurostat, half of immigrants are aged between 15 and 39, compared to only one-third of nationals. This difference is even sharper in countries such as Spain, where immigration is a very recent and intense phenomenon and a large portion of immigrants are newcomers and still young (62% of the total immigrant population belong to this age group).

Table 6.2 Stock of foreign-born population in a selection of EU Member States, by country of birth, around 2006

	Austria	Belgium	Denmark	Finland	France	Greece	Hungary	Ireland							
Ex-Yugoslavia	14.7	France	12.1	Turkey	9.8	Ex-USSR	22.3	Algeria	13.7	Albania	36.0	Romania	49.5	United Kingdom	44.2
Turkey	12.7	Morocco	11.8	Germany	8.0	Sweden	15.9	Morocco	12.6	Germany	9.0	Ex-Czechoslovakia	8.8	Poland	10.4
Germany	12.7	Italy	9.4	Iraq	3.8	Estonia	7.7	Portugal	11.4	Turkey	6.8	Ex-Yugoslavia	8.3	United States	4.1
Bosnia Herzegovina	12.6	Netherlands	8.8	Bosnia Herzegovina	6.3	Somalia	2.8	Italy	6.8	Russian Federation	6.5	Ex-USSR	7.9	Lithuania	4.1
Ex-Czechoslovakia	5.8	Turkey	6.5	Poland	3.6	Ex-Yugoslavia	2.8	Spain	5.6	Georgia	6.4	Germany	7.1	Nigeria	2.7
Poland	5.1	Germany	6.3	Norway	4.5	Germany	2.6	Turkey	4.5	Bulgaria	3.5	Austria	1.8	Latvia	2.3
Croatia	4.2	D. R. of the Congo	5.3	Sweden	4.3	China	2.4	Tunisia	4.5	Egypt	2.9	Ukraine	1.4	Germany	1.9
Romania	4.2	Spain	2.7	Lebanon	4.0	Iraq	2.4	Germany	2.6	Romania	2.4	China	1.4	China	1.8
Hungary	2.6	Poland	2.6	Iran	3.8	Thailand	2.2	United Kingdom	2.5	Kazakhstan	2.2	United States	1.2	Philippines	1.6
Italy	1.8	Serbia & Montenegro	2.4	Former Yugoslavia	4.3	United Kingdom	2.0	Belgium	2.1	United States	2.1	Poland	1.0	India	1.5
Slovenia	1.4	Russian Federation	2.3	United Kingdom	3.7	Turkey	2.0	Poland	1.8	Cyprus	2.0	Others	11.6	France	1.5
Others	22.2	United Kingdom	1.8	Pakistan	3.4	United States	1.8	Vietnam	1.5	Australia	1.8	Romania	1.4	Romania	1.4
		Portugal	1.8	Somalia	3.7	Iran	1.8	Senegal	1.4	Ukraine	1.5	South Africa	1.3	South Africa	1.3
		Algeria	1.5	Afghanistan	0.8	Viet Nam	1.8	China	1.3	Poland	1.4	Australia	1.1	Australia	1.1
		Romania	1.2	Vietnam	2.8	India	1.3	Mali	1.1	United Kingdom	1.2	Spain	1.0	Spain	1.0
		Others	23.6	Others	33.3	Others	28.2	Others	26.8	Others	14.5	Others	19.1	Others	19.1

	Luxembourg	Poland	Portugal	Slovak Republic	Spain	Sweden	United Kingdom						
Portugal	28.8	Ukraine	40.2	Angola	26.7	Czech Republic	51.9	Morocco	11.8	Finland	15.4	India	9.9
France	13.0	Belarus	13.6	France	14.6	Hungary	10.8	Romania	9.7	Iraq	7.0	Ireland	7.2
Belgium	10.2	Germany	12.7	Mozambique	11.7	Ukraine	6.4	Ecuador	8.3	Ex-Yugoslavia	6.3	Pakistan	4.8
Germany	8.9	Lithuania	10.3	Brazil	7.7	Poland	3.5	United Kingdom	6.1	Iran	4.7	Germany	4.7
Italy	8.5	Russian Fed.	7.1	Cape Verde	6.9	Russian Federation	2.8	Colombia	5.6	Bosnia Herzegovina	4.7	Poland	4.0
Serbia & Montenegro	4.5	France	4.4	Germany	3.7	Germany	2.3	Argentina	5.2	Poland	4.4	Bangladesh	3.8
Netherlands	2.3	United States	1.1	Venezuela	3.4	Macedonia	2.2	Germany	4.2	Norway	3.8	South Africa	3.4
United Kingdom	2.2	Czech Republic	0.8	Guinea-Bissau	3.3	Romania	2.1	France	4.0	Denmark	3.8	United States	2.9
Cape Verde	1.7	Austria	0.5	Spain	2.1	Austria	1.9	Bolivia	3.8	Germany	3.7	Kenya	2.4
Spain	1.5	Kazakhstan	0.5	Switzerland	2.0	United States	1.7	Peru	2.6	Turkey	3.2	Jamaica	2.3
Bosnia Herzegovina	1.2	Serbia & Montenegro	0.5	Sao Tome & Prin.	1.9	France	1.6	Venezuela	2.5	Chile	2.4	Nigeria	2.0
Denmark	1.0	Romania	0.4	South Africa	1.7	Viet Nam	1.1	Bulgaria	2.3	Lebanon	1.9	Australia	2.0
United States	0.8	Italy	0.4	United Kingdom	1.5	Bulgaria	0.8	Brazil	2.2	Thailand	1.7	France	1.9
China	0.7	Bosnia Herzegovina	0.4	Canada	1.1	Belgium	0.4	Portugal	2.1	United Kingdom	1.5	Sri Lanka	1.8
Poland	0.7	United Kingdom	0.4	United States	1.1	Serbia & Montenegro	0.4	China	2.1	Syria	1.5	Philippines	1.7
Others	14.3	Others	6.8	Others	10.4	Others	10.1	Others	27.5	Others	33.9	Others	45.1

Note: National data sources are not harmonized in the way they deal with countries with recently changed borders such as the former Yugoslavia, Czechoslovakia and the former USSR.

Source: Authors' analysis from OECD (2008: 225–236).

*Gender.* Few doubts can be cast on the relevance of taking into account gender when analysing the functioning of labour markets. While earlier waves of immigration were to a large extent male dominated, that is no longer the case. In the EU27 women make up half of the immigrant population, and this is generally true across all EU Member States. Nevertheless, this does not apply to specific groups of immigrants. For example, in France, 65 per cent of immigrants from Mali are men, in contrast, two-third of Polish immigrants are women. In Spain, women are over-represented in the Latin-American group, making up 57 per cent of Ecuadorian immigrants, for example, but under-represented in the Moroccan group (36%).

*Educational level.* One of the main concerns of host countries is the skill level of foreign-born workers, as evidenced by the restrictions and quotas imposed on lower-educated immigrants by countries such as the United States or the United Kingdom, among others. In this respect, the general pattern observed across EU countries (Figures 6.4 and 6.5) points to the lower schooling levels among foreign-born workers than among locals, irrespective of gender. However, there are some exceptions worth mentioning. First, in some countries –particularly, Latvia, Estonia, Ireland, Portugal and the United Kingdom – immigrants exhibit similar schooling attainment levels to nationals. This circumstance is probably related to the fact that many of these migrants do not correspond with the popular stereotype of foreign workers. For example, there are a lot of British and Irish people working in the Ireland and the United Kingdom, respectively, while in Portugal return migration from France constitutes one of the major foreign-born population groups. In the case of Estonia and Latvia, as mentioned before, the Russian-speaking population accounts for a very significant share of the non-native labour force, and this population tends to have higher qualifications than the ‘standard’ foreigner. In other countries, such as Spain or Belgium, even though the proportion of individuals with a college degree is higher among employed nationals, the percentage of immigrant workers with low levels of schooling is lower than among locals. The opposite pattern is observed in Luxembourg and Belgium.

*Employment and unemployment.* Although often fuelled by political reasons, the main drive of immigration is to improve the economic outcomes of immigrants and their families. This, together with the characteristic mentioned above of a majority of immigrants belonging to the prime age working group, helps to explain why in most EU countries foreign workers have a high labour force participation rate and, thus, a high employment rate, even if immigrants also suffer from higher unemployment rates (Figures 6.6 and 6.7). However, there are

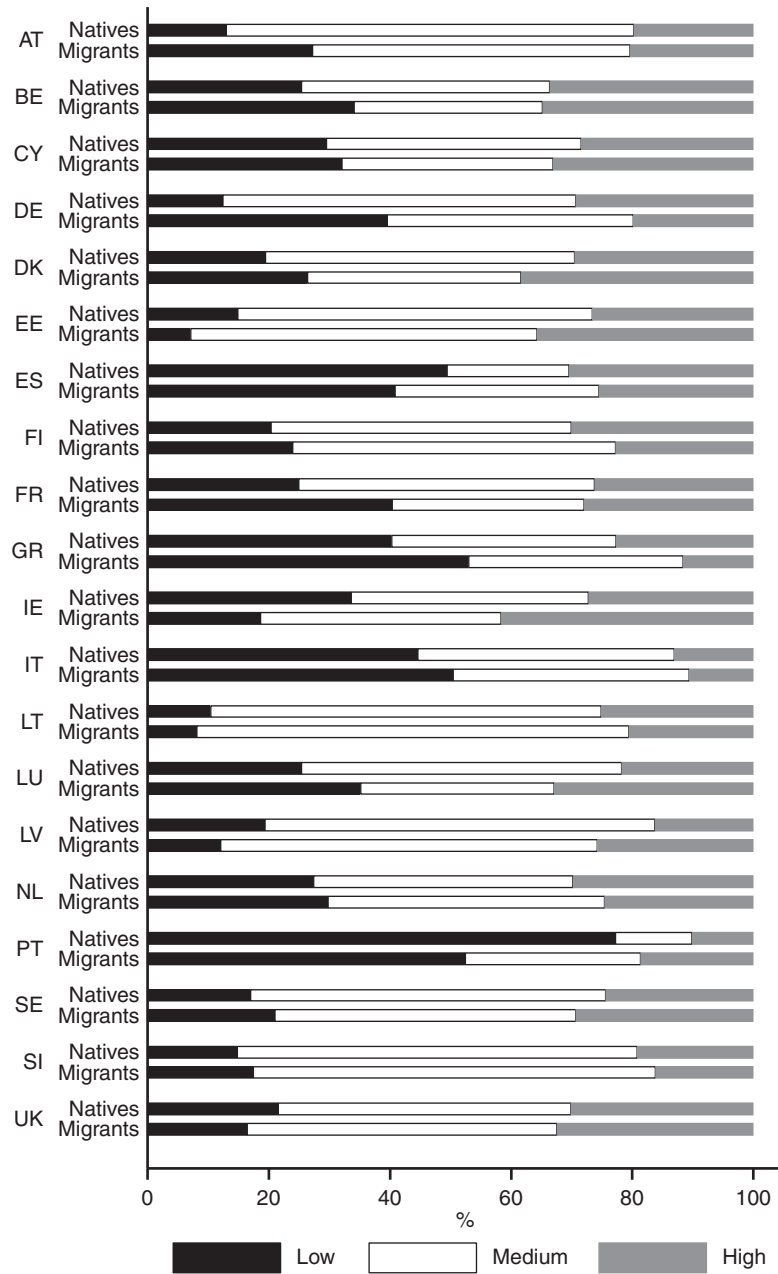


Figure 6.4 Distribution of male workers by educational level, 2006

Note: Low = ISCED-1 and ISCED-2; Medium = ISCED-3 and ISCED-4; High = ISCED-5 and ISCED-6

Source: Authors' analysis from Jobs Project Database.

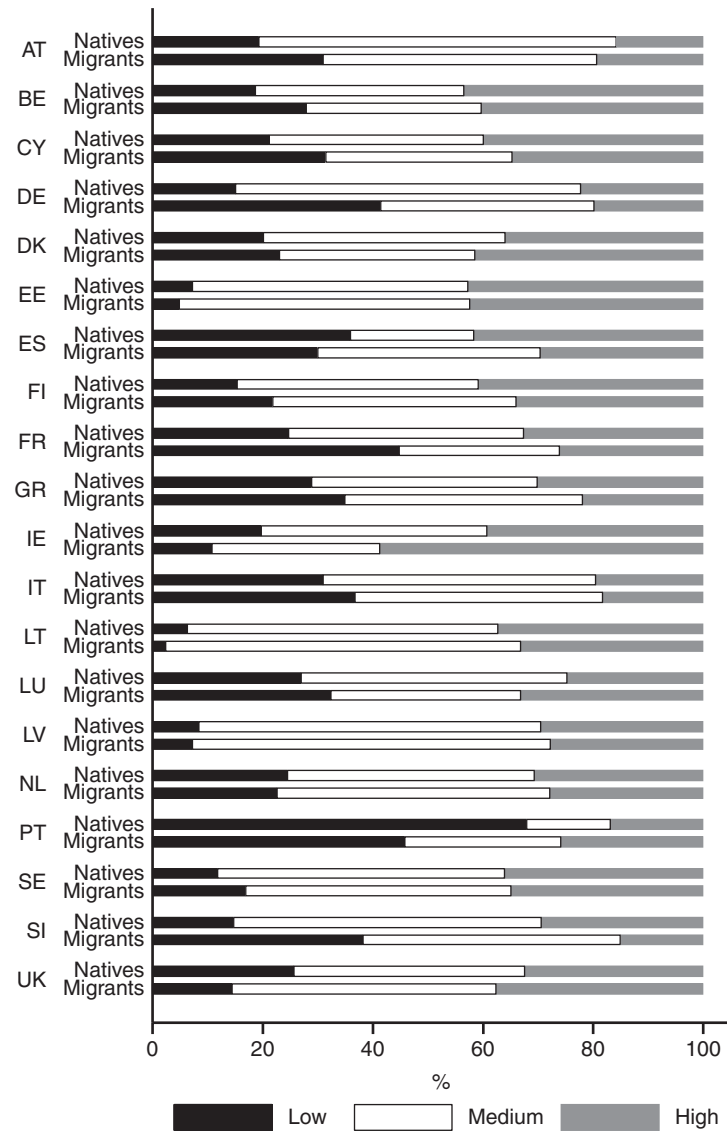


Figure 6.5 Distribution of female workers by educational level, 2006  
 Note: Low = ISCED-1 and ISCED-2; Medium = ISCED-3 and ISCED-4; High = ISCED-5 and ISCED-6  
 Source: Authors' analysis from Jobs Project Database.

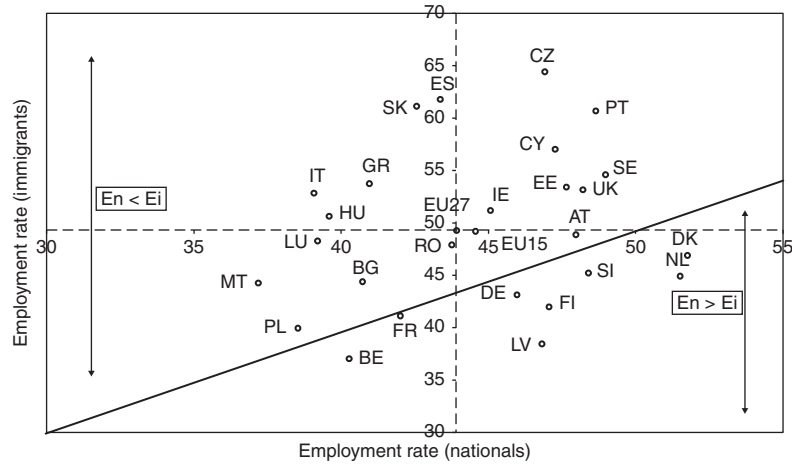


Figure 6.6 Employment rate among national and immigrants in the EU, 2nd quarter, 2006

Note: The employment rate is defined as employment by total population (of each population group)

Source: Authors' analysis from Labour Force Survey data.

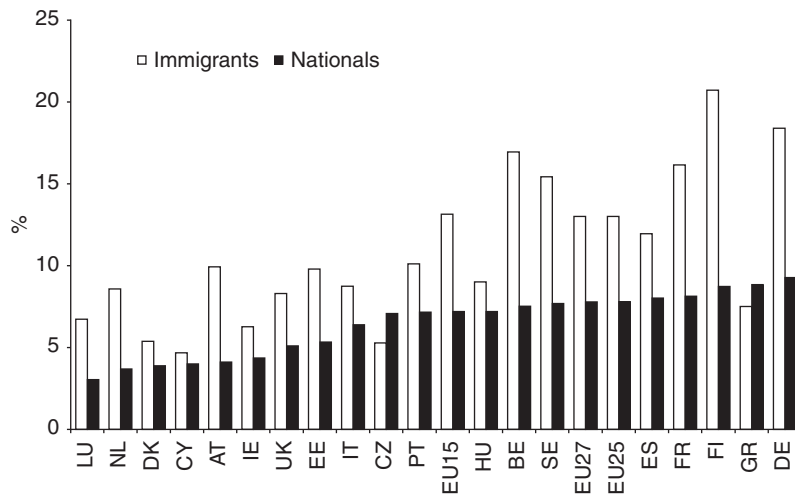


Figure 6.7 Unemployment rate among nationals and immigrants in the EU, 2nd quarter, 2006

Source: Authors' analysis from Labour Force Survey data.

remarkable exceptions to this general picture: in many of the *classic* immigration countries, such as Belgium, Germany, Denmark or the Netherlands, immigrants have lower employment rates than locals and unemployment is more acute among nationals in Greece and the Czech Republic. It is also worth mentioning the lack of a consistent relationship (of any sign) between the employment rates of both groups of population. Denmark and the Netherlands, for example, have employment rates well above the EU average, but immigrants' employment rates are below the EU average, while the opposite is true for Greece or Italy.

## 6.5 Immigrants performance in European labour markets

### 6.5.1 Occupational segregation, job creation and job destruction

This section tries to answer the question of what types of jobs foreign-born workers fill and how this pattern compares to the locals'. Figures 6.8, 6.9 and 6.10 show the distribution of immigrant and local workers – total workers, male and female, respectively – by quintiles of jobs, taking 2006 as the reference year for constructing the rank. Several interesting facts should be highlighted. First, the general rule is the concentration of migrants in the lowest quintiles of the distributions, which suggests that foreign-born workers enjoy jobs of lower quality than locals. However, there are non-negligible differences across countries, pointing to the existence of several different types of labour market participation of foreign-born workers. While in some countries such as Austria, Cyprus, Germany, Spain, Cyprus, France and Italy the concentration of immigrants at the bottom is particularly intense, there are other countries where the immigrant population does not seem to face such a severe disadvantage compared to natives. Countries such as Finland (where a high share of the foreign population is Swedish), the United Kingdom (with an important presence of Irish workers) and Belgium (with Brussels being the headquarters of most of European institutions employing thousands of high-skilled foreigners) exemplify this point. A look at the same data from a gender perspective reveals that women, and particularly female immigrants, are, in general terms, over-represented in the top two quintiles of jobs.

The quantitative analysis presented above can be complemented with some qualitative information about what specific jobs are more common among immigrants and how this picture compares with locals. For reasons of space, we limit the discussion to a few remarks derived from



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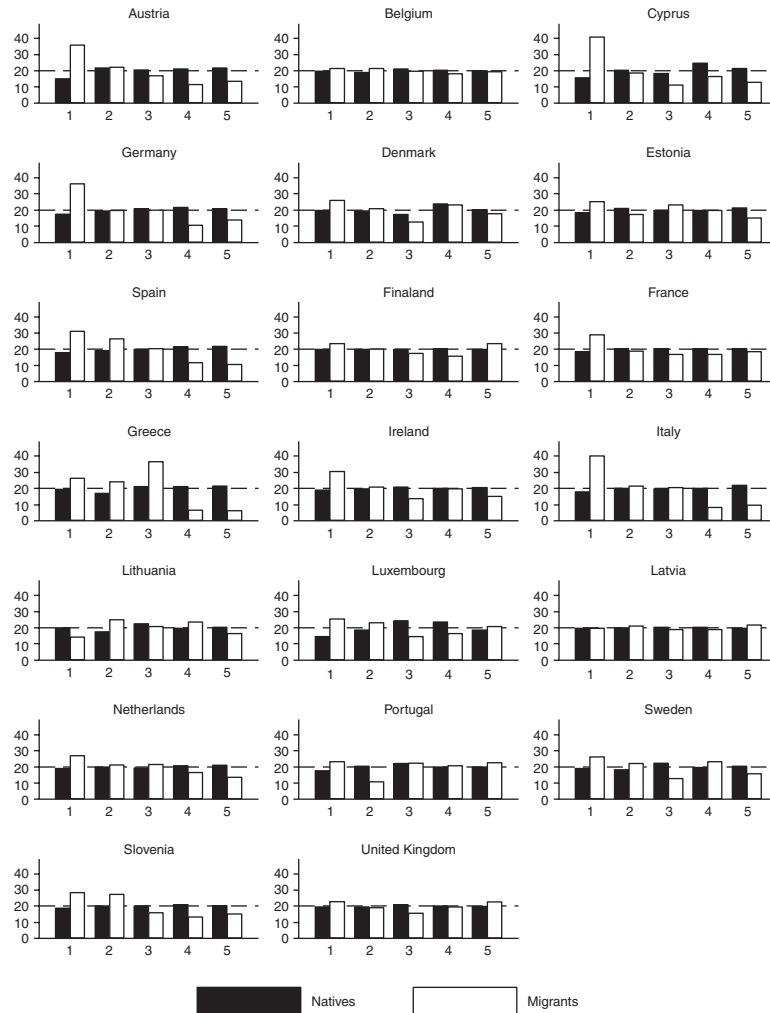


Figure 6.8 Distribution of total workers by job quintile in the EU, percentage of each group, 2006

Source: Authors' analysis from Jobs Project database.

detailed analyses carried out separately for men and women, since male and female labour markets are clearly segregated, with women specialized in different activities than men.<sup>7</sup>

First, regarding male workers, it is remarkable that in all countries, low- or medium-skilled jobs in the construction sector are always

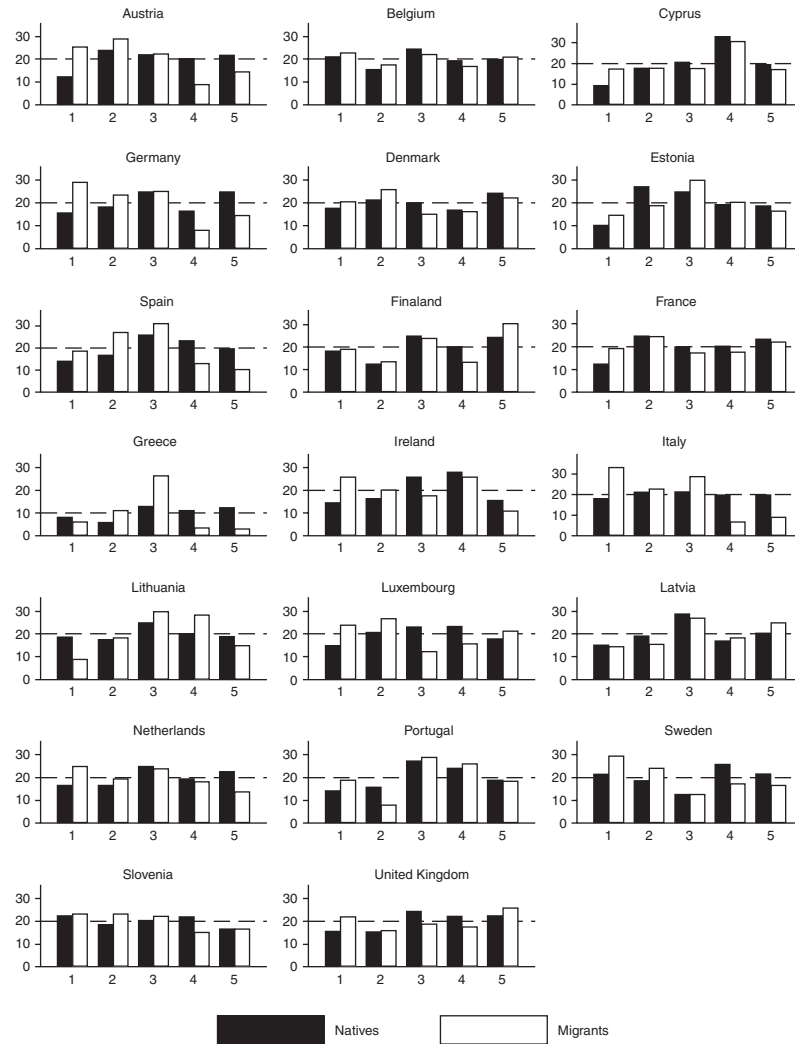


Figure 6.9 Distribution of male workers by job quintile in the EU, percentage of each group, 2006

Source: Authors' analysis from Jobs Project database.

among the five most common jobs for both natives and migrants, although in most cases more important among the latter group. In addition, while jobs in education or health care seem to play an important role for native workers, this is not always the case for migrants. Only in

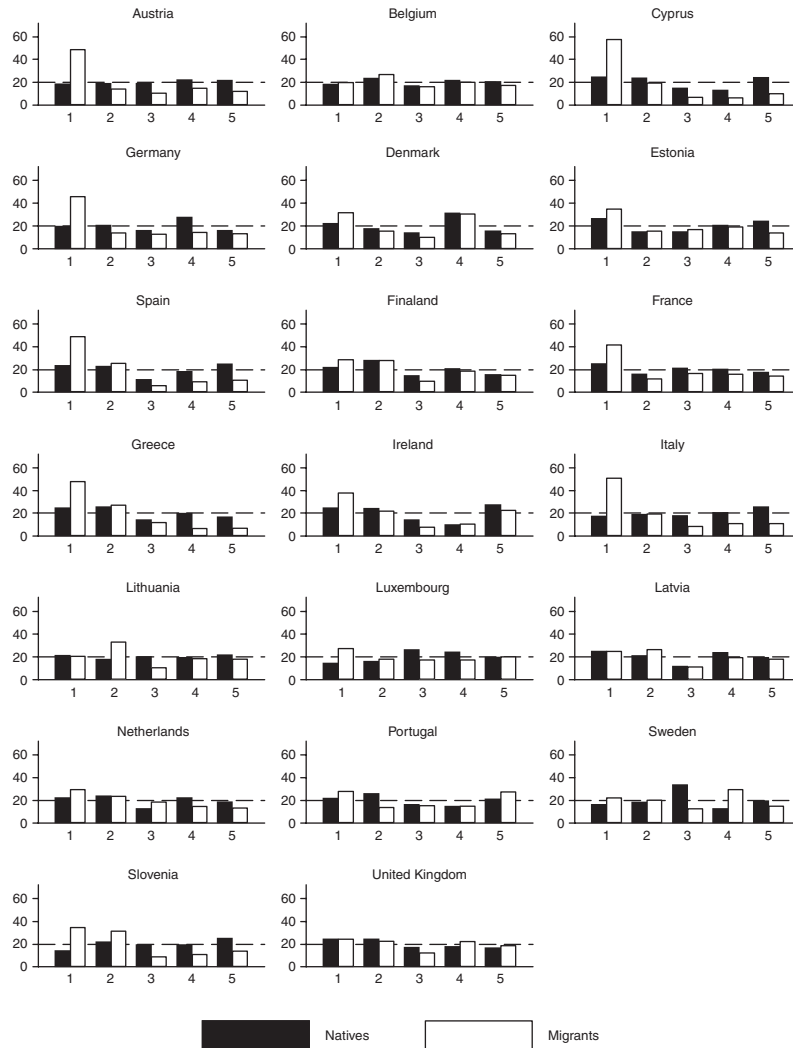


Figure 6.10 Distribution of female workers by job quintile in the EU, percentage of each group, 2006

Source: Authors' analysis from Jobs Project database.

some particular cases, such as the Nordic countries, do foreign workers have a significant participation in these kinds of jobs. In contrast, especially in France and other Mediterranean countries, employment in low-qualified jobs in the services sector (particularly, in hotels and

restaurants) is especially significant and this sometimes includes those managing small firms.

In relation to women, the pattern is different. Among nationals, the services associated with the welfare state – health care, education and other social services – and the public administration – especially, office clerks – have a major relevance in terms of female employment. Although these types of jobs have also a non-negligible role in the female immigrant job structure, foreign-born women are over-represented in low-skill jobs in the retail sector, hotels and restaurants industry and, particularly, among domestic servants.

A closer look at job structure tells us that immigrant employment is more concentrated in the five top-employing jobs (understood in the jobs project sense as occupation x sector cells) than locals: while often less than 30 per cent of native-born workers are concentrated in the five top-employing jobs among the local population, immigrants have a higher concentration in their corresponding sectors. In this respect, Portugal, Cyprus and Spain represent extreme cases, with roughly half of the foreign-born labour force working in only five types of jobs. This might be related not only to different socio-demographic characteristics of locals and migrants or occupational segregation resulting from discriminatory employer hiring practises, but also to the role played by occupational networks of migrants in the process of labour market entry by immigrants. It is the case, for example, that the foreign-born population tends to locate, other things being equal, in the same jobs as previously established immigrants from the same country, whose advice and help are very important in the process of finding a job.<sup>8</sup> This pattern might have non-trivial consequences: for example, the higher the concentration of immigrants in a specific sector, the higher will be their risk of facing specific employment problems in case of a downturn in the specific sector (e.g. construction).

From a more rigorous and quantitative point of view, it is possible to formally assess how different is the job allocation between immigrants and locals. There is a considerable and increasing volume of literature, starting as early as the 1950s, focused on analysing how workers are allocated across jobs or occupations; that is, occupational segregation, jointly with their causes and potential implications (discrimination, lower wages, limited opportunities of advancement, working conditions etc.). This academic interest has fostered the development of better and better measurement tools for depicting and analysing this issue, which has received particular attention from the gender perspective. As it is beyond the scope of this work to construct new or more sophisticated

indicators, we will rely on the Duncan Dissimilarity Index (DDI) (Duncan and Duncan 1955), an index widely used by social scientists, that yields information about how different is the distribution of two population groups (in our case, locals and immigrants) across jobs. The DDI can be formally expressed as follows:

$$DDI = \frac{1}{2} \sum_i |p_N^i - p_I^i|$$

where  $p_j^i$  ( $j = N, I$ ) denotes the proportion of individuals of group  $j$  placed in the job  $i$ . The statistic is bounded by 0 (no different occupational pattern) and 1 (complete segregation across jobs). Therefore, the higher the DDI, the larger is the occupational segregation; that is, the more different is the distribution of migrants and natives across jobs.

The main results of the application of the DDI are shown in Table 6.3, which reproduces the DDI by country of origin (foreign-born *v.* native-born workers) by country of origin and gender and, in the last column,

Table 6.3 Duncan Index of occupational segregation in Europe for migrant status and gender, 2006

	Segregation by migrant status			Segregation by gender
	Total	Men	Women	
AT	0.372	0.399	0.395	0.539
BE	0.238	0.264	0.265	0.516
CY	0.477	0.462	0.570	0.595
DE	0.377	0.413	0.405	0.534
DK	0.328	0.412	0.337	0.530
EE	0.388	0.458	0.417	0.661
ES	0.423	0.412	0.503	0.564
FI	0.415	0.492	0.460	0.594
FR	0.317	0.337	0.360	0.533
GR	0.587	0.588	0.614	0.465
IE	0.353	0.385	0.361	0.580
IT	0.398	0.397	0.435	0.487
LT	0.472	0.534	0.459	0.623
LU	0.515	0.543	0.541	0.534
LV	0.367	0.448	0.400	0.639
NL	0.254	0.304	0.262	0.511
PT	0.326	0.379	0.346	0.523
SE	0.257	0.338	0.235	0.526
SI	0.419	0.466	0.472	0.523
UK	0.249	0.310	0.235	0.526

Source: Authors' analysis from Jobs Project database.

solely by gender (i.e. men *v.* women) in order to see whether segregation is higher by gender (men *v.* women) or by country of origin (foreign-born *v.* native-born). No clear pattern emerges from this picture, but several issues can be highlighted. First, Belgium, the United Kingdom, Netherlands, Sweden and France are the countries where migrants work in jobs that are more similar to native ones. In contrast, in Greece, Luxembourg, Cyprus, Latvia and Spain the occupational segregation between migrants and locals is the highest. Second, in general terms, differences by gender are not large (the correlation between DDI for male and DDI for female across countries is nearly 95%), but there are remarkable differences in several countries, such as Cyprus (where women are much more segregated than men) and Sweden (where the female job structure is more homogenous than the male). Finally, when comparing these figures with occupational segregation by gender in order to calibrate the magnitude of the differential patterns of employment for migrants and locals, the only case where segregation by migrant status exceeds dissimilarity by gender is Greece.

According to standard labour market analysis, immigration produces an increase in the supply of labour, and, *ceteris paribus*, a reduction in wages in comparison with a zero immigration situation. The importance of this impact will depend on the immigration rate and the substitutability between immigrant and local workers. In the hypothetical case of a single labour market (i.e. not segmented) and identical characteristics of immigrants and locals, this impact would be highest. In contrast, if immigrant and locals have completely different characteristics and are employed in completely different segments in the labour market, the effect might be null. Finally, it can be argued that if immigrants and locals complement each other, the result can be an increase in the productivity of local workers and, in a purely competitive framework, an increase in their wages.<sup>9</sup>

Is it then possible to evaluate from the previous analysis to what extent immigration affects the situation in the labour market of local workers? Unfortunately the answer is no, as it is possible, and even probable, that, in the presence of a high increase of immigrant labour supply in specific niches of the labour market, local workers might react changing jobs, climbing up the labour ladder if employment is growing and moving to different niches of the labour market less affected by immigrant labour supply. This means that after comparing the job structure of immigrants and locals we can say to what extent are both groups of workers competing in the same market niches (as defined in the jobs approach) in a given moment of time, but we cannot evaluate

Table 6.4 Correlation coefficient between change in native and migrant employment growth by job cell

GR	LT	PT	SE	CY	FR	IE	LU	DK	EE	FI	DE	ES	NL	BE	UK	AT
-0.040	0.044	0.067	0.073	0.163	0.227	0.264	0.264	0.336	0.348	0.380	0.441	0.475	0.507	0.509	0.615	0.650

Note: Changes are referred to time periods considered in Table 6.1.

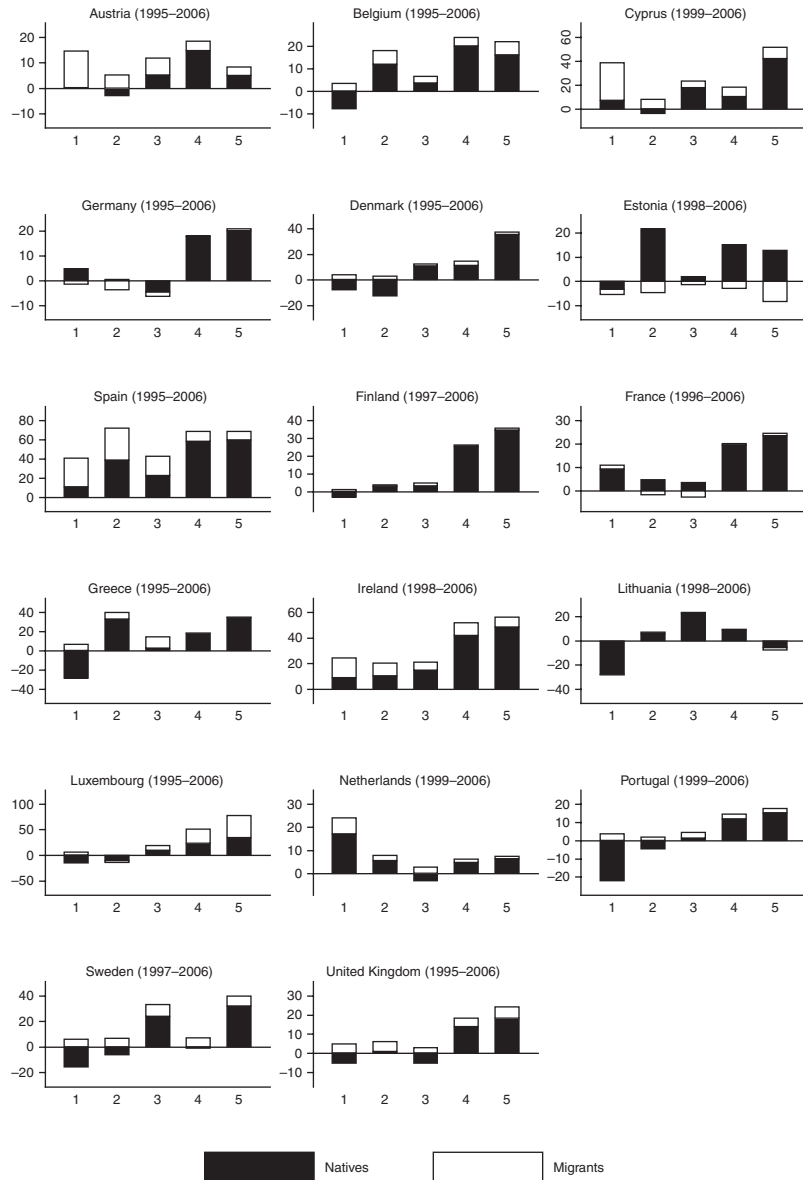
Source: Authors' analysis from Jobs Project database.

whether they have not competed in the past. A possible, although very indirect, way to address this problem is to calculate the correlation between changes in immigrant and local employment by jobs, to see to what extent, in a given period of time, local and immigrant employment follow different patterns of job creation. In this respect, as we can see in Table 6.4, the correlation between the growth of native and immigrant employment at the job level reveals (once again) no clear pattern: although employment growth among both populations groups is positively correlated (with the exception of Greece, with a negative but almost null value), the range of results goes from the practically zero correlation in Lithuania, Portugal and Sweden to values around 65 per cent in Ireland and Austria. In general, migrant job creation is not related with native job destruction; on the contrary, it seems that the demand side is a much more important force when trying to explain the relationship between employment changes among both population groups.

Given the impressive immigration flows experienced by some EU countries such as Spain or Austria, it seems of particular interest to look at the dynamics of job creation and job destruction, establishing where employment is being created and destroyed for immigrants and locals. Figures 6.11–6.13 reproduce the employment growth as a percentage of the number of workers in each quintile in 1995, by native and migrant status. As concluded from the analysis of employment structure, the dynamics of job creation and destruction for immigrants and locals (both for men and women) are to a large extent country specific.

Nevertheless, new migrant jobs tend to be created mainly in the two lowest quintiles. Austria, Cyprus and Spain are the main exponents of this trend. Luxembourg represents a noteworthy exception, as there is an impressive growth of jobs performed by foreign-born individuals in the top quintile.

Connecting with the analysis of the employment dynamics of local and immigrant workers discussed in the previous section, using Figure 6.11, it is possible to identify different patterns of job creation and



*Figure 6.11* Job creation, destruction and immigration in the EU, percentage employment of growth by job quintile

*Source:* Authors' analysis from Jobs Project database.



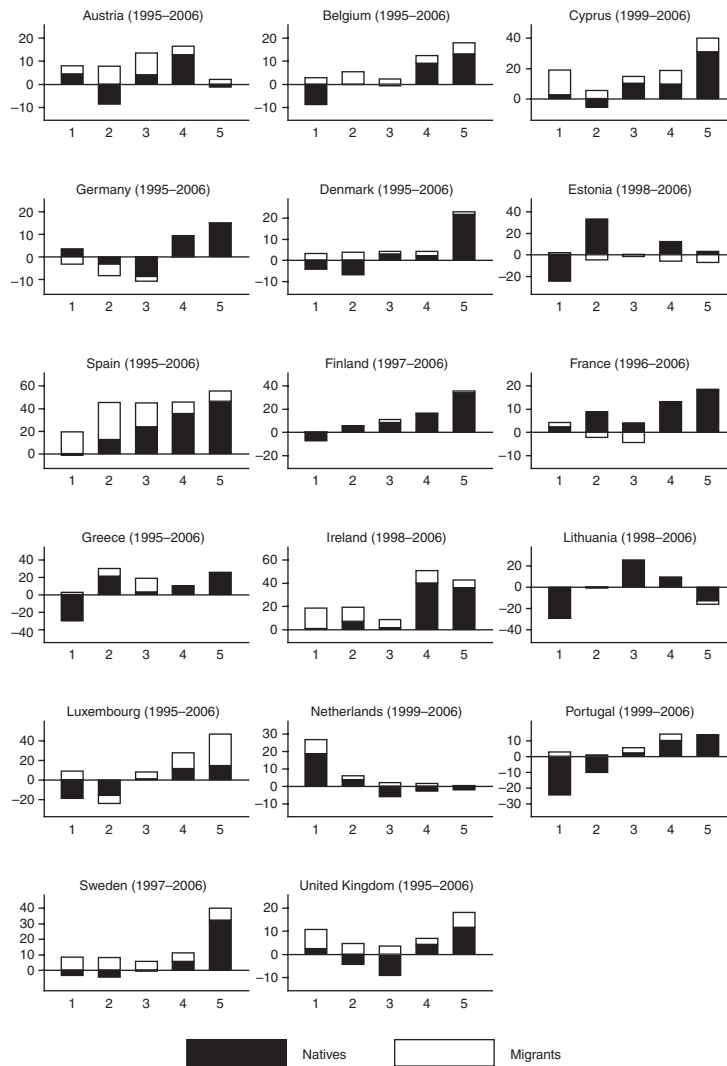


Figure 6.12 Job creation, destruction and immigration in the EU, percentage male employment of growth by job quintile

Source: Authors' analysis from Jobs Project database.

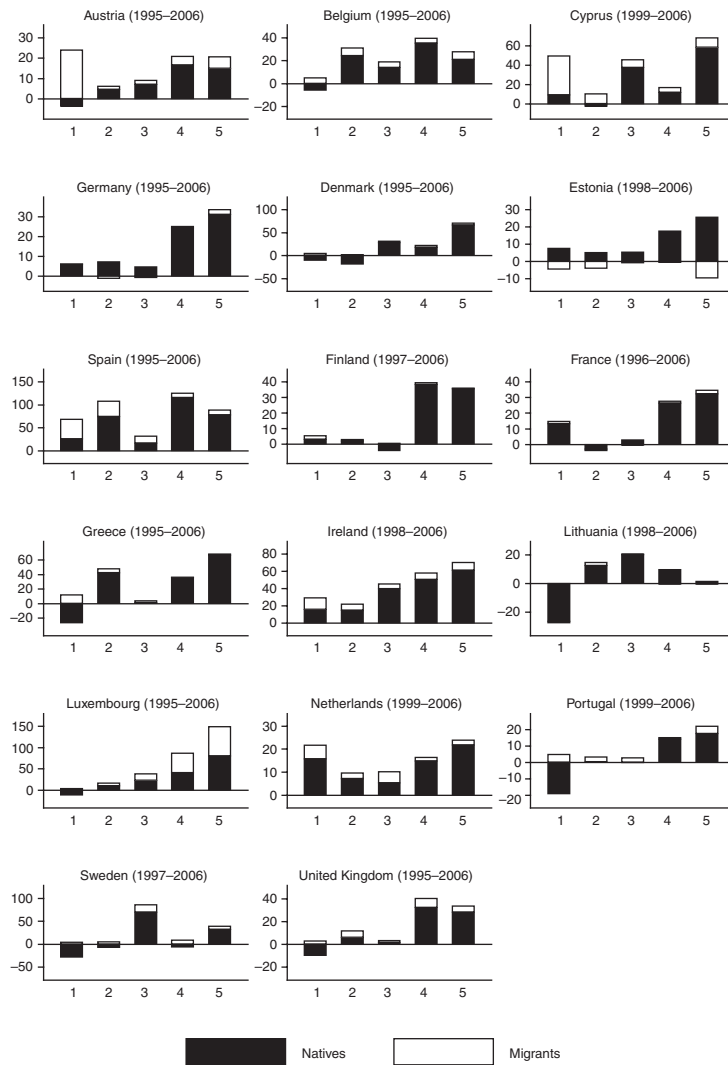


Figure 6.13 Job creation, destruction and immigration in the EU, percentage female employment of growth by job quintile  
 Source: Authors' analysis from Jobs Project database.

Table 6.5 Evolution of total employment of immigrants and locals

	Opposite direction		Same direction	
	Reduction in local employment and growth in immigrant employment	Growth in local employment and reduction in immigrant employment	Growth in local and immigrant employment	Reduction in local and immigrant employment
Q1	AT*, BE, DK, FI, FR, GR, LT**, LU, PT, SW, UK	DE	ES, FR, IE, NL, CY	EE
Q2	AT, BE, DK, PT, SE	FR, EE, DE*	CY, ES, FI, GR, UK, LT, IRL, NL	LU
Q3	NL, UK	FR, EE	Rest of countries	DE
Q4	–	EE	Rest of countries	
Q5	–	EE	Rest of countries	LT

\* Local employment stagnant, \*\* Immigrant employment stagnant

Note: Changes are referred to time periods considered in Table 6.1.

Source: Authors' analysis from Figure 6.11.

destruction in terms of quintiles of job quality and distinguishing between local and foreign workers. In order to facilitate the interpretation of the figure, Table 6.5 summarizes such tendencies focusing on whether the evolution of employment of immigrants and locals by job quintiles follows opposing (columns 2 and 3) or similar paths (columns 4 and 5). As we can see, in the first quintile there is a general pattern of substitution of local labour by immigrant labour (10 countries), although in five countries (Spain, France, Ireland, the Netherlands and Cyprus) both immigrant and local employment grows. (In Spain and Cyprus the intensity of growth is higher among immigrants, while in France and Ireland it is the opposite.) The notable exception is Germany, where employment in this quintile grows among locals and decreases, albeit very little, among immigrants. In quintile two, the case is more diverse; in half a dozen countries there is substitution with growth in immigrant employment and reduction in local employment, while in a majority of cases there is growth in both local and immigrant employment. The upper quintiles show in most cases the same pattern of increase in both groups with few exceptions, notably Estonia, with reduction in immigrant employment in the three upper quintiles.

Finally, we can speculate about the profile of employment creation in the different countries in the absence of immigration. By comparing the profile of the black part of the bars with the general profile of the full bars, a very simplistic answer could be given assuming that in absence of immigration the jobs held by immigrants would have not been created at all. Under such assumption, as in many cases the growth in employment in the lowest quintiles relies heavily on immigrant work (e.g. Spain, Cyprus, Austria or Belgium), most countries would show a lower degree of polarization and a higher degree of upgrading. Obviously, the assumption that the absence of immigration would result in the elimination of the jobs held by immigrants is a gross simplification. Most probably, some such jobs would have been created anyway, while other jobs currently held by locals would have not been created at all – their existence being dependent on migration in one way or another. Furthermore, especially in countries such as Ireland, Greece, Cyprus or Spain, with large immigration inflows in the period considered, the lack of immigrants would have shown in a shortage of labour and the change of production methods in favour of more capital intensive technology (e.g. residential care for the elders instead of personnel hired to help at home). It is also possible that the entrance of immigrants, filling the jobs at the bottom of the rank, in a context of general economic growth, acts as a push factor, pushing up the labour ladder the existing local workers, contributing thus to the increase in employment in middle quintiles. Lastly, especially in countries with a less-developed welfare state, the lack of immigrants could increase the restriction faced by women in their work–life balance (as migrants, especially women, often do domestic work or care for children, elderly or disabled individuals), reducing the labour market supply of locals.

#### 6.5.2 Job matches and immigration

From a European perspective, over-qualification of workers is definitely one of the hot topics in both labour and education economics and probably the most worrying side of the mismatch between labour supply and demand. Therefore, it is not surprising that, during the last years, it has become one of the biggest sources of concern among both academics and policy-makers.<sup>10</sup>

The measurement of over- and under-qualification is itself a much-debated issue as proved by the variety of perspectives adopted to analyse these phenomena (Hartog 2000). There are basically three possible approaches: worker self-assessment (WA), job analysis (JA),

and realized matches (RM). The WA perspective cannot be adopted since no information about workers' opinions on skills requirement is available in the Job Projects database.<sup>11</sup> The JA approach consists in comparing systematic evaluations carried out by professional job analysis about the required level of skills for a certain job with the educational level of the individual holding the job. Since we do not have a detailed catalogue of the education requirements for each job in each country, the OECD (2007a) approach to measuring immigrants' over-education has been followed. It consists in re-codifying both occupational (using ISCO classification) and educational levels (using ISCED taxonomy) into three categories of skills and educational attainments (low, intermediate and high), respectively. The cross-comparison of both categories logically defines the over- or under-qualification status of an individual. According to the RM, the required level of education for a job is derived from the mode of the distribution of educational attainment within the job. Therefore, this perspective is necessarily relative and, unless everybody holding a certain job has the same education, implies the existence of over- and under-educated workers in the economy whatever the average skills level. This should not be a major problem as long as the main interest is comparing how immigrants and natives fare in the labour market.

The characteristics of the Jobs Project database allow only implementing the JA and RM approaches. For reasons of brevity, only the main results of the approach based on the realized matches in the labour market are presented here. The results obtained using the JA approach offer different absolute figures for some countries, but the situation of immigrants in relation to locals, the main focus of the analysis, is very similar to the picture offered by the RM methodology.

In order to estimate the degree of over- or under-qualification of workers, jobs (as defined in the Jobs Project) are taken as the basic units of analysis, determining the representative educational category that corresponds to each job. Those individuals whose schooling level is higher than the mode are labelled as over-qualified workers. Similarly, those employed individuals with an educational level below the mode are considered as under-educated workers.

The incidence of over-qualification on the basis of the RM criterion is depicted in Figure 6.14. Unsurprisingly, the incidence of over-qualification is higher among immigrants than among nationals, with the exception of Germany. This is completely consistent with the distribution by job quintile and may be related to several phenomena:

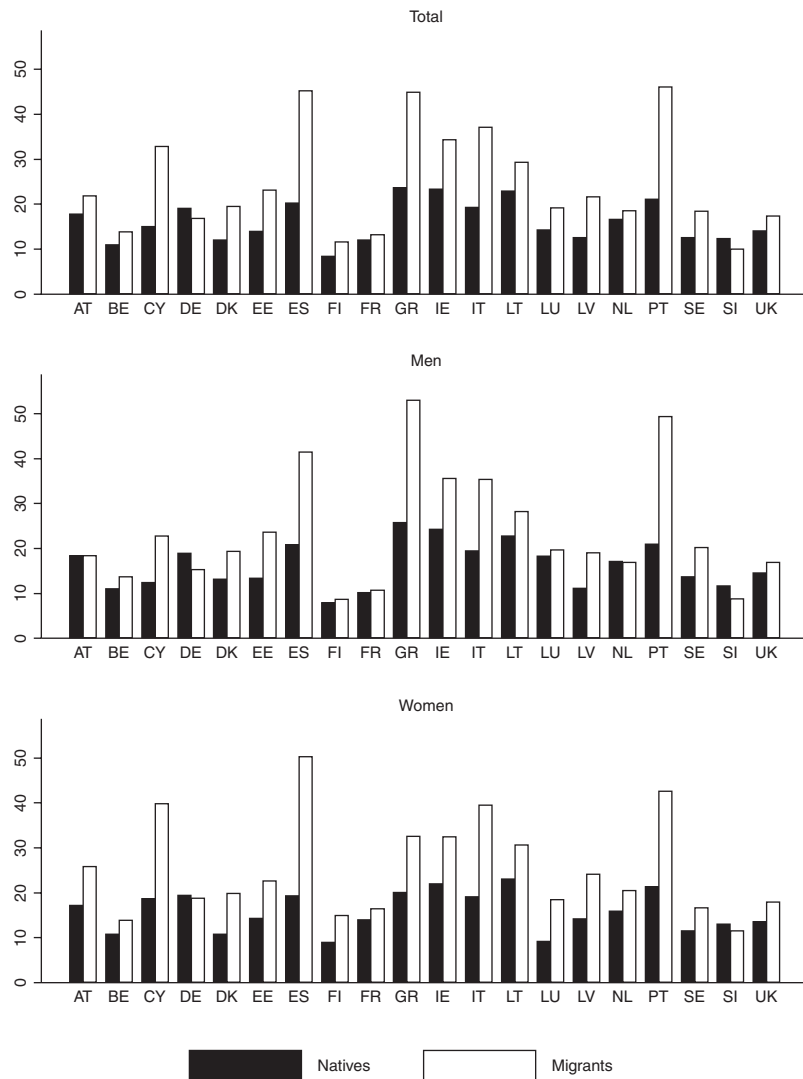


Figure 6.14 Over-qualification by migrant status and sex, percentage of employed, 2006

Source: Authors' analysis from Jobs Project database.

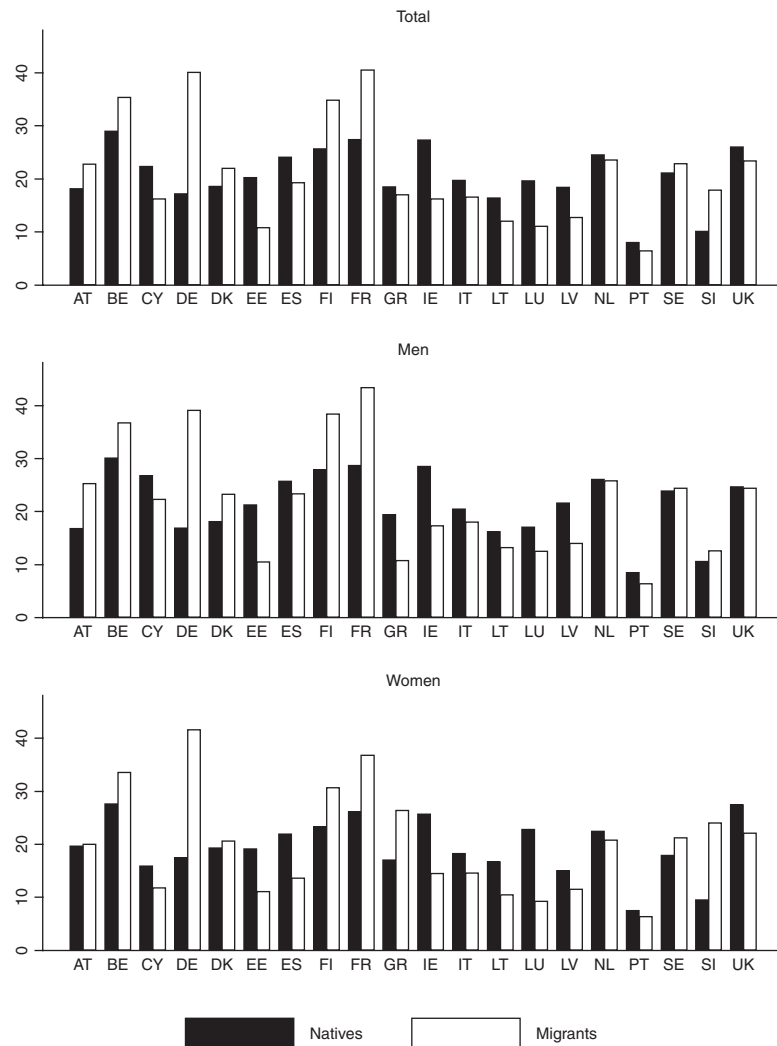


Figure 6.15 Under-qualification by migrant status and sex, percentage of employed, 2006

Source: Authors' analysis from Jobs Project database.

limited transferability of skills acquired in other countries, discriminatory practices by employers – whatever the source of such behaviour (taste, statistical discrimination, market power etc.) –, lack of language proficiency or possibly lower reservation wages and job-search time. The second fact worth mentioning is the existence of substantial differences by gender: in particular, immigrant female workers show higher levels of over-qualification than men, although there are exceptions, notably Greece. This difference by gender is specific for immigrants: over-qualification is higher among native men than among women in 13 countries, and in those countries where it is not so, the difference (with the exception of Cyprus and France) is not large. A third and final remark has to do with cross-country differences: Mediterranean and Baltic EU members and Ireland exhibit significantly high rates of over-qualification, pointing to the existence of a non-negligible mismatch between human capital resources and national production structures.

A glance at under-qualification reveals a roughly inverted image of the over-qualification rates (Figure 6.15). In general, differences between foreign-born and local workers are much smaller than in the case of over-qualification. While in some countries – like Estonia, Ireland, Spain, Italy or Portugal – the incidence of under-qualification among foreign-born population is lower than among their local counterparts according to both criteria, in others (Belgium, Germany, Finland and France, among others) the opposite picture is observed. In this case discrepancies by gender are not particularly acute, with men displaying, in general, higher rates of under-qualification than women.

## 6.6 Summary and conclusions

Immigration is a very sensitive and multifaceted issue. Important dimensions include the impact on the sending country, the human experience, the economic and social impact on the receiving country including its impact on natives' labour market outcomes, their effect on the financial sustainability of the welfare state, and so on. From this panoply of issues, this chapter has aimed at studying the labour market participation of immigrants, their similarities and differences with local workers, using the database and job ranking developed by the Jobs Project. Several conclusions arise from this analysis.

First, although migration to a large extent is the great absentee of the process of globalization, the last two decades have witnessed a change in the geography of migration, with an important increase in



the European immigration rate which has risen to almost 9 per cent. The stock of foreigners and the timing of immigration flows vary widely across EU Member States. While several of the once-typical immigration countries (Belgium and France, for example) have been comparatively untouched by the latest immigration wave, others considered until recently as countries of emigration, such as Spain, Ireland and Greece, have been subject to a very intense and sudden inflow of foreign workers. Countries also differ in terms of the country of origin of immigrants. In some countries, such as Luxembourg or Belgium, most immigrants come from other EU countries; in others, such as Greece or Spain, most immigrants are from outside of the Union. With few exceptions, in most EU countries a majority of immigrants come from a relatively small number of sending countries.

Second, regarding the socio-economic and demographic characteristics of immigrants, they tend to be younger than nationals, especially in new immigration countries, and to be gender balanced on aggregate (but not always in every particular group of immigrants), and have, on average and with some notable national exceptions, lower human capital levels and higher employment and unemployment rates.

Third, the most interesting contributions of the chapter have to do with the analysis of the labour market participation of foreign workers:

- (a) As a rule, immigrants tend to concentrate in the lowest quintiles of the job distribution. As a consequence foreign-born workers tend to have jobs of lower quality than locals. Nevertheless, the analysis suggests the existence of non-negligible differences across countries, pointing to the existence of several different patterns of labour market participation of foreign-born workers. In some Member States (Austria, Cyprus, Germany, Spain, Cyprus, France, Greece and Italy) the differences are quite stark while in other countries the immigrant population does not seem to face a severe disadvantage compared to the native population (Finland, the United Kingdom and Belgium, for example). A look at the same data from a gender perspective reveals that women in general – and particularly female immigrants – are over-represented in the top two quintiles of jobs. In addition, immigrants show a much higher concentration in a relatively small number of jobs (defined by occupation and sector). In this respect, Portugal, Cyprus and Spain represent extreme cases, with roughly half of foreign-born labour force working in only five types of job.

- (b) Consistent with the diversity of the characteristics of immigration in Europe, the Duncan Dissimilarity Index does not show a homogeneous pattern of segregation of immigrants and natives in the labour market of different EU Member States. Belgium, the United Kingdom, Netherlands, Sweden and France are the states where migrants and natives work in jobs that are more similar. At the other end of the scale, in Greece, Luxembourg, Cyprus, Latvia and Spain, the occupational segregation of migrants and locals is the highest. In general terms, differences by gender are not large, but there are remarkable differences in several countries, such as Cyprus (where women are much more segregated than men) and Sweden (where the female job structure is more homogenous than the male one). Although immigration is in some countries an important element of labour market segregation, in comparative terms, with the exception of Greece, other factors, principally gender, are more important in explaining segregation in the labour market.
- (c) The dynamic of job creation and destruction for immigrants and locals is to a large extent country specific. Nevertheless, new migrant jobs tend to be mainly in the two lowest quintiles. Austria, Cyprus and Spain are the main exponents of this trend. Luxembourg, with an impressive growth of jobs performed by foreign-born individuals at the top quintile, represents a notable exception. In contrast, immigrants' job creation is spread more or less evenly across the five quintiles in Ireland.
- (d) Immigrant workers have worse job matches than nationals. In particular, the incidence of over-qualification is higher among migrants than among nationals, for both men and women. This might reflect a less-than-perfect transferability of immigrant's skills and education, the lack of sufficient time to make a suitable match in the case of newly arrived immigrants or, alternatively, the existence of discrimination in the labour market.<sup>12</sup>

Summing up, the analysis performed in this chapter is consistent with the existence of segmentation in terms of the type (quality) of jobs held by national and foreign-born workers, with immigrants over-represented at the bottom of the job-quality distribution. However, this general conclusion should make allowances for differences in segregation intensity among the different EU Member States. This high concentration of immigrants in a relatively reduced number of activities and occupations has important implication in times of crisis, as

immigrants, as a group, may tend to have lower resilience to adverse economic circumstances.

### Notes

1. See, among many others, Borjas and Trejo (1991) and Brücker et al. (2002).
2. Spanish law clearly illustrates this problem: while the standard procedure takes ten years of continued residence in the country, Latin American migrants can get the Spanish nationality in two years.
3. This sort of exercise is carried out, for example, by Borjas (2003a) for health insurance in the US.
4. In the words of Hatton and Williamson (1998: 3) 'contemporary numbers are relatively small compared with the mass migration of a century ago...mass migration in the 40 years prior to World War I raised the New World labor force by a third and lowered the Old World labor force by an eighth'.
5. Note that Figure 6.2 uses citizenship as the criterion to define immigrant status, which results in lower immigration rates than the alternative measure based on the country of birth, as it excludes from this group all those immigrants acquiring the nationality of the host country. In some countries, this discrepancy can be very relevant: for example, in the Netherlands, from 2001 to 2007, the number of foreigners that acquired Dutch nationality amounted to 5.6 per cent of the total population in 2008.
6. The analysis of geographical patterns of migration and the factors behind them have received much attention from immigration scholars. For a detailed analysis, see Pedersen et al. (2008).
7. For details see section 4 of the technical annex at <http://web.usal.es/~janton/annex.pdf>.
8. This phenomenon is illustrated by Mullan (1989) and Patel and Vella (2007) for the United States.
9. The impact of immigration on the labour markets of the host countries is one of the major fields of debates among academic economists. On the one hand, the works of some authors like Borjas (1994 and 2003b) support the existence of a negative effect of immigration on labour market outcomes of (at least) some segments of workers of the host countries. On the other, there is also a remarkable body of literature that defends the opposite view. This position is mainly based on evidence from 'natural experiments', like the massive arrival of Cubans to Florida after the Mariel boat lift (Card 1990), the increase in labour supply in France resulting from the return of the so called *pied noirs* to France with the independence of Algeria (Hunt 1992) or the migration of Russian Jews to Israel with the fall of the Berlin wall (Friedberg 2001). See Longhi et al. (2005 and 2006) for a meta-analysis of empirical findings and Friedberg and Hunt (1995), Borjas (1999) and Bodvarsson et al. (2009) for detailed literature reviews.
10. See Hartog (2000) and Groot and Maassen van den Brink (2000) for an extensive review of this issue.
11. Other possible databases, such as the *European Social Survey*, contain very few observations of foreign-born workers.

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12. In this last respect, according to a recent Eurobarometer 64 per cent of Europeans (EU25) considered the existence of discrimination based on ethnic origin (in many countries related to immigration) widespread. In Sweden, the Netherlands or France the percentage was equal or higher than 80 per cent (Special Eurobarometer 263 / Wave 65.4, Discrimination in the European Union, 2007)