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Lídia Farré
Núria Rodríguez-Planas

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Lidia Farré

IAE-CSIC and IZA

Núria Rodríguez-Planas

IZA and IAE-CSIC

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IZA

P.O. Box 7240
53072 Bonn
Germany

Phone: +49-228-3894-0

Fax: +49-228-3894-180

E-mail: iza@iza.org

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ABSTRACT

Immigrants from Eastern Partnership (EaP) Countries in Spain^{*}

Most EaP migrants in Spain come from Ukraine, followed by, to a much lesser extent, Moldavia, Armenia, and Georgia. Relative to other migrants, they are those who most recently arrived to Spain. Despite being considerably more educated than natives and other migrants, they are less likely to work than natives and other migrants upon arrival to Spain. Using data from *Spanish Labor Force Survey* (LFS) from the years 2000 to 2011, this paper analyzes how their employment situation evolves with time in Spain, the type of sectors they work in, and their welfare use, including unemployment insurance receipt.

JEL Classification: J15, J24, J61, J62

Keywords: immigrants' employment and welfare assimilation

Corresponding author:

Núria Rodríguez-Planas
Visiting Research Fellow
IZA
P.O. Box 7240
53072 Bonn
Germany
E-mail: rodriguez-planas@iza.org

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Introduction

Over the last decade, Spain has experienced many changes. It has gone from being one of the most dynamic European economies, with gross domestic product (GDP) growth of 3.4 per cent, to experiencing a major reverse after the international financial crisis of 2007, which burst the Spanish real-state bubble and soared unemployment rate to 24 per cent – the highest level among Organisation for Economic Co-operation and Development (OECD) countries. Before the collapse of the Spanish economy, the country received an impressive inflow of immigrants – approximately 500,000 per year between 2002 and 2007 – who were quick to find jobs in the booming economy and to integrate in its society. As Figures 3 and 4 show, the composition of migrants changed over time, with EU-15 migrants being overtaken by South Americans and migrants from the EU enlargement member states. While much is known on how migrants from Africa, Eastern Europe and South America assimilate in Spain, there is no evidence on the experience of migrants from Eastern Partnership (EaP) countries. Nonetheless, the number of EaP migrants has increased considerably over the last decade. There were as few as 4,000 migrants from EaP countries residing in Spain at the turn of the century, and as many as 127,204 in 2011, representing almost 2 per cent of the total immigrant population. This chapter's main objectives are to: (i) evaluate the importance of EaP migrants' inflows and stocks in Spain; (ii) identify EaP migrants' socio-demographic characteristics and compare them to those of natives and other immigrants; (iii) evaluate the impact of migration from EaP countries on the Spanish labour market and welfare state; and (iv) identify mechanisms to deal with the skill shortages and present migration policies to deal with migrant labour market matching.

Our analysis highlights three important results. First, we find that in contrast with earlier findings on migrants in Spain, EaP migrants are less likely to work than natives and other migrants upon arrival. This result is particularly puzzling because the high education level of EaP migrants relative to both natives and other migrants. A possible explanation for this is that the strong segmentation of the Spanish labour market makes it difficult for highly educated migrant workers to find jobs that match their skills (Alcobendas and Rodríguez-Planas, 2009). Since EaP migrants are largely high-skilled workers, their higher reservation wage at arrival is likely to explain their lower employability. As they are high skilled, they may first search for a high-skilled job. As time goes by and they cannot find such type of job, their need for money makes

them adapt their expectations and increases their willingness to take less-qualified jobs. In contrast, migrants from other origins, which tend to be lower skilled, have lower reservation wages and thus are more likely to access low-skilled jobs (for which there was an excess supply prior to the real-estate bubble burst in 2007). An alternative and complementary explanation for the difficult labour market integration of high-skilled EaP immigrants in Spain is that they face difficulties obtaining Spanish recognition and professional accreditation for their college or professional degrees.

Second, a common finding in Spain is that immigrants are much more likely to be over-educated than similar natives (Fernández and Ortega, 2008; Alcobendas and Rodríguez-Planas, 2009). Like these authors, we find that EaP migrants are more over-educated than natives and other immigrants. We also find that EaP migrants work in more vulnerable jobs than natives and other migrants, and that although their employment situation improves over time, convergence is slow. Like other immigrants in Spain, we find that EaP migrants are concentrated in the domestic and construction sector. While EaP women are disproportionately employed in the domestic sector as nannies, nurses and housekeepers (over 50 per cent of them work in this sector), EaP men are mainly employed in the construction sector with about two fifths of EaP men in low-skilled jobs working in this sector.

Third, we find that EaP immigrants assimilate into unemployment benefits over time, and that they do so at a faster rate than natives, other migrants and migrants from the EU enlargement member states. This result suggests that most EaP immigrants have come to Spain to work, and since they concentrate in the most vulnerable positions – the most likely to be hit by the recession – they make use of unemployment benefits once they have the right to do so.

The experience of Spain ought to be of interest to policymakers of other Southern European countries that share: (i) common cultural affinities, such as strong family-orientated values associated with a low degree of individualization (Flaquer, 2000); (ii) similar socio-economic circumstances, such as rigid labour and financial markets, an important underground economy, low productivity growth and excessive borrowing (Garicano, 2008; Andrés, 2009); (iii) welfare commonalities, such as the mix of universalistic health-care and education systems with professional pension schemes, the high degree of institutional fragmentation and the lack of an explicit family policy as evidenced by a very limited number of family-friendly social provisions (Ferrera, 1996; Guillén, 1997); and (iv) a recent preponderance of illegal migration and weak

governmental capacity to regulate immigrants' inflows (Castles and Miller, 2003; Solé, 2004).

The structure of this paper follows. Section 1 evaluates the importance of inflows and stocks of EaP migrants in the Spanish economy. Section 2 identifies EaP migrants' socio-demographic, labour market and welfare use characteristics, and compares them to those of natives and other migrants. Section 3 discusses EaP migrants' legal routes of migration and legal framework in Spain. Section 4 contains the methodological model and the main results on how EaP migrants compare to natives and other migrants in terms of employment and welfare use. Section 5 discusses the impact EaP migrants may have had on Spain. Section 6 provides some discussion on the reasons why skilled EaP migrants are concentrated in low-skilled jobs in Spain. The paper concludes in Section 7, with some discussion on the skill shortages and potential for increased migration flows and their consequences as a result of possible changes in migration policies in the European Union with regard to EaP countries.

Sources

The main results in this study are derived from a quantitative analysis conducted by the authors. We employ two main data sets: The Spanish Labor Force Survey and the Spanish Local Population Registry. The first is a quarterly survey conducted by the Spanish Statistical Institute (INE) and covers about 60,000 households (180,000 individuals) each quarter. It contains detail information on the labour market status and socioeconomic characteristics of the respondents. We restrict the analysis to the year 2000-2011, that correspond to the large immigration episode in Spain. The second data set is the Spanish Local Population Survey conducted also by the Spanish Statistical Office. As we will describe latter in the paper, the main advantage of this administrative data set is that it allows us to quantify the stock of immigrants in the country in a given year.

Along the paper we refer to several studies conducted mainly by Spanish researchers that try to quantify the economic implications of the immigration boon during the 2000s. Other than studies by the two authors of this paper: Farré and Rodríguez-Planas, we also refer to work by Sara de la Rica, Libertad González, Juan Francisco Jimeno, Francesc Ortega, among others.

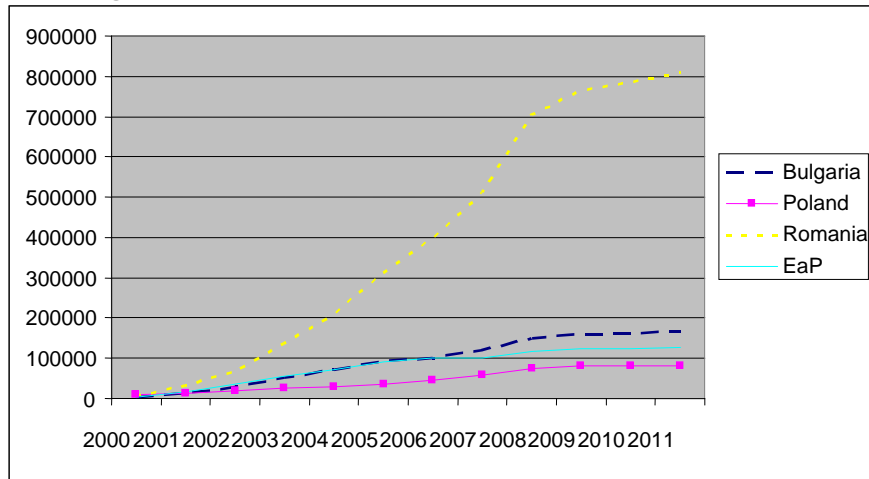
1. Inflows and Stocks

To analyse inflows and stocks of migrants in Spain we use the *Spanish Local Population Registry*, which has the advantage of including undocumented immigrants. As the Spanish welfare system offered until recently free health care and education to all residents – including undocumented immigrants – it needs a population registry to keep a record of all individuals who can access this universal welfare.¹ As a consequence, it is in immigrants' best interests to register in the Local Population Registry immediately after arriving in Spain. The registration process does not require proof of legal residence and guarantees full data confidentiality (i.e. the Spanish Government cannot use information in the Local Population Registry to deport undocumented immigrants). Moreover, in the case of an amnesty, the undocumented immigrants can show proof of residence and date of arrival in Spain – a necessary condition to be considered eligible for the amnesty – through their registration in the Local Population Registry. Finally, immigrants are required to update their status every two years, which guarantees the accuracy of the immigrant population in the Spanish Local Population Registry.

Figure 1 plots the inflow of immigrants from the most popular Eastern European countries (Bulgaria, Poland and Rumania). We observe a sharp inflow of Romanians in Spain at the turn of the century. While there were no more than 8,000 Romanians in Spain in 2000, close to 800,000 of them were living in the country a decade later. Romanians have experienced a particularly interesting status in Spain since 1 January 2007, when their country became part of the European Union. By 2007, Romanians were the second largest group of immigrants in Spain with 11.2 per cent of the share (closely following Moroccans, the first largest group of immigrants). Figure 1 also shows that the inflow of immigrants from EaP countries in Spain resembles that of Bulgarians and Polish immigrants, with an acceleration of the inflow beginning in 2004 and ending after the great recession.

¹Note that since September 2012 there are some restrictions regarding the eligibility for health care coverage among immigrants. For example, immigrants without legal residence (i.e. illegal immigrants) are not covered.

Figure 1 Main Eastern European countries and EaP



Source: Spanish Local Population Registry.

Table 1 compares immigrants from EaP countries with those from the 12 member states which joined the European Union in 2004 and 2007. Data limitations restrict the comparison to the 2000-2008 period. It shows that the number of individuals from the EU enlargement member states living in Spain substantially increased between 2000 and 2008, and that immigrants from EaP countries, as a group, are comparable in magnitude to Bulgarians or Polish.

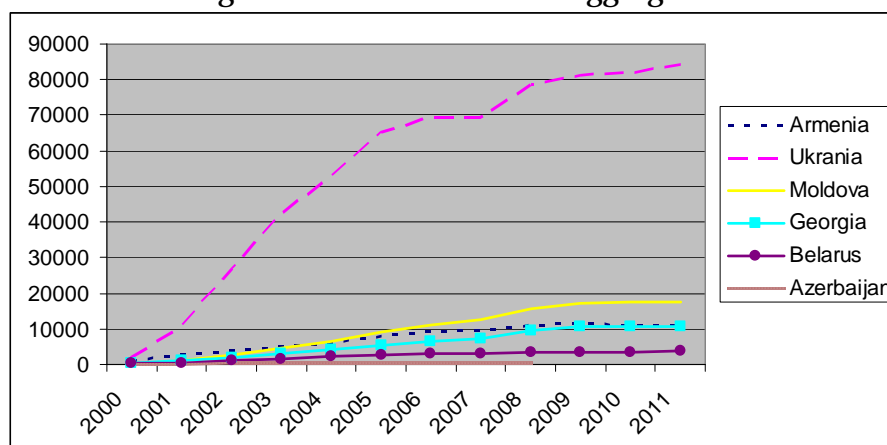
Figure 2 shows the total number of immigrants in Spain from EaP countries by country of origin. Most come from Ukraine, followed by, to a much lesser extent, Moldova, Armenia and Georgia. We observe few immigrants from Belarus and even fewer from Azerbaijan.

Table 1: EaP and the 2004 and 2007 EU enlargement

| | 2000 | 2004 | 2008 |
|----------------|-------|---------|---------|
| Cyprus | 226 | 234 | 293 |
| Czech Republic | 1,461 | 3,783 | 8,322 |
| Estonia | 111 | 506 | 1,138 |
| Hungary | 1,141 | 2,458 | 6,973 |
| Latvia | 169 | 1,206 | 2,452 |
| Lithuania | 193 | 9,163 | 20,107 |
| Malta | 174 | 187 | 246 |
| Poland | 8,623 | 27,657 | 75,757 |
| Slovakia | 361 | 2,477 | 7,315 |
| Bulgaria | 3,266 | 70,363 | 150,742 |
| Romania | 7,544 | 206,394 | 706,164 |
| EaP | 4,080 | 71,720 | 118,373 |

Source: Spanish Local Population Registry.

Figure 2: EaP countries disaggregated



Source: Spanish Local Population Registry.

Table 2: Number of individuals born in the EaP countries living in Spain

| | 2000 | 2004 | 2008 | 2009 | 2010 | 2011 |
|------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Armenia | 1,169 | 6,203 | 10,961 | 11,392 | 11,138 | 10,909 |
| Ukraine | 1,879 | 52,687 | 78,579 | 81,243 | 81,886 | 84,391 |
| Moldova | 190 | 6,333 | 15,534 | 17,174 | 17,457 | 17,405 |
| Georgia | 465 | 4,059 | 9,464 | 10,868 | 10,772 | 10,787 |
| Belarus | 267 | 2,142 | 3,411 | 3,559 | 3,587 | 3,712 |
| Azerbaijan | 110 | 296 | 424 | 424 | 424 | 424 |
| Total EaP | 4,080 | 71,720 | 118,373 | 124,236 | 124,840 | 127,204 |
| Total Immigrants | 1,472,458 | 3,693,806 | 6,044,528 | 6,466,278 | 6,604,181 | 6,677,839 |
| EaP/Total Immg | 0.28 | 1.94 | 1.96 | 1.92 | 1.89 | 1.90 |

Source: Spanish Local Population Registry.

Table 2 shows that, as a group, immigrants from EaP countries accounted for 2 per cent of the immigrant population in Spain in 2011. Again, it is worth noticing that the growing inflow since the beginning of the century halted after the great recession. While the number of immigrants from EaP countries in Spain grew from 4,080 in 2000 to 118,373 in 2008, the increase from 2008 to 2011 was from 124,236 to 127,204. That said, the number of EaP migrants has *not* decreased after the great recession, suggesting that on average they are not necessarily returning to their country of origin. In Section 5 and 6 we return to this point, discussing potential explanations for this.

2. EaP Migrants' Socio-Demographic Characteristics

Unfortunately, the Spanish Local Population Registry has limited information on immigrants' socio-demographic characteristics and labour force status. To analyse migrants' profile and evaluate their impact in Spain, we focus on data from the second quarter of the Spanish Labour Force Survey (LFS) from the years 2000 to 2011.² The Spanish LFS gathers information on demographic characteristics (age, years of education, marital status and region of residence), and employment characteristics (work status, occupation and industry). Unfortunately, no information on earnings is available. For immigrants – defined as foreign-born workers who are not Spanish nationals – the LFS collects information on the number of years of residence in Spain and the country of birth. Our analysis focuses on individuals between 16 and 64 years old. We exclude older individuals to avoid complications involving retirement decisions.

One of the strengths of the LFS is that it is supposed to include both legal and illegal immigrants, in contrast to alternative datasets that *only* cover legal ones, such as the data from the Social Security Records or the Wage Survey Structure. However, the potential under-reporting of illegal immigrants is likely, especially before an amnesty (as the LFS is voluntary, in contrast with the Census, which is mandatory). Similarly, return migration related (or not) to an amnesty may also be worrisome, as both return migration and under-reporting of immigrants may generate deterministic biases in our

²As is common practice in the research using this dataset, we only use the second quarter to avoid repeated observations. The LFS is carried out every quarter on a sample of around 60,000 households. Each quarter, one sixth of the sample is renewed. However, the dataset does not include a variable that allows identification of individuals along the six consecutive interviews.

analysis. However, studies suggest that amnesties ought not to be a major concern in our analysis (see Amuedo-Dorantes and de la Rica, 2007; Fernandez and Ortega, 2008; and Rodríguez-Planas, 2013).

Table 3 presents descriptive statistics for natives and immigrants. It also distinguishes migrants' region of origin. Focusing first on EaP migrants, we observe that 56 per cent are women. As expected, EaP migrants are younger than the native population. On average, they are about 37 years old – about 9 years younger than natives. EaP migrants are also highly educated, especially when compared to the native population. Over one third of men and close to one half of women have a college degree and only about one fifth of them do not have a high-school degree. In contrast, about 16 per cent of natives have a college degree and almost two thirds have not successfully completed secondary education. While their household structure resembles that of natives in terms of average size, some interesting differences emerge. EaP migrants are less likely to be married and more likely to have children than natives (albeit fewer of them).

Most immigrants come to Spain to work, and EaP migrants are not any different in this respect. Around three quarters of EaP male and two thirds of EaP female migrants in Spain work. Of these, between one quarter of men and one third of women do so under a permanent contract, which guarantees them high severance pay if dismissed. A differential gender pattern emerges: EaP female migrants are 14 percentage points more likely to work than their native counterparts. This higher labour force commitment implies that the share of those who work under a permanent contract is the same as native women (close to one third of those employed in a wage and salary job). In contrast, men do not exhibit a higher employment commitment, and the share of EaP male migrant workers with a permanent contract is, at 26 per cent, half the size of that observed among natives, which is 50 per cent.

Perhaps surprisingly, given their higher education levels, EaP migrants are primarily employed in low-earning occupations. As few as 6 per cent of male and 10 per cent of female EaP migrants work in medium- or high-earning occupations (as shown in Table 3).³ Where does the typical EaP immigrant work and how is it different to other

³High-earning occupations are directors, managers, scientific technicians, professionals and academics. Middle-earning occupations include: technicians and support professions; accountancy, administrative and other office employees; and craftsperson and skilled workers in manufacturing and construction. Low-skilled occupations include workers in: catering, personal and protection services and sales; agriculture, livestock, forestry and fishing; installation and

migrant groups living in Spain? As EaP and other immigrants are disproportionately over-represented in low-skilled occupations in Spain, Table 4 presents the list of main sectors these immigrants work in and their relative importance. While EaP women are disproportionately employed in the domestic sector as nannies, nurses and housekeepers (56 per cent of them work in this sector), EaP men are mainly employed in the construction sector with 42 per cent of EaP men in low-skilled jobs working in this sector. The domestic sector is also the most common occupation among other female immigrants (51 per cent of those working in low-skill occupations do so in that sector). In contrast, while many women from other ethnic groups work in the sales sector (with a share of 8 per cent), the share of EaP female migrants in this sector is limited, probably due to their lower language skills. Finally, both EaP and non-EaP female migrants are also largely represented in the food-services sector (as waiters and cooks) with a share of 20 and 16 per cent, respectively.

Non-EaP men are also employed in the construction sector (with a share of 35 per cent of those in low-skilled occupations working in this sector). But, in contrast to EaP male immigrants, they also have jobs in other occupations in the manufacturing and the food-services sector (with a share of 14 per cent and 7 per cent, respectively). During the 2000s, the construction sector was booming and thus finding a first job here was much easier than in other sectors. After some years in the country, immigrants could make a transition to other sectors. The shorter experience in the country is likely to explain the high concentration of EaP migrants in the construction sector.

We also find that EaP migrants are less likely to be welfare recipients or receive pensions than natives. As Rodríguez-Planas (2013) explains their legal status or insufficient contribution is likely to hamper participation in social programmes in Spain – a country with a low level of social assistance and a welfare state in which access to pensions is conditioned on having contributed to social security. The only exception is the unemployment insurance (UI) receipt of EaP men, which, at 10 per cent, is double that of native men.⁴ As EaP men are considerably more likely to be working under fixed-term contract and in low-earning occupations – including construction work, a

machinery operators and assemblers; and other elementary occupations.

⁴ To be able to receive UI benefits in Spain you have to be registered in the Social Security records, under 65 years old, unemployed and have contributed to social security for at least 12 months(not necessarily consecutive).

sector heavily hit after the real-estate bubble burst in 2008 – than native men, they are more likely to have been hit harder by the great recession than natives, explaining their higher UI receipt. This result suggests the urgent need to promote circular migration schemes, which allow the systematic and regular movement of migrants typically seeking work between their homelands and foreign countries.

Relative to other migrants, EaP migrants and migrants from the EU enlargement member states arrived most recently to Spain. On average, EaP migrants have been in Spain for a little more than 5 years – about half the average length of African migrants. Most likely this explains the concentration of EaP migrants and those from the EU enlargement member states in low-earning occupations relative to their African and South American counterparts.

3. Legal Routes of Migration and Legal Framework for EaP Migrants

Spain has not had an active policy of attracting immigrants. As early as 1985, it imposed severe restrictions on non-EU foreigners who wanted to establish Spanish residency and citizenship.⁵ Beginning in 1993, further tightening took place with tougher restrictions on work and residency permit renewals and the implementation of immigration quotas system, which limited the entry of foreigners to about 30,000 per year. At the turn of the century, Spain updated its immigration legislation, bringing it in line with other European countries.

However, the free entrance of foreigners as tourists together with a lax implementation of immigration laws and several generous amnesties that have granted legal residence to illegal immigrants (1985, 1991, 1996, 2000, 2001, and 2005) have converted Spain into an attractive destination for immigrants. In fact, the most common way of obtaining legal status in Spain during the past two decades has been through amnesties – often originally entering either illegally or as tourists (see Amuedo-Dorantes and de la Rica, 2005, 2008; Dolado and Vazquez, 2007; and Izquierdo *et al.*, 2009).⁶ Between 1985 and 1991, as many as 150,000 immigrants regularized their

⁵To have the legal status, immigrants were required to acquire a work and residency permit that restricted them to a particular activity and geographic area only for a year. In addition, immigrants were not granted any social benefits, despite paying social security taxes when employed.

⁶For instance, in the 2000 amnesty, immigrants had to provide proof of one of the following: (i) residence since 1 June 1999; (ii) having held a work permit any time during the three-year period preceding 1 February 2000; (iii) being denied asylum before February 2000; (iv) having

status; between 1996 and 2001, a total of 400,000 immigrants did the same; and in the last amnesty, that of 2005, as many as 550,000 immigrants obtained residence permits.

Today, Spain is part of the Schengen zone; a group of countries in Europe which have no internal border controls, so their citizens can cross into the different countries without showing a passport. As EaP countries are *not* members of the Schengen zone, they are treated as other non-EU migrants. This implies that citizens from EaP countries need a visa to work in Spain in addition to other requirements asked to non-EU citizens, such as a valid passport, no criminal record, private health insurance, documentation to justify the purpose of the trip (visiting friends, work or holiday), a return travel ticket and some financial guarantee (a minimum of € 600). As a result of the strict entry requirements, a substantial fraction of non-EU citizens enter the country legally through a temporary visa or permit, such as a tourist or a family-visit visa, followed by an overstay – implying that their legal status in the country has expired.

Rodríguez-Planas and Vegas (2011) find that female Moroccans and Ecuadorians follow a similar pattern that contrast with the one observed among Romanian women. While the former come mainly to Spain to work legally and over time (some of them) move out of employment, Romanians are considerably (and persistently) more attached to the labour force. Although they tend to lack legal status upon arrival, they gain this status in time. This may seem surprising at first because Romania has been an EU member state since 1 January 2007 implying that Romanians are free to enter and reside in Spain. However, although the *Spanish Real Decreto 340/2007* permits Romanians to work or be self-employed in Spain, with the same rights as nationals, it did so as long as they *first* proved a minimum of two years residence in Spain. The Rodríguez-Planas and Raquel Vegas (2011) study, which uses retrospective survey data collected in 2007, is interesting as it suggests that many Romanians may have anticipated this legal change that facilitated their legal and employment assimilation process and entered Spain *prior* to the legislation change, even if that implied working without legal status. Probably because of this legislative change, Romanians became the second largest group of immigrants in Spain in 2007, at 11 per cent (closely followed by Moroccans).

Many researchers have found that networks of migrants from the same country facilitate the arrival and assimilation of migrants into the host country. Unfortunately,

applied for any type of residence permit before 30 March 2000; or (v) family ties to legal residents or to individuals in any of the previous categories.

the LFS does not ask workers about their networks. However, to explore this we first analyse whether EaP immigrants have clustered in any particular regions in Spain and whether these regions differ to those chosen by other migrants. Table 5 shows the top ten destinations of immigrants in 2002 and 2011 (Panel A displays this information for EaP migrants and Panel B displays this information for other migrants). When the immigration boom started in Spain in the early 2000s, EaP migrants were located in the non-traditional immigrant regions of Albacete, Cuenca and Huelva. While these regions had an immigration share of about 2 per cent in 2002, the concentration of EaP migrants was well above 5 per cent. In contrast, the main destinations of other migrants were Alicante and Balears with an immigrant share of 12 per cent and 11 per cent, respectively.

By comparing the geographical distribution of immigrants in 2002 and 2011, we can also gain some insight on the influence of personal contacts on their migration process. Indeed Albacete and Cuenca are still among EaP migrants' preferred destinations, while those are not popular destinations among other immigrants (i.e. in 2011 the migration rate for Albacete is 9 per cent and for Cuenca 13 percent, while the top three receiving regions have a migration rate above 20 per cent).

4. EaP Migrants' Labour Market and Welfare Assimilation in Spain

4.1 Empirical Specification

This section examines labour market and welfare assimilation of EaP migrants in Spain. In particular, we analyse whether differences in observable characteristics between EaP migrants and natives, and EaP migrants and other migrants, and explain the observed descriptive differences from the previous section. For this purpose, we estimate the following cross-sectional linear probability model:

$$Y_{ijt} = \alpha_1 X_{ijt} + \alpha_2 EaP_{ijt} + \alpha_3 Female_{ijt} + \alpha_4 (EaP_{ijt} \times Female_{ijt}) + \alpha_5 YSM_{ijt} + \alpha_6 YSM_{ijt}^2 + \delta_j + \gamma_t + t + t\delta_j + \alpha_7 Z_{ijt} + \varepsilon_{ijt} \quad (1)$$

where i indexes the individual, t the LFS year, and j indexes the state. The variable X_{ijt} is a vector of person-specific characteristics, which includes the following socio-demographic controls: age and age squared, marital status, four education dummies

(primary education, secondary education but no high-school degree, high-school graduate and college education), household size, number of children in the household and four dummies indicating the age of the children in the household (0-4, 5-9, 10-15 and 16-29 years old). EaP_{ijt} is a dummy variable indicating whether the individual is an EaP immigrant, $Female_{ijt}$ is a dummy variable indicating whether the individual is woman, and $(EaP_{ijt} \times Female_{ijt})$ is an interaction of the two. YSM_{ijt} and YSM_{ijt}^2 control for years since migration to Spain (and its square). The specification also includes State fixed effects (δ_j), LFS year fixed effect (γ_t), a time trend (t) and a time trend interacted by State fixed effects. Z_{ijt} is a vector describing labour market characteristics (at the province level) and includes the following variables: unemployment rate, share of immigrants, share of immigrants on welfare and share of inactive immigrants at the province level. A normally distributed error term is represented by ε_{ijt} .

The LHS variable, Y_{ijt} , varies according to which aspect of migrants' assimilation under analysis. For example, when we examine work assimilation, Y_{ijt} is a dummy indicating whether the individual is working at the time of the survey. Other aspects analysed include dummies for: working under a permanent contract; being self-employed; being unemployed; and receiving cash-welfare benefits – which includes UI benefits, retired pension and other type of pension, including disability pension.⁷ In addition, to identify possible skill mismatches and over-qualification, we construct a variable that has the value 1 if the individual works in a low-earning occupation, 2 if in a middle-earning occupation and 3 for a high-earning occupation. This last specification is estimated only for individuals working at the time of the survey.

Tables 6 to 12 present the results from these regressions. Because we are interested in analysing how EaP migrants compare to natives, equation 1 is estimated on a sample of EaP migrants and natives. The results from these estimations are in column 1 of Tables 6 to 12. Columns 2 and 3 repeat the analysis but compare EaP migrants to other migrants living in Spain (in column 2) and to other migrants from EU enlargement member states (in column 3). As EaP migrants most closely resemble EU enlargement migrants, we think this last comparison is particularly relevant to policy.

Our analysis focuses on the coefficients, α_2 , and $(\alpha_2 + \alpha_4)$, which capture male and female differences between EaP migrants and: (i) natives (in column 1); (ii) other migrants living in Spain in column 2; and (iii) migrants from EU enlargement member

⁷We cannot include housing, schooling or health-care benefits as these are not measured in the LFS.

states in column 3, controlling for migrants' year of arrival in Spain. If lower employment- or welfare-participation rates among immigrants are simply due to differences in observable characteristics between EaP migrants and others, the coefficients, α_2 , and $(\alpha_2+\alpha_4)$, should not be significantly different from zero when these controls are included in the model.

4.2 Main Results

Below we summarise the main results from Tables 6 to 12.

EaP migrants are less likely to work than natives and other migrants, although their employment situation improves over time. Estimates from column 1 in Table 6 show that on arriving to Spain, EaP male migrants are 32 percentage points less likely to work than their native counterparts (once all observable socio-demographics have been accounted for). Although the employment gap on arrival is smaller between female EaP migrants and natives, it is far from negligible – with EaP women 12 percentage points less likely to work than native women.⁸ As the average employment rate for EaP men (women) is 78 (63) per cent, our estimates imply that EaP migrants are 41 (19) per cent less likely to work than their male (female) counterparts when they first arrive. It is important to note that we find that this gap decreases over time, suggesting that EaP migrants assimilate over time. The employment differential vanishes for men after 11 years and for women after 4. From this point on it begins to reverse.

The male results contrast with those from Spanish migration literature. For instance, Fernández and Ortega (2008) find that the labour supply of new male immigrants arriving from Eastern Europe and South America is higher than that of similar natives. In addition, they find that while the labour supply increases for South Americans over time, it decreases for Eastern European immigrants. When focusing on migrants from the EU enlargement member states, de la Rica (2009) also finds evidence that the employment situation of these immigrants in Spain deteriorates over time. More specifically, she finds that while there is no difference in the probability of working for *recent* EU-enlargement migrants and natives, *non-recent* EU-enlargement migrants do worse in terms of employment than their recent counterparts.

How can we reconcile our results with the rest of the literature? First, we find that EaP men fare worse at arrival in terms of employment than other migrants. Results

⁸We obtain the estimate of 12 percentage points by adding 0.32 and -0.20.

from columns 2 and 3 in Table 6 show that, upon arrival to Spain, EaP male migrants are less likely to work than their migrant counterparts (including those from EU enlargement member states). Second, EaP migrants differ considerably from the average Spanish migrant as they are considerably more educated. More than one third of them have a college degree compared to about one tenth of the immigrants the EU enlargement member states and one fifth of South Americans. Moreover, Alcobendas and Rodríguez-Planas (2009) find that, in contrast to low-skilled workers, immigrants with a university degree are over-represented in the “not-working” category compared to their native counterparts. The Spanish labour market is strongly segmented and rigid, making it difficult for high-skilled workers to find jobs that match their skills. Since EaP migrants are largely high-skilled workers, their higher reservation wage at arrival is likely to explain their lower employability. In contrast, migrants from other origins, who tend to be lower skilled, have lower reservation wages and thus are more likely to access low-skill jobs (for which, there was an excess supply prior to the real-estate bubble burst in 2007).

EaP migrants are less likely to work under permanent contracts than natives and other migrants, although their employment situation in Spain improves with time.

Table 7 shows that EaP migrants are not only less likely to work upon arrival than natives and other migrants, but they are also more likely to work under more vulnerable conditions. Upon arrival, male (female) migrants are 60 (34) percentage points less likely to work under permanent contract than their native counterparts. Although this gap narrows over time, and takes 15 (8) years for men (women) to vanish, and then reverses.

When comparing EaP migrants’ likelihood of working under a permanent contract with other migrants, we observe a gender differential. While EaP men are 10 percentage points less likely to work under permanent contract upon arrival than other migrants, there is no difference between women. This differential holds (albeit smaller) when we compare EaP migrants to those from EU enlargement member states.

EaP migrants are less likely to be self-employed than natives and other migrants. It may be that since they are high-skilled workers, EaP migrants may be more entrepreneurial than natives or other migrants. We find no evidence of this in Table 8. Upon arrival, EaP male migrants are 11 and 7 percentage points less likely to be self-

employed than natives or other migrants, respectively. Moreover, when compared to natives, this differential does not decrease over time. Again, the differential between EaP female migrants and natives or other migrants is considerably smaller than that observed among men. This is likely to be partly explained by the fact that as many as 45 per cent of EaP female migrants are college graduates.

EaP migrants are over-qualified for their jobs and more so than natives and other migrants. Consistent with earlier evidence, we find that EaP migrants are more over-educated than natives and other immigrants (as shown in columns 1 and 2 of Table 9). These authors also find that the native–immigrant over–education differences are largest for Eastern European immigrants, which are the ones with the highest levels of education. Estimates from column 3 in Table 9 show that there are no over-education differences between EaP and migrants from EU enlargement countries on arriving.⁹

Moreover, we find that the over-education differential between EaP migrants and natives does *not* decrease over time – there is *no* convergence. While this result differs from the ones described earlier on migrants’ employment and work security assimilation in Spain, it is consistent with findings from Fernández and Ortega (2008), which reveal that the over-education gap of male immigrants with comparable natives is *unaffected* by the number of years since migration. These findings are also in line with Alcobendas and Rodríguez-Planas (2009), who find that the degree of assimilation in Spain is higher the lower their education level. These authors find that high-skilled immigrants are over-represented in the “non-qualified” occupation category, which includes jobs such as, janitors, entry positions in construction work, non-qualified labourers, house-cleaning, childcaring and elderly caring. Section 6 below presents alternative explanations on why immigrants are over-represented in low-qualified occupations (regardless of their educational level) and the lack of upward occupational mobility.

There is no residual welfare gap between EaP migrants and natives. The residual welfare gap between EaP migrants and natives in Spain is a negative (albeit not statistically significant) 4.5 percentage points – shown in column 1 in Table 10. This negative residual welfare gap upon arrival is consistent with the Rodríguez-Planas

⁹ However, we do find that over time, EaP migrants improve their skill mismatch in relation to migrants from EU enlargement countries.

(2013), who finds that immigrants in Spain are less likely than natives to participate in cash-benefit social programmes – even when controlling for observable characteristics.¹⁰ The author concludes that the self-selection of immigrants coming to a relatively ungenerous welfare state (at least in terms of means-tested social programmes) is likely to be a reason for this result.

It is interesting to note that the coefficient in the “years since migration” variable in column 1 of Table 10 is positive and statistically significant. Although, on its own, this estimate may seem to suggest that over time, EaP migrants increase their welfare use relative to similar natives, when information from column 1 in Table 11 is added, it is clear that assimilation into welfare is all driven by UI benefits. This is consistent with Rodríguez-Planas (2013), who finds that there is no assimilation into cash-welfare benefits in Spain (other than UI benefits). This result contrasts with findings from other countries – even ones with traditionally not very generous states, such as the United States.

When comparing EaP welfare use to that of other migrants in Spain, there is no differential use upon arrival (shown in column 2 of Table 7). However, column 3 in Table 10 shows that EaP migrants are more likely to use welfare upon arrival than their counterparts from EU enlargement countries (as opposed to when all other migrants are used as a comparison group).

EaP migrants are less likely to receive UI upon arrival than natives, but this differential decreases over time. Column 1 in Table 11 shows that EaP migrants are 4.5 percentage points less likely to receive UI upon arrival in Spain. This result is consistent with the Spanish social security system, which being a defined benefit pay-as-you-go system, conditions receipt and level of unemployment benefits to the worker’s labour history (wages and number of years of contribution). When we compare UI receipt between EaP migrants and other migrants in Spain, holding all other characteristics constant, we do not find a statistically significant difference (columns 2 and 3 in Table 11).

¹⁰ Rodríguez-Planas (2012) includes the following benefits as cash-welfare : (i) unemployment benefits; (ii) disability pensions; (iii) survivor’s pension; (iv) family allowance; and (v) other social programmes.

We find that EaP immigrants assimilate into unemployment benefits with time spent in the new country, and that they do so at a faster rate than natives. Two and a half years after arriving, the difference in UI receipt between EaP migrants and natives disappears and begins to reverse. In contrast, Rodríguez-Planas (2013) finds that it takes between 6 to 8 years in Spain for the difference to vanish when all immigrants (not just EaP) are compared to natives. Since EaP immigrants concentrate in the most vulnerable positions, they are the first to be hit by recession. Thus, they use unemployment benefits as a supplement of income once they have the right to do so. This is likely to be part of the explanation for the sustained stock of EaP immigrants even after the great recession.

5. Impact of EaP Migrants on the Receiving Country

The number of EaP migrants in Spain increased from 4,080 in 2000 to 127,204 in 2011. Despite the substantial increase in absolute numbers, this group represented only a 2 per cent of the foreign-born population in 2011. Thus, we do not expect them to have had any important impact on the labour market. Most of the literature on migration finds a small effect (if any) of migration inflows on the labour market prospects (employment and wage) of natives with similar skill levels. This result has also been confirmed for the Spanish case (Carrasco *et al.*, 2008). Given the small size of the EaP migrants as a group we cannot perform any rigorous econometric analysis. However, in light of previous evidence, one should not expect any significant effect from the EaP migrants on the labour market outcomes of natives with similar skill levels.

In contrast, a recent literature has presented evidence of some complementarities between low-skilled immigrants and high-skilled natives. For the Spanish case, Farré *et al.* (2011) show that the massive inflow of immigrants during the last decade had a positive effect on the labour market participation of high-skilled native women. The authors show that female migration has substantially decreased the price of domestic services. In response to this fall in prices, high-skilled women have hired domestic services and substituted away hours of home production (childcare and housekeeping) by hours of work in the market. The estimates in Farré *et al.* (2011) indicate that the large inflow of immigrants to Spain between 1999 and 2008 led to a 3-percentage-point increase in the participation rate of highly skilled women with family responsibilities.

As shown in Table 4 EaP female immigrants are disproportionately employed in domestic services. Thus, this group is likely to have contributed to the increase in the

labour market participation of native women. The share of EaP women over the immigrant population increased from almost 0 to more than 2 per cent between 1999 and 2008. According to the estimates in Farré *et al.* (2011), this group would have been responsible for about a 0.06-percentage-point increase in native female employment (i.e. a 2 per cent of the total increase in native female employment).

Alternatively, one may wonder how the recession is affecting EaP migrants, and how this in turn is affecting the native population. To explore this, we have re-estimated Table 6, but using only the pre-recession years, that is from 2000 to 2007 (shown in Table 12). When doing so, we observe that, compared to natives, the employment gap is larger during this period. The reduction in the employment gap after including the recessionary years may respond to the increase in the unemployment rate of natives. While this does not imply that EaP migrants are hurting natives, it does imply that their employment status is relatively less affected by the recession than that of natives.

How do EaP migrants affect the Spanish pension, health and education systems? Because the immigration boom is a relatively recent process in Spain, very few migrants receive old age pensions as they are still in working age (Muñoz de Bustillo and Antón, 2009). This is particularly true of EaP migrants as they are younger than migrants from other origins. Moreover, the Spanish Social Security System is a defined benefit pay-as-you-go system where the pension level depends mainly on the labour history of the worker (wages, number of years of contribution and age of retirement). Thus, even if they were over 65 years old, EaP migrants would not receive old age pension unless they contributed the minimum 15 years required by law. Moving now to the effects of EaP migrants to the health care system, Muñoz de Bustillo and Antón, 2009, analyze immigrants' use of Spanish public health care insurance using data from the 2003 Spanish Health Survey. They find that immigrants incur lower health expenditures than natives, even when controlling for observable characteristics.¹¹ Finally, Salinas Jiménez and Santín González, 2010, estimate that the total direct expenditures accumulated by the Spanish national and regional governments from the school year 2000-2001 to 2006-2007 amount to € 2.570 million euros, most of which (about 70 percent) have been concentrated in Andalucía, Cataluña and Madrid. As EaP migrants represent 2 percent of all migrants, they have increased the Spanish educational expenditures by no more than € 51,4 million euros.

¹¹According to the raw data, immigrants are more likely to visit the family doctor and go to the emergency room than natives. Similar results are found by Jiménez *et al.*, 2009.

6. Reasons for the mismatch between skilled EaP migrants and their low-skilled jobs

Rodríguez-Planas (2012) discusses potential alternative and (possibly) complementary explanations of why skilled migrants in Spain are concentrated in low-skilled jobs. These explanations would of course also apply to EaP migrants. We summarize them below. The first explanation for why skilled migrants are concentrated in low-skilled jobs is the structural nature of the Spanish economic growth in the last decade, combined with the weak governmental capacity of regulating immigrant inflows. The second is the imperfect transferability of human capital acquired abroad, which implies that the higher the homeland education the greater the gap between the native and the immigrant's human capital. Third, in an economy with a segmented labour market and with a large informal sector as the Spanish economy, it is easier to converge towards the occupational distribution of low-skilled workers, but extremely hard to penetrate the high-skilled labor market. The fourth reason is the need for certification. Several occupations that require high levels of education also require certification in the destination country. This is clearly the case in the Spanish labour market – and not only for architects, physicians or lawyers, but also for electricians and plumbers. A fifth explanation is that immigrants may affect the labor market decisions of natives with *different* skills through the presence of complementarities. In such case, there would be a shift towards less manual jobs among the native population compared to a shift in the opposite direction for immigrants. Several recent papers have highlighted that native and immigrant workers of similar educational attainment specialize in different occupations and therefore do not compete for the same jobs, explaining the small effect the inflows of immigrants on the wages of the less-educated natives in the U.S. (Ottaviano and Peri, 2006) as well as in Spain (Carrasco *et al.*, 2008b, Alcobendas and Rodríguez-Planas, 2009, and Amuedo-Dorantes and de la Rica, 2011). Finally, prejudicial attitudes leading to discriminatory behavior could also produce lower labor market attainments for member of visible minority groups.

7. Conclusions: Skill Shortages and Potential for Labour Market Matching with EaP Immigration

Since the great recession, the Spanish economy has suffered a major reverse. The burst of the real-estate bubble, a failing banking system, a lack of liquidity and loans for firms, and a rigid labour market have driven the economy to a double-dip recession within four years. The change of government by the end of 2011 has shifted the social welfare priorities and has changed the regulation so that universal health care is no longer readily available to legal and illegal immigrants. As a consequence the inflow of immigrants has come to a halt, regardless of their nationality. In addition, the soaring unemployment rate is pushing both immigrants and natives to leave the country as employment perspective becomes meagre. Within this context, the following two major concerns arise. First, the rising unemployment benefit costs due to very large numbers of people losing their jobs during the current recession; and second, the risk of social exclusion with the well-known medium- to long-term consequences of social and cultural integration of immigrants due to their vulnerable situation and the scarcity of social assistance available in Spain.

How have immigrants coped with the soaring job destruction rates observed in Spain? We have seen that the level of unemployment has increased faster among foreign workers than among natives partly because they were concentrated in sectors of the economy that were the most vulnerable during the recession (i.e. construction), and partly because migrants tend to be younger and have less job security than natives. However, the overall stock of (EaP) migrants has not decreased as much as expected given that the unemployment rate in Spain has soared to over 25 percent. Indeed, as of 2011, we have not observed the massive return of immigrants to their country of origin even after losing their jobs

As a reaction to the crisis, the Spanish authorities introduced the *Plan de Retorno Voluntario* – a pay-to-go system introduced in June 2008, which gives unemployment benefits to non-EU nationals who agree to return home. However, this programme had only recorded 11,660 applications by April 2010 (compared to the anticipated 87,000 applications) and only 8,451 immigrants actually returned home (Lopez, 2011). Furthermore, the fact that the overall stock of EaP migrants has not decreased as much as expected also suggests that the incentive programmes to foster

return migration put in place by the Spanish government have not worked. Several factors may explain this, including: (i) the fear of return, which may be considered as a personal failure; (ii) the fact that some migrants have now their family, social and emotional network in Spain; and (iii) a poor economic situation in their country of origin.

Despite the dramatic unemployment numbers, there are still some occupations which are difficult to fill. Each quarter the regional authorities publish a list of "difficult to cover occupations".¹² Prior to 2008, it was hard to find workers to cover the large number of vacancies in the construction and the restoration sector. Nowadays, the uncovered vacancies are in the fishing and the maritime sector. Those jobs require technical skills to deal with sophisticated machines and availability to spend much time travelling (i.e. on board).

In the long run, Spain will need immigrants to cover labour shortages because of emigration and an ageing population. As a result of the recession many skilled natives (i.e. engineers, business persons and architects) are leaving to find better job opportunities in Western Europe, the United States or the booming economies in Latin America. Analysts are not very optimistic about the recovery of the Spanish economy, thus most of those emigrant workers are not likely to return. In turn, skilled immigrants, with lower reservation wages, such as EaP migrants, are good candidates to cover those vacancies. In addition, the ageing population will increase the demand for elderly care services. The Spanish experience suggests that immigrants, and in particular women, will fill these vacancies, at least during their first years upon arriving in Spain.

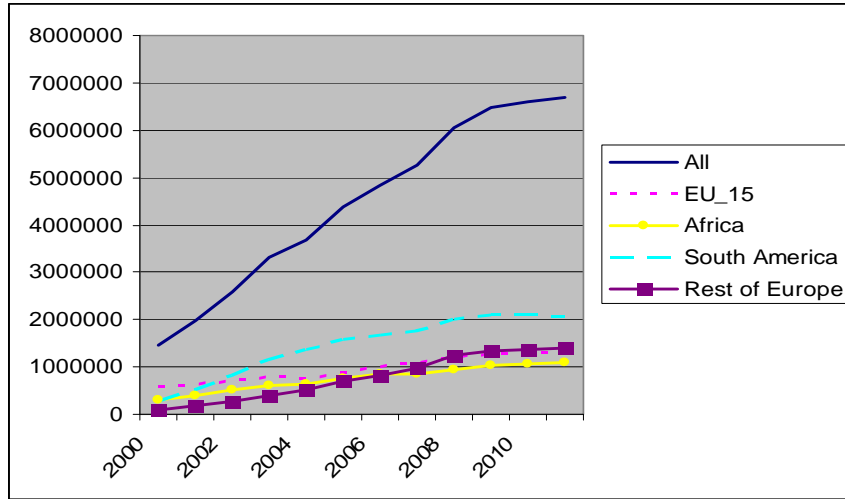
Given the current situation of the Spanish economy, a liberalization of the immigration law is very unlikely to occur. However, the government should establish bilateral agreements with EaP countries to cover the anticipated labour demand shortages. For example, workers can be hired with a fix-term contract to fill labour shortages in the care sector. Some policies should also be implemented to replace Spanish skills migration. In this direction, permanent or high-incentive contracts should be offered to attract educated workers with technical degrees.

¹²http://www.sepe.es/contenido/empleo_formacion/catalogo_ocupaciones_dc/pdf/CatalogoOcupacionesDificilCobertura.pdf

Appendix

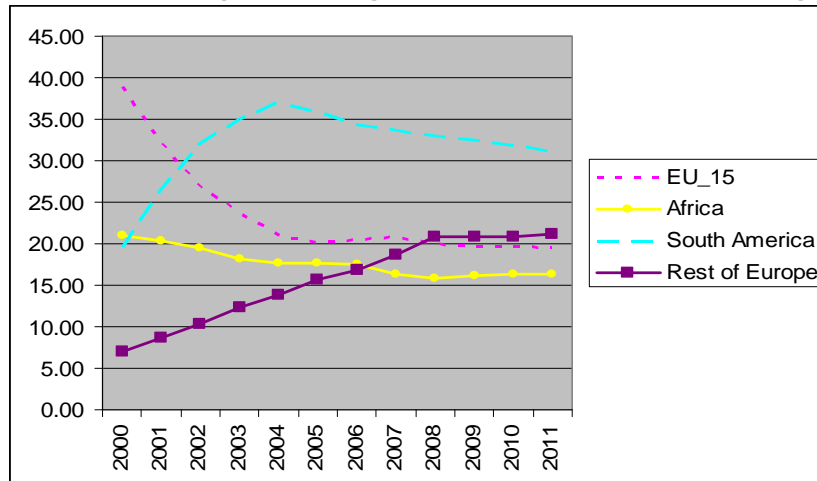
Figures

Figure 3: Total number of immigrants by source country (main groups of countries)



Source: Spanish Local Population Registry.

Figure 4: Percentage of immigrants as a share of total immigrants



Source: Spanish Local Population Registry.

Tables

Table 3: Descriptive statistics, natives and immigrants, by region of origin

| | Natives | | All Immigrants | | EaP | | EU enlargement | | Africans | | South Americans | |
|------------------------|---------|---------|----------------|--------|-------|-------|----------------|-------|----------|-------|-----------------|--------|
| | Men | Women | Men | Women | Men | Women | Men | Women | Men | Women | Men | Women |
| Sample size | 392,983 | 442,021 | 27,078 | 32,437 | 445 | 561 | 3,377 | 3,862 | 6,009 | 5,216 | 10,215 | 14,308 |
| Working | 0.80 | 0.49 | 0.78 | 0.55 | 0.78 | 0.63 | 0.79 | 0.63 | 0.71 | 0.28 | 0.80 | 0.64 |
| Permanent contract | 0.50 | 0.31 | 0.36 | 0.28 | 0.26 | 0.32 | 0.33 | 0.29 | 0.32 | 0.14 | 0.37 | 0.33 |
| Self-employed | 0.19 | 0.07 | 0.14 | 0.06 | 0.05 | 0.02 | 0.07 | 0.02 | 0.10 | 0.03 | 0.12 | 0.05 |
| Welfare recipient | 0.17 | 0.13 | 0.12 | 0.09 | 0.11 | 0.06 | 0.09 | 0.06 | 0.16 | 0.10 | 0.10 | 0.08 |
| Unemployment insurance | 0.05 | 0.05 | 0.08 | 0.05 | 0.10 | 0.05 | 0.08 | 0.05 | 0.11 | 0.05 | 0.09 | 0.06 |
| Disability pension | 0.05 | 0.03 | 0.01 | 0.01 | 0 | 0.01 | 0.01 | 0 | 0.02 | 0.01 | 0.01 | 0.01 |
| Retired pension | 0.07 | 0.02 | 0.02 | 0.01 | 0 | 0 | 0 | 0 | 0.02 | 0 | 0 | 0 |
| Other pension | 0.05 | 0.06 | 0.02 | 0.03 | 0.01 | 0.01 | 0.01 | 0 | 0.03 | 0.04 | 0.01 | 0.02 |
| High-skill occup | 0.15 | 0.12 | 0.13 | 0.08 | 0.03 | 0.04 | 0.02 | 0.02 | 0.09 | 0.07 | 0.12 | 0.08 |
| Medium-skill occup | 0.18 | 0.25 | 0.12 | 0.14 | 0.03 | 0.06 | 0.03 | 0.04 | 0.07 | 0.13 | 0.11 | 0.10 |
| Low-skill occup | 0.67 | 0.63 | 0.75 | 0.78 | 0.94 | 0.90 | 0.95 | 0.94 | 0.84 | 0.80 | 0.77 | 0.82 |
| Male | 0.44 | | 0.46 | | 0.44 | | 0.47 | | 0.54 | | 0.42 | |
| Age | 46.65 | 45.98 | 39.83 | 38.79 | 38.09 | 37.07 | 36.25 | 34.17 | 40.47 | 38.58 | 39.25 | 38.42 |
| Years since migration | | | 11 | 10.72 | 5.88 | 5.40 | 5.34 | 4.87 | 12.78 | 11.83 | 8.54 | 8.49 |
| Age at migration | | | 28.43 | 27.50 | 32.16 | 31.70 | 30.90 | 29.27 | 26.57 | 25.05 | 30.22 | 29.40 |
| Married | 0.84 | 0.80 | 0.72 | 0.68 | 0.79 | 0.70 | 0.72 | 0.68 | 0.79 | 0.81 | 0.67 | 0.62 |
| Primary | 0.29 | 0.32 | 0.22 | 0.21 | 0.09 | 0.08 | 0.12 | 0.13 | 0.47 | 0.56 | 0.16 | 0.16 |
| HS dropouts | 0.29 | 0.28 | 0.21 | 0.20 | 0.11 | 0.13 | 0.16 | 0.19 | 0.19 | 0.18 | 0.21 | 0.21 |
| HS graduates | 0.26 | 0.22 | 0.38 | 0.38 | 0.44 | 0.34 | 0.63 | 0.54 | 0.23 | 0.19 | 0.42 | 0.41 |
| College | 0.16 | 0.17 | 0.19 | 0.20 | 0.37 | 0.45 | 0.09 | 0.14 | 0.12 | 0.08 | 0.21 | 0.22 |
| With kids | 0.43 | 0.41 | 0.54 | 0.56 | 0.49 | 0.52 | 0.50 | 0.51 | 0.56 | 0.66 | 0.57 | 0.57 |
| Number of kids | 1.52 | 1.51 | 1.67 | 1.63 | 1.44 | 1.38 | 1.45 | 1.43 | 1.98 | 2 | 1.60 | 1.57 |
| Household size | 3.31 | 3.26 | 3.25 | 3.30 | 3.06 | 3.07 | 3.12 | 3.10 | 3.52 | 3.89 | 3.32 | 3.29 |

Source: Labour Force Survey 2000-2011.

Notes: The sample is restricted to individuals 16 to 64 years old who are heads of the household or spouses.

Table 4: Percentage of immigrants workers employed in the most common low skilled occupations

| | EaP immigrants | | Other immigrants | |
|---|----------------|-------|------------------|-------|
| | Men | Women | Men | Women |
| Food services (cooks, and waiters) | 0.96 | 20.2 | 7.3 | 16.4 |
| Sales | 1.92 | 3.71 | 3.07 | 7.88 |
| Construction | 42.19 | 0 | 35.02 | 0.47 |
| Manufacturing (food preparation, metals, and electricians) | 10.24 | 0 | 14.19 | 3.49 |
| Domestic services (nannies, nurses, housecleaning) | 2.56 | 56.23 | 3.7 | 51.43 |
| Agriculture and fishing | 4.15 | 3.71 | 5.26 | 3.29 |
| Other unskilled jobs (janitors, drivers, warehouse workers) | 17.58 | 4.71 | 7.31 | 7.21 |

Source: Labour Force Survey 2000-2011.

Table 5: Immigrants' preferred destinations, 2002 and 2011

A. EaP immigrants

| | 2002 | | 2011 |
|-------------|-------------|-----------|-------------|
| Albacete | 10.74 | Cantabria | 6.69 |
| Cuenca | 6.53 | Albacete | 4.16 |
| Huelva | 5.08 | Lleida | 4.16 |
| Ciudad Real | 4.92 | Córdoba | 3.39 |
| Cantabria | 4.23 | Valencia | 3.02 |
| Valencia | 4.17 | Cuenca | 2.98 |
| Murcia | 3.24 | La Rioja | 2.94 |
| Lleida | 3.22 | Murcia | 2.84 |
| Huesca | 2.82 | Girona | 2.70 |
| Sevilla | 2.41 | Tarragona | 2.69 |

B Other immigrants

| | 2002 | | 2011 |
|----------|-------------|-----------|-------------|
| Alicante | 11.91 | Alicante | 25.75 |
| Baleares | 10.88 | Baleares | 24.33 |
| Melilla | 9.29 | Melilla | 22.89 |
| Gerona | 8.98 | Almería | 22.50 |
| Tenerife | 8.25 | Girona | 21.96 |
| Madrid | 8.04 | Tenerife | 19.96 |
| Málaga | 7.83 | Málaga | 19.82 |
| Palmas | 7.31 | Madrid | 19.59 |
| Almería | 7.21 | Tarragona | 18.96 |
| Múrcia | 6.81 | Lérida | 18.66 |

Source: Labour Force Survey 2000-2011.

Table 6: Employment assimilation

| | Relative to natives (1) | Relative to other migrants (2) | Relative to migrants from EU enlargement (3) |
|---|----------------------------|-----------------------------------|---|
| EaP | -0.321*** [0.051] | -0.048* [0.025] | -0.064** [0.027] |
| Female | -0.303*** [0.004] | -0.195*** [0.006] | -0.151*** [0.014] |
| EaP interacted by female | 0.203*** [0.036] | 0.085** [0.035] | 0.049 [0.039] |
| Age | 0.049*** [0.001] | 0.048*** [0.002] | 0.042*** [0.005] |
| Age squared | -0.001*** [0.000] | -0.001*** [0.000] | -0.001*** [0.000] |
| Years since migration | 0.029** [0.014] | 0.006*** [0.001] | 0.018*** [0.004] |
| Years since migration squared | -0.002** [0.001] | -0.000*** [0.000] | -0.001*** [0.000] |
| Married | -0.006*** [0.002] | -0.064*** [0.006] | -0.024 [0.015] |
| Presence of children | 0.014*** [0.003] | 0.023** [0.010] | 0.007 [0.027] |
| Household size | -0.010*** [0.001] | -0.012*** [0.003] | -0.023*** [0.008] |
| Unemployment rate (province) | -0.005*** [0.000] | -0.010*** [0.001] | -0.017*** [0.003] |
| Share of immigrants (province) | 0.003*** [0.000] | -0.001*** [0.000] | 0.000 [0.001] |
| Share of immigrants on welfare (province) | 0.000 [0.000] | -0.002** [0.001] | -0.001 [0.002] |
| Immigrant inactivity rate (province) | -0.000** [0.000] | -0.006*** [0.001] | -0.004*** [0.002] |
| Education dummies | yes | yes | yes |
| Child dummies | yes | yes | yes |
| State dummies | yes | yes | yes |
| Year dummies | yes | yes | yes |
| Observations | 835,996 | 50,081 | 8,168 |
| R-squared | 0.258 | 0.131 | 0.100 |

Source: Labour Force Survey 2000-2011.

Notes: Specifications also included a linear trend and a linear trend specific to each region. Linear regression model on the probability of working.

*, **, *** Estimate significantly different from zero at the 90%, 95% level, or 99% level.

Table 7: Permanent employment assimilation

| | Relative to natives (1) | Relative to other migrants (2) | Relative to migrants from EU enlargement (3) |
|---|----------------------------|-----------------------------------|---|
| EaP | -0.596*** [0.040] | -0.098*** [0.024] | -0.101*** [0.025] |
| Female | -0.181*** [0.003] | -0.049*** [0.006] | -0.001 [0.015] |
| EaP interacted by female | 0.262*** [0.033] | 0.100*** [0.031] | 0.066** [0.034] |
| Age | 0.047*** [0.001] | 0.029*** [0.002] | 0.024*** [0.005] |
| Age squared | -0.001*** [0.000] | -0.000*** [0.000] | -0.000*** [0.000] |
| Years since migration | 0.041*** [0.010] | 0.009*** [0.001] | 0.041*** [0.005] |
| Years since migration squared | -0.001* [0.001] | -0.000*** [0.000] | -0.002*** [0.000] |
| Married | 0.015*** [0.002] | -0.027*** [0.006] | 0.004 [0.013] |
| Presence of children | 0.026*** [0.003] | 0.028*** [0.009] | 0.037 [0.025] |
| Household size | -0.018*** [0.001] | -0.003 [0.003] | -0.011 [0.007] |
| Unemployment rate (province) | -0.001* [0.001] | -0.005*** [0.001] | -0.010*** [0.003] |
| Share of immigrants (province) | 0.002*** [0.000] | -0.002*** [0.000] | -0.000 [0.001] |
| Share of immigrants on welfare (province) | -0.000 [0.000] | -0.003*** [0.001] | -0.003 [0.002] |
| Immigrant Inactivity rate (province) | -0.000 [0.000] | -0.001* [0.001] | 0.000 [0.001] |
| Education dummies | yes | yes | yes |
| Child dummies | yes | yes | yes |
| State dummies | yes | yes | yes |
| Year dummies | yes | yes | yes |
| Observations | 835,996 | 50,081 | 8,168 |
| R-squared | 0.158 | 0.064 | 0.089 |

Source: Labour Force Survey 2000-2011.

Notes: Specifications also included a linear trend and a linear trend specific to each region. Linear regression model on the probability of working.

*, **, *** Estimate significantly different from zero at the 90%, 95% level, or 99% level.

Table 8: Self-employment assimilation

| | Relative to natives (1) | Relative to other migrants (2) | Relative to migrants from EU enlargement (3) |
|---|----------------------------|-----------------------------------|---|
| EaP | -0.115*** [0.023] | -0.066*** [0.014] | -0.022 [0.015] |
| Female | -0.114*** [0.001] | -0.065*** [0.003] | -0.044*** [0.006] |
| EaP interacted by female | 0.085*** [0.016] | 0.037** [0.016] | 0.015 [0.017] |
| Age | 0.011*** [0.000] | 0.002* [0.001] | 0.002 [0.002] |
| Age squared | -0.000*** [0.000] | -0.000 [0.000] | -0.000 [0.000] |
| Years since migration | -0.005 [0.004] | 0.009*** [0.001] | 0.004** [0.002] |
| Years since migration squared | 0.000 [0.000] | -0.000*** [0.000] | 0.000 [0.000] |
| Married | 0.007*** [0.001] | -0.004 [0.003] | -0.004 [0.006] |
| Presence of children | -0.006*** [0.002] | 0.006 [0.007] | -0.007 [0.011] |
| Household size | 0.010*** [0.001] | -0.000 [0.002] | 0.003 [0.003] |
| Unemployment rate (province) | -0.002*** [0.000] | -0.000 [0.001] | 0.001 [0.001] |
| Share of immigrants (province) | 0.001*** [0.000] | -0.001*** [0.000] | -0.000 [0.000] |
| Share of immigrants on welfare (province) | 0.000 [0.000] | -0.000 [0.001] | -0.001 [0.001] |
| Immigrant Inactivity rate (province) | 0.000 [0.000] | 0.000 [0.000] | -0.000 [0.001] |
| Education dummies | yes | yes | yes |
| Child dummies | yes | yes | yes |
| State dummies | yes | yes | yes |
| Year dummies | yes | yes | yes |
| Observations | 835,996 | 50,081 | 8,168 |
| R-squared | 0.040 | 0.059 | 0.044 |

Source: Labour Force Survey 2000-2011.

Notes: Specifications also included a linear trend and a linear trend specific to each region. Linear regression model on the probability of working.

*, **, *** Estimate significantly different from zero at the 90%, 95% level, or 99% level.

Table 9: Occupational upgrading

| | Relative to natives (1) | Relative to other migrants (2) | Relative to migrants from EU enlargement (3) |
|---|----------------------------|-----------------------------------|---|
| EaP | -0.694*** [0.082] | -0.318*** [0.035] | -0.041 [0.033] |
| Female | -0.073*** [0.003] | -0.087*** [0.007] | 0.003 [0.011] |
| EaP interacted by female | 0.085* [0.044] | 0.094** [0.042] | 0.019 [0.039] |
| Age | 0.003*** [0.001] | -0.013*** [0.004] | 0.009* [0.005] |
| Age squared | 0.000*** [0.000] | 0.000*** [0.000] | -0.000* [0.000] |
| Years since migration | 0.009 [0.025] | 0.015*** [0.002] | 0.000 [0.005] |
| Years since migration squared | 0.001 [0.002] | -0.000*** [0.000] | 0.001*** [0.000] |
| Married | 0.015*** [0.003] | 0.022*** [0.008] | -0.007 [0.010] |
| Presence of children | -0.016*** [0.005] | -0.002 [0.016] | -0.002 [0.023] |
| Household size | 0.015*** [0.002] | -0.013*** [0.005] | 0.005 [0.008] |
| Unemployment rate (province) | 0.001** [0.001] | 0.006** [0.002] | 0.000 [0.002] |
| Share of immigrants (province) | 0.001** [0.000] | -0.006*** [0.001] | -0.000 [0.001] |
| Share of immigrants on welfare (province) | -0.000 [0.000] | 0.000 [0.002] | -0.000 [0.002] |
| Immigrant Inactivity rate (province) | 0.000 [0.000] | 0.003*** [0.001] | 0.001 [0.001] |
| Education dummies | Yes | yes | yes |
| Child dummies | Yes | yes | yes |
| State dummies | Yes | yes | yes |
| Year dummies | Yes | yes | yes |
| Observations | 528,169 | 32,492 | 5,739 |
| R-squared | 0.285 | 0.250 | 0.110 |

Source: Labour Force Survey 2000-2011.

Notes: Specifications also included a linear trend and a linear trend specific to each region. Linear regression model on the probability of working.

*, **, *** Estimate significantly different from zero at the 90%, 95% level, or 99% level.

Table 10: Welfare residual

| | Relative to natives (1) | Relative to other migrants (2) | Relative to migrants from EU enlargement (3) |
|---|----------------------------|-----------------------------------|---|
| EaP | -0.045 [0.031] | 0.023 [0.018] | 0.034* [0.018] |
| Female | -0.031*** [0.001] | -0.029*** [0.003] | -0.023*** [0.008] |
| EaP interacted by female | -0.017 [0.026] | -0.014 [0.025] | -0.013 [0.024] |
| Age | -0.034*** [0.000] | -0.022*** [0.002] | -0.013*** [0.004] |
| Age squared | 0.000*** [0.000] | 0.000*** [0.000] | 0.000*** [0.000] |
| Years since migration | 0.021*** [0.007] | 0.005*** [0.001] | 0.012*** [0.002] |
| Years since migration squared | -0.001** [0.000] | -0.000*** [0.000] | -0.000*** [0.000] |
| Married | -0.126*** [0.002] | -0.023*** [0.004] | 0.004 [0.008] |
| Presence of children | 0.040*** [0.002] | 0.014** [0.006] | -0.014 [0.015] |
| Household size | -0.011*** [0.001] | -0.006*** [0.002] | 0.009* [0.004] |
| Unemployment rate (province) | 0.002*** [0.000] | 0.000 [0.001] | 0.002 [0.002] |
| Share of immigrants (province) | -0.001*** [0.000] | 0.000 [0.000] | 0.001 [0.001] |
| Share of immigrants on welfare (province) | 0.000 [0.000] | 0.011*** [0.001] | 0.009*** [0.001] |
| Immigrant Inactivity rate (province) | 0.000 [0.000] | -0.000 [0.000] | -0.002* [0.001] |
| Education dummies | yes | yes | yes |
| Child dummies | yes | yes | yes |
| State dummies | yes | yes | Yes |
| Year dummies | yes | yes | Yes |
| Observations | 835,996 | 50,081 | 8,168 |
| R-squared | 0.143 | 0.093 | 0.078 |

Source: Labour Force Survey 2000-2011.

Notes: Specifications also included a linear trend and a linear trend specific to each region. Linear regression model on the probability of working.

*, **, *** Estimate significantly different from zero at the 90%, 95% level, or 99% level.

Table 11: Unemployment benefits residual

| | Relative to natives (1) | Relative to other migrants (2) | Relative to migrants from EU enlargement (3) |
|---|----------------------------|-----------------------------------|---|
| EaP | -0.045* [0.024] | 0.021 [0.015] | 0.021 [0.016] |
| Female | -0.002*** [0.001] | -0.032*** [0.003] | -0.024*** [0.008] |
| EaP interacted by female | -0.028 [0.021] | -0.002 [0.020] | -0.004 [0.021] |
| Age | -0.003*** [0.000] | 0.005*** [0.001] | -0.003 [0.003] |
| Age squared | 0.000*** [0.000] | -0.000*** [0.000] | 0.000 [0.000] |
| Years since migration | 0.020*** [0.006] | 0.006*** [0.000] | 0.013*** [0.002] |
| Years since migration squared | -0.001* [0.000] | -0.000*** [0.000] | -0.000*** [0.000] |
| Married | -0.018*** [0.001] | -0.016*** [0.003] | 0.005 [0.008] |
| Presence of children | 0.008*** [0.002] | 0.015*** [0.005] | -0.013 [0.014] |
| Household size | -0.003*** [0.000] | 0.000 [0.002] | 0.007 [0.004] |
| Unemployment rate (province) | 0.002*** [0.000] | 0.001** [0.001] | 0.002 [0.002] |
| Share of immigrants (province) | -0.000*** [0.000] | 0.001*** [0.000] | 0.001 [0.001] |
| Share of immigrants on welfare (province) | -0.000* [0.000] | 0.006*** [0.001] | 0.007*** [0.001] |
| Immigrant Inactivity rate (province) | -0.000 [0.000] | -0.002*** [0.000] | -0.001* [0.001] |
| Education dummies | yes | yes | yes |
| Child dummies | yes | yes | yes |
| State dummies | yes | yes | yes |
| Year dummies | yes | yes | yes |
| Observations | 835,996 | 50,081 | 8,168 |
| R-squared | 0.027 | 0.055 | 0.074 |

Source: Labour Force Survey 2000-2011.

Notes: Specifications also included a linear trend and a linear trend specific to each region. Linear regression model on the probability of working.

*, **, *** Estimate significantly different from zero at the 90%, 95% level, or 99% level.

Table 12: Employment assimilation from 2000 to 2007

| | Relative to natives (1) | Relative to other migrants (2) | Relative to migrants from EU enlargement (3) |
|---|----------------------------|-----------------------------------|---|
| EaP | -0.405*** [0.083] | -0.005 [0.035] | -0.037 [0.043] |
| Female | -0.350*** [0.004] | -0.261*** [0.008] | -0.200*** [0.021] |
| EaP interacted by female | 0.174*** [0.046] | 0.049 [0.046] | 0.009 [0.054] |
| Age | 0.047*** [0.001] | 0.055*** [0.003] | 0.039*** [0.009] |
| Age squared | -0.001*** [0.000] | -0.001*** [0.000] | -0.001*** [0.000] |
| Years since migration | 0.100*** [0.038] | 0.006*** [0.001] | 0.039*** [0.007] |
| Years since migration squared | -0.008** [0.004] | -0.000*** [0.000] | -0.002*** [0.001] |
| Married | -0.026*** [0.003] | -0.083*** [0.009] | -0.036* [0.019] |
| Presence of children | 0.010*** [0.003] | 0.023 [0.016] | -0.011 [0.040] |
| Household size | -0.009*** [0.001] | -0.009** [0.004] | -0.012 [0.010] |
| Unemployment rate (province) | -0.005*** [0.000] | -0.011*** [0.002] | -0.017*** [0.005] |
| Share of immigrants (province) | 0.003*** [0.000] | -0.001** [0.001] | 0.001 [0.002] |
| Share of immigrants on welfare (province) | -0.000 [0.000] | -0.000 [0.001] | -0.004 [0.004] |
| Immigrant Inactivity rate (province) | -0.000 [0.000] | -0.007*** [0.001] | -0.006*** [0.002] |
| Education dummies | Yes | yes | yes |
| Child dummies | Yes | yes | yes |
| State dummies | Yes | yes | yes |
| Year dummies | Yes | yes | yes |
| Observations | 553,951 | 20,583 | 3,244 |
| R-squared | 0.290 | 0.174 | 0.140 |

Source: Labour Force Survey 2000-2007.

Notes: Specifications also included a linear trend and a linear trend specific to each region. Linear regression model on the probability of working.

*, **, *** Estimate significantly different from zero at the 90%, 95% level, or 99% level.

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