

**THE SOCIOECONOMIC SITUATION OF  
IMMIGRANTS IN SPAIN PROGRESS OR COHORT  
EFFECTS?**

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Centre d'Estudis Demogràfics

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**RECAÑO, Joaquín; ROIG, Marta.- La situació socioeconòmica dels immigrants a Espanya. Efecte de progrés o de cohort?**

**Resum.**- L'objectiu d'aquest article es estudiar la situació socioeconòmica dels immigrants de diferents cohorts d'arribada i examinar la influència de varis factors, entre ells, el temps de residència i la regió o país d'origen sobre la seva situació en el mercat de treball a Espanya. L'anàlisi es base en microdades del cens espanyol de 2001 que contenen informació extensa sobre les característiques socioeconòmiques i demogràfiques dels immigrants. Com a conseqüència de les limitacions d'informacions de dades transversals per l'estudi de processos que tenen lloc en el temps, com ara la integració, una part de l'article analitza els problemes metodològics derivats d'aquestes limitacions.

Comencem discutint els pros i els contres d'utilitzar les dades de només un cens i l'abast dels nostres resultats. Més tard realitzem una regressió logística per mesurar la influència del temps de residència i la regió d'origen, entre altres, en la situació del mercat de treball de diferents grups de treballadors immigrants, mentre controlen mitjançant altres característiques socioeconòmiques i demogràfiques. Examinem tres aspectes principals de la situació del mercat de treball: l'ocupació, les característiques del treball i el tipus de contracte.

Els resultats preliminars suggereixen que, entre altres, el temps de residència disminueix sovint les desigualtats de treball en una ocupació que requereix poca qualificació. Malgrat tot, encara que les conclusions sobre la integració dels immigrants s'han inferit sovint d'un sol conjunt de dades transversals, aquesta informació no pot identificar els efectes de cohort i temps de residència separadament. L'article posa l'accent, finalment, en el paper dels factors no observats que influeixen en la qualitat de l'ocupació de les diferents cohorts d'arribada.

**Paraules claus.**- Migració internacional, Assimilació, Efecte de cohort, Espanya, Educació, Població estrangera

**RECAÑO, Joaquín; ROIG, Marta.- La situación socioeconómica de los inmigrantes en España. ¿Efecto de progreso o de cohorte?**

**Resumen.**- El propósito de este artículo es estudiar la situación socioeconómica de los inmigrantes de diferentes cohortes de llegada y examinar la influencia de varios factores, entre ellos la duración de residencia y la región o país de origen sobre su situación en el mercado de trabajo en España. El análisis se basa en microdatos del censo español de 2001 que contiene información extensa sobre las características socioeconómicas y demográficas de los inmigrantes. Dada las limitaciones de información de datos transversales para el estudio de procesos que tienen lugar en el tiempo, como la integración, una parte del artículo se consagra a analizar los problemas metodológicos derivados de esas limitaciones.

Empezamos discutiendo los pros y los contras de usar los datos de un solo censo y el alcance de nuestros resultados. Más tarde realizamos una regresión logística para medir la influencia de duración de residencia y región de origen, entre otros, en la situación del mercado de trabajo de diferentes grupos de trabajadores inmigrantes, mientras controlamos por otras características socioeconómicas y demográficas. Examinamos tres aspectos principales de la situación del mercado de trabajo: la ocupación, las características del empleo y el tipo de contrato.

Los resultados preliminares sugieren que, entre otros, la duración de residencia disminuye a menudo las desigualdades de trabajar en una ocupación que requiere escasa cualificación. Sin embargo, aunque las conclusiones sobre la integración de los inmigrantes se han inferido a menudo de un solo conjunto de datos transversales, este tipo de información no puede identificar los efectos de cohorte y duración de residencia separadamente. El artículo enfatiza finalmente el papel de los factores no observados que influyen en la calidad de la ocupación de las diferentes cohortes de llegada.

**Palabras clave.**- Migración internacional, Asimilación, Efecto de cohorte, España, Educación, Población extranjera.

**RECAÑO, Joaquín; ROIG, Marta.- The socioeconomic situation of immigrants in Spain: Progress or cohort effects?**

**Abstract.**- The purpose of this paper is to study the socioeconomic situation of immigrants from successive arrival cohorts and to examine the influence of a number of factors, including length of residence and region or country of origin, on their labour market situation. The analysis is based on microdata from the 2001 Spanish census, which contains extensive information on the socioeconomic and demographic characteristics of immigrants. Given the limitations of cross-section information for the study of processes that take place over time, including integration, part of the paper is devoted to analyzing methodological issues.

Hence we start by discussing the pros and cons of using data from one single census and the scope of our results. We then conduct logistic regression analyses to measure the influence of length of residence and origin, among others, on the labour market situation of different groups of migrants, while controlling for other socio-economic and demographic characteristics. We examine three main aspects of the labour market situation: occupation, employment situation and type of contract.

Preliminary results suggest that, among other, length of residence often decreases the odds of working in a job that requires low skills. However, even though conclusions about immigrants' integration have often been inferred from a single cross-section data set, cross-section information cannot fully identify time and cohort effects separately. The paper emphasizes the role of non-observable factors that influence cohort quality and labour supply.

**Keywords.**- International migration, assimilation, cohort effects, Spain, Education, foreign population.

**RECAÑO, Joaquín; ROIG, Marta.- La situation socio-économique des immigrés en Espagne.**

**Résumé.**- L'objectif de cet article est d'étudier la situation socio-économique des immigrés de différentes cohortes d'arrivée et d'examiner l'influence de divers facteurs, parmi lesquels le temps de résidence et la région ou le pays d'origine, sur leur situation dans le marché du travail en Espagne. L'analyse se développe à partir des microdonnées du recensement espagnol de 2001 qui contiennent une vaste information sur les caractéristiques socio-économiques et démographiques des immigrés. Étant données les limitations d'information des données transversales pour l'étude de processus qui

s'inscrivent dans la durée, comme par exemple l'intégration, une partie de l'article analyse les problèmes méthodologiques dérivés de ces limitations.

Nous débutons par une discussion sur les avantages et les inconvénients d'utiliser un seul recensement et la portée de nos résultats. Puis, nous réalisons une régression logistique pour mesurer l'influence du temps de résidence et de la région d'origine, entre autres, sur la situation dans le marché du travail de différents groupes de travailleurs immigrés, tandis que nous contrôlons les résultats moyennant d'autres caractéristiques socio-économiques et démographiques. Nous examinons trois aspects principaux de la situation du marché du travail : la population active occupée, les caractéristiques du travail et le type de contrat.

Les résultats préliminaires suggèrent entre autre que le temps de résidence diminue souvent les inégalités de travail pour un emploi qui requiert peu de qualification. Malgré cela, bien que les conclusions sur l'intégration des immigrés aient souvent été inférées à partir d'un seul ensemble de données transversales, cette information ne peut pas identifier les effets de cohorte et temps de résidence séparément. L'article met l'accent, finalement, sur le rôle des facteurs non observés qui influencent la qualité de l'emploi des différentes cohortes d'arrivée.

**Mots clés.-** Migrations internationales, Effets de cohorte, Espagne, Éducation, Population étrangère.



# THE SOCIOECONOMIC SITUATION OF IMMIGRANTS IN SPAIN: PROGRESS OR COHORT EFFECTS?<sup>1</sup>

Joaquín Recaño  
Marta Roig

## 1.- Introduction

Spain, a country of emigration until the 1970s, has become a receiving country in the last twenty years. This Southern European country hosted more than 4 million foreigners in January 2003, up from less than 600,000 in 1981 and over 1.5 million in 1996 (table 1). Immigration has therefore experienced a rapid and accelerated growth. With an inflow of 672,000 foreigners in 2003, Spain is currently the main receiving country of Europe (OECD, 2004).

While the socioeconomic dynamics of immigrants have been studied in the context of countries with a longer tradition of immigration, little is known about the immigrants' fate in the new immigration countries of Southern Europe, at this early stage. Questions related to the occupational paths of the immigrant population in Spain—namely: Does the socioeconomic situation of immigrants improve over time? How does the labor market situation of immigrants from different arrival cohorts and from diverse regions differ?—have not been explored. Although it is too early to study intergenerational paths, the socioeconomic dynamics of the first generation can now be examined for a significant number of immigrants of diverse nationalities.

The purpose of this paper is to study the socioeconomic situation of immigrants from successive arrival cohorts and to examine the influence of a number of factors, including length of residence and region of origin, on their labour market situation. Our analysis is based on information from the 2001 Spanish census. We start the paper by comparing selected socioeconomic and demographic characteristics of immigrants by duration of

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<sup>1</sup> This study is part of the Project *Migration processes, settlement and family structures: a sociodemographic analysis*, funded by the Science and Technology Ministry of Spain, *Programa Nacional de Promoción General del Conocimiento. Plan Nacional I+D+I2000-2003. BSO2001-1233*.

residence (period-of-arrival cohorts) in 2001. We then conduct logistic regression analyses to measure the influence of origin and length of residence, among other, on the labour market situation of individuals, while controlling for other socio-demographic characteristics. We analyze three aspects of the labour market situation of immigrants in 2001: occupation, type of contract and employment situation. While the 2001 census contains extensive information on the socioeconomic and demographic characteristics of immigrants and thus provides a unique opportunity to study their situation, the use of cross-section information for the study of processes that take place over time, including integration, has limitations. Part of the paper is devoted to discussing such limitations.

## **2.- Immigration trends in Spain**

The recent rise in immigration has brought about changes in the composition of the migrant stock. Namely, while over 60% of all immigrants originated in the European Union and other industrialized countries in 1981, less than 30 per cent of all foreign-born individuals were born in another industrialized country in 2001; 38 per cent were born in Latin America and 19 per cent were born in Africa (table 2). While almost half of all EU immigrants arrived before 1990, about 80 per cent of all Latin Americans and Eastern Europeans, and some 70 per cent of all Africans arrived after 1990.

The proportion of individuals working in unskilled, manual positions is significantly higher for foreign-born individuals born in Africa, Latin America, Asia and Eastern Europe than for those born in Spain and in other industrialized countries (table 3). Those arrived after 1990 are in a particularly disadvantaged position: the proportion in unskilled jobs, for instance, is twice as high for recently arrived Northern Africans and Latin Americans than for those arrived before 1990. In addition, the foreign-born, and especially those born in Eastern Europe, Africa and Latin America and arrived after 1990, are employed more often under temporary contracts. These groups also differ in many characteristics that are associated with occupation and labour market situation. Namely, while individuals born in other industrialized countries are slightly older than the Spanish population, those born in Northern Africa are almost 5 years younger than natives, on average and those born in Latin America are more than 7 years younger.

Recently arrived Africans and Eastern Europeans are also more likely to be employed in agriculture and related activities. Differences in education, however, do not systematically go in the direction expected: while Northern Africans are significantly less educated than natives, on average, the proportion of Latin Americans or Eastern Europeans with low levels of education is similar to that of natives'. Yet the proportion uneducated is higher among recent arrivals across all groups but individuals born in other industrialized countries.

With the important exception of education, most of the differences observed -in duration of residence, age and employment sector- may be associated with labour market disadvantages among immigrants from developing countries compared to natives and immigrants from other developed countries. Therefore, a multivariate analysis is necessary to explore whether any disadvantages in the labour market arise from the origin of foreign-born individuals and whether duration of residence plays a role in their current situation, net of the effect of other demographic and socioeconomic characteristics.

### **3.- Data and methods**

The statistical analysis presented in this paper is based on preliminary micro-data provided by the National Statistical Institute (INE)<sup>2</sup>. The contingency tables generated by INE for this study allowed for the use of a limited number of variables (8). Given this limitations, we had to exclude some variables that we had initially considered relevant in our model (namely, those related to residence). The analysis focuses on two subgroups: first, employed individuals living in households over 16 years of age who lived in Spain on November 1 2001; the analysis of skills and type of contract focuses on this subgroup. Second, the active population over 16, for the analysis of unemployment. The labour market characteristics of immigrants can now be observed, for the first time, using census information.

The variables selected as representative of occupational differences among groups are: holding an unskilled, manual job, working under a temporary contract and being

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<sup>2</sup> Given that individual-level results from the 2001 Census became available later than expected (in November 2004), this paper presents only preliminary results of the analysis.

unemployed. Unskilled, manual jobs are those under Major Group 9 of the International Standard Classification of Occupations (ISCO-88)<sup>3</sup> and include elementary occupations in sales and services (street vendors, domestic helpers, shoe cleaning, etc.), agricultural and related labourers and labourers in construction, manufacturing and other. Because our dependent variables measure a dichotomous outcome –whether the individual had an unskilled, manual occupation in 2001, or belonged to another occupational group; whether the individual worked under a temporary contract, or else was employed under a long-term contract or worked for himself; whether the individual was unemployed or not– we have used logistic regression. The results shown in the following section are presented as odds ratios –the exponential of the logistic regression coefficients. The odds ratios or relative risks represent the multiplicative change in the odds of working in an unskilled job (or holding a temporary contract, or being unemployed) for those individuals in a specific category with respect to those in the omitted category.

The variables included in the model as independent variables are: origin, period of arrival (for those born abroad), age, sex, education, citizenship (foreign, national) and labour market sector. The effect of origin is measured by region of birth. In some models, we have created a variable that combines region of birth and duration of residence; it distinguishes 2 groups by region of birth: those arrived before 1990 and those arrived in 1990 or after<sup>4</sup>. Our three main models compare foreign-born groups to natives (that is, individuals born in Spain). We have also conducted analyses by region of origin in order to examine whether the influence of certain variables (education, period of arrival and other) remains constant across groups. One of the limitations of the model is that, at present, we lack the information needed to include variables related to residence (region, type of residence, in our model).

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<sup>3</sup> See <http://laborsta.ilo.org>.

<sup>4</sup> Such combination was statistically required for a comparison of immigrants with the Spanish population. Aware of the limitations of the combined variable, however, we have tested other models that exclude the Spanish population.

#### 4.- Results

As shown in table 4, occupational differences among groups persist once the effect of selected demographic and socioeconomic variables is accounted for. That is, the odds of holding a manual, unskilled position are significantly higher for individuals from Africa, Latin America, and Eastern Europe, in particular, than for individuals born in Spain and in other industrialized countries. Even though these findings apply to immigrants from these regions regardless of duration of residence, the odds of holding such positions are lower for individuals that arrived before 1990 than for those who arrived during the 1990s across all three groups. Namely, Latin Americans arrived before 1990 have 16% more chances of holding an unskilled job than individuals born in Spain, while the odds are almost twice as high for those arrived recently if compared to Spaniards. In contrast, recently-arrived individuals from OECD countries have lower odds of being unskilled than those arrived before 1990 and almost half the odds of Spaniards. The model also suggests that citizenship has a strong net effect on occupation: the odds of holding an unskilled job are more than 50% higher for foreigners. Additional models by group, shown in table 5, indicate that the effect of citizenship holds for all origins, and is especially strong among those born in Eastern Europe and Latin America. Indeed, the occupational structure of Spanish citizens born abroad is closer to that of natives than to that of other foreign-born individuals, even when the effect of duration of residence and origin are accounted for<sup>5</sup>.

As for the rest of variables included in the model, there is a clear trend away from unskilled jobs among the youngest cohorts (those born after 1970, that is, 30 years or younger in 2001). The possibility of strong upward inter-generational mobility among immigrants will be explored in another paper. Gender effects are highly significant. Additional models by group show that the relative disadvantage of females in the labour market is stronger among Latin Americans and Eastern Europeans than among those born in Spain; in contrast, gender differences in occupation are less pronounced among Africans than among Spaniards. As expected, education, employment status and labour market sector have a strong effect on occupation. However, the effect of education is

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<sup>5</sup> Models comparing all immigrant groups, but excluding natives, are not shown here.

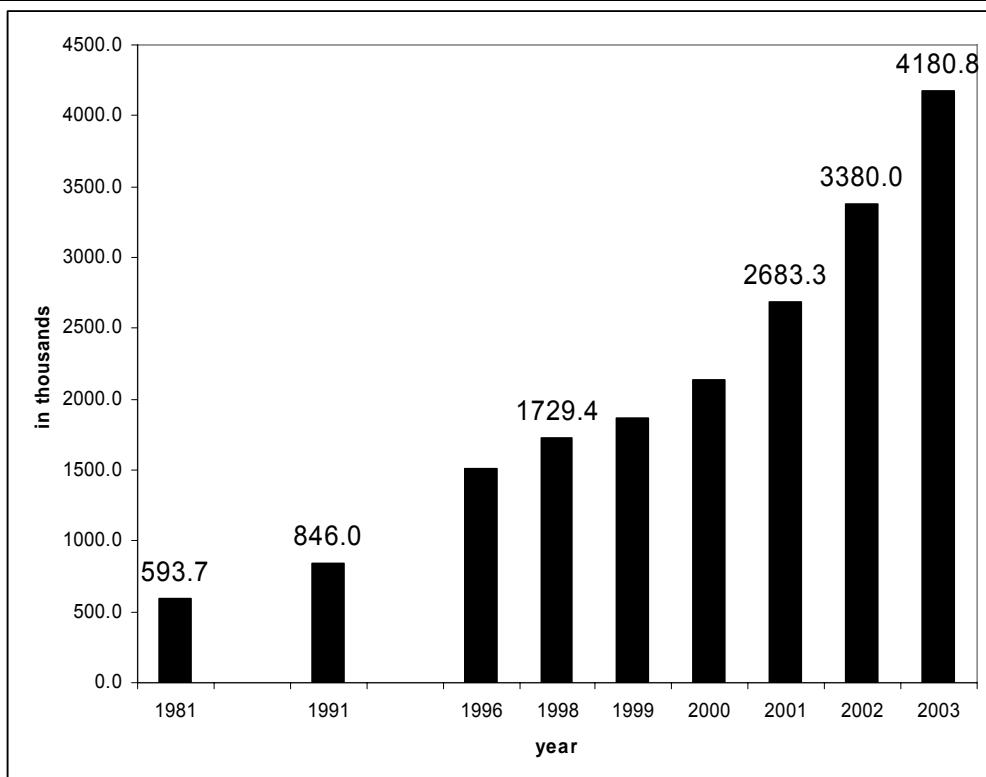
stronger for individuals born in Spain and in other industrialized countries than for those born in other regions. That is, the odds of holding an unskilled position are higher for Eastern European, Latin American or African graduates, as compared to non-educated individuals born in the same regions, than for highly-educated Spaniards or individuals born in other industrialized countries.

Similarly, the odds of being employed under a temporary contract are higher for individuals born in Africa, Latin America and Eastern Europe, particularly for those that arrived after 1990 (table 6). The effect of variables included in the model is comparable to that found in table 4. Finally, immigrants also have higher odds of being unemployed than Spaniards. However, duration of residence does not systematically play a positive role, in this case: among Africans and Asians, the odds of being unemployed are higher for the pre-1990 arrival cohorts than for recently arrived immigrants (table 7). In order to better examine insertion in the labour market, we focus on the chances of young individuals (19-35 years of age) being unemployed while looking for their first job. As shown in the two last columns of table 7, foreign-born individuals from developing regions have higher chances of being unemployed while looking for their first job. That is also the case for most of those arrived before 1990 –that is, at ages 9 to 25. The relative odds of being unemployed are particularly high for young Latin American and Eastern European immigrants arrived after 1990. Young individuals born in other industrialized countries, in contrast, have lower chances of being unemployed before finding their first job in Spain, and so do young Eastern Europeans arrived before 1990.

In sum, differences among immigrants of diverse origins and successive arrival cohorts persist, even when the effect of selected demographic and socioeconomic variables, including education, is accounted for. That is, inequalities are not only due to differences in human capital and other measurable socioeconomic traits. In order to substantiate whether such differences are due to the integration process, that would place earlier arrivals in a relatively better position, a longitudinal analysis of their occupational paths is necessary. The comparison of these results with those of the previous census,

conducted in 1991, will be the object of a second part of this study, which will also incorporate additional variables<sup>6</sup>.

**Table 1.-** Immigration in Spain, 1981-2003

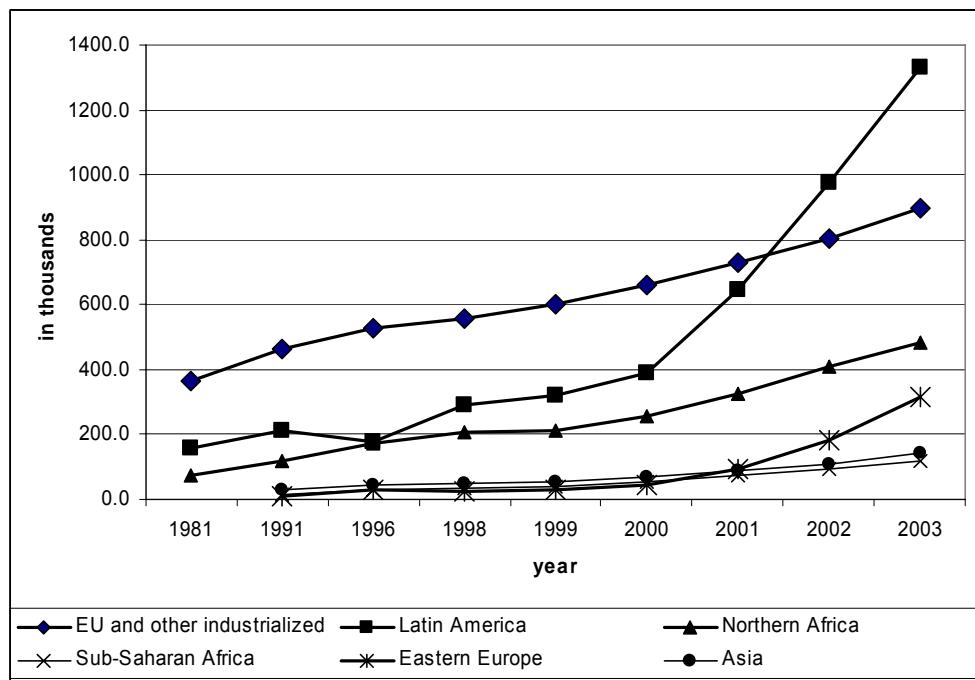


Clearly, immigrants from different arrival cohorts and natives may not be comparable even when differences in these observable characteristics are accounted for. Beyond different motivations, innate abilities and expectations by immigrants from different arrival cohorts, there may be issues related to immigrant status and social capital that cannot be measured with census information. More importantly, immigrants of different arrival cohorts faced different labour market opportunities upon arrival. Economic factors may have affected their settlement experiences and social networks and not all of these factors can be accounted for by way of two successive censuses. However, the finding that inequalities among individuals of different origins are not simply due to differences

<sup>6</sup> Namely, variables to measure the impact of residence, family contexts and language skills.

in human capital or length of residence is, in itself, an necessary first step in the study of integration, and one that has significant political implications.

**Table 2.-** Immigrants in Spain by region of origin, 1981-2003



**Table 3.** – Main characteristics of natives and foreign-born individuals older than 16 in the labour force by region of origin, 2001

	Spain	Other industrialized countries	Northern Africa	Sub- Saharan Africa	Latin America	Eastern Europe	Asia and Oceania
<b>Total</b>							
% workers in unskilled, manual positions	11.2	9.3	<b>36.0</b>	35.7	31.4	35.3	23.9
% under temporary contract	32.1	35.5	60.4	59.9	52.5	<b>65.3</b>	44.9
% unemployed	14.0	15.6	17.9	<b>18.7</b>	16.8	16.8	13.7
% Males	62.0	57.7	<b>77.9</b>	74.6	50.6	61.2	66.1
Mean age	40.3	41.0	34.9	32.3	32.7	<b>31.1</b>	35.6
% in agriculture	6.2	3.4	<b>20.2</b>	13.7	6.8	14.2	4.7
% primary education or less	22.4	13.4	<b>51.7</b>	44.5	21.0	25.1	32.8
% arrived before 1990	N/a	73.5	46.0	40.9	36.0	<b>20.6</b>	48.9
% foreign	0.1	43.8	76.4	83.1	74.2	<b>96.6</b>	78.1
<b>Pre-1990</b>							
% workers in unskilled, manual positions		9.8	22.9	25.2	16.6	24.6	19.6
% under temporary contract		34.3	42.3	44.0	38.5	52.2	35.9
% unemployed		14.8	16.8	15.7	14.6	14.9	12.6
% Males		56.3	73.0	69.4	52.6	62.4	66.1
% in agriculture		3.6	8.4	6.9	3.2	8.7	2.9
% primary education or less		14.3	39.0	34.2	15.7	24.6	25.2
% foreign		28.6	51.7	62.8	43.3	89.0	60.3
<b>Post-1990</b>							
% workers in unskilled, manual positions		7.9	47.2	43.0	39.7	38.1	28.0
% under temporary contract		39.0	74.5	70.1	59.5	68.5	52.6
% unemployed		17.8	18.9	20.7	18.0	17.3	14.7
% Males		61.6	82.1	78.2	49.5	60.9	66.1
% in agriculture		2.9	30.3	18.4	8.8	15.6	6.4
% primary education or less		11.0	62.6	51.6	24.1	25.2	40.0
% foreign		85.7	97.4	97.2	91.7	98.6	95.1

**Table 4.** – Odds ratios from logistic regression of holding an unskilled position in the labour market

Variables	Exp(β)	Signif
<i>Region of birth by period of arrival</i>		
(Spain)		
Other OECD countries, pre-1990 arrival	<b>0.83</b>	***
Other OECD countries, post-1990 arrival	<b>0.60</b>	***
Latin America, pre-1990 arrival	<b>1.16</b>	***
Latin America, post-1990 arrival	<b>1.96</b>	***
Africa, pre-1990 arrival	<b>1.30</b>	***
Africa, post-1990 arrival	<b>1.82</b>	***
Eastern Europe, pre-1990 arrival	<b>1.25</b>	***
Eastern Europe, post-1990 arrival	<b>1.75</b>	***
Asia, pre-1990 arrival	<b>1.35</b>	***
Asia, post-1990 arrival	<b>1.34</b>	***
<i>Sex</i>		
(Male)		
Female	1.50	***
<i>Cohort</i>		
(Before 1950)		
1951-1960	1.04	***
1961-1970	1.00	
1971-1980	0.89	***
After 1980	1.07	***
<i>Education</i>		
(No education)		
Primary education	0.78	***
Secondary education	0.36	***
University degree	0.05	***
<i>Citizenship</i>		
(Spanish)		
Foreign	1.53	***
<i>Employment status</i>		
(Long-term contract, work for others)		
Temporary contract, work for others	2.00	***
Self-employed, no staff	0.17	***
Self-employed with staff	0.11	***
<i>Labour market sector</i>		
(Agriculture)		
Industry	0.12	***
Construction	0.36	***
Hotels and catering	0.21	***
Services(1)	0.26	***
Services(2)- personal and domestic	1.50	***
Constant (not exp.)	0.85	***
R <sup>2</sup>	0.296	
-2 log likelihood	9380129.68	
Chi2	2753389.05 (27df)	

**Table 5.** – Odds ratios from logistic regression models of holding an unskilled position in the labour market, by region of origin, 2001

	Spain Exp(β)	Other OECD Exp(β)	Latin America Exp(β)	Sub-S. Africa Exp(β)	Maghreb Exp(β)	Eastern Europe Exp(β)
<i>Sex</i>						
(Male)						
Female	1.51***	1.30***	1.68***	1.09***	1.24***	1.56***
<i>Cohort</i>						
(Before 1950)						
1951-1960	1.04***	1.04	1.10***	1.15*	1.01	1.12**
1961-1970	1.00	0.98	1.01	0.95	1.00	1.00
1971-1980	0.89***	0.96	0.86***	0.79***	0.93**	0.86***
After 1980	1.09***	1.20***	0.81***	0.65***	0.78***	0.84*
<i>Period of arrival</i>						
(Before 1980)						
1981-1990	n/a	0.94**	1.07***	1.56***	1.23***	0.86**
1991-1995	n/a	0.92**	1.41***	1.71***	1.33***	0.94
1996-2001	n/a	0.87***	1.63***	1.81***	1.52***	1.31***
<i>Education</i>						
(No education)						
Primary education	0.76***	0.70***	0.92***	0.81***	0.85***	0.80***
Secondary education	0.34***	0.32***	0.58***	0.47***	0.52***	0.60***
University degree	0.04***	0.06***	0.23***	0.19***	0.19***	0.34***
<i>Citizenship</i>						
(Spanish)						
Foreign	1.47***	0.99	1.97***	1.91***	1.86***	2.20***
<i>Employment status</i>						
(Long-term contract, work for others)						
Temporary contract, work for others	2.02***	1.92***	1.58***	2.01***	2.11***	1.77***
Self-employed, no staff	0.16***	0.33***	0.31***	1.81***	0.99	0.41***
Self-employed with staff	0.11***	0.14***	0.11***	0.17***	0.17***	0.10***
						(...cont.)

(Table 5, cont.)

	Spain Exp( $\beta$ )	Other OECD Exp( $\beta$ )	Latin America Exp( $\beta$ )	Sub-S. Africa Exp( $\beta$ )	Maghreb Exp( $\beta$ )	Eastern Europe Exp( $\beta$ )
<i>Labour market sector</i>						
(Agriculture)						
Industry	0.12***	0.14***	0.05***	0.08***	0.06***	0.06***
Construction	0.37***	0.43***	0.30***	0.34***	0.25***	0.27***
Hotels and catering	0.24***	0.20***	0.07***	0.10***	0.07***	0.07***
Services(1)	0.27***	0.23***	0.14***	0.30***	0.19***	0.16***
Services(2)- personal and domestic	1.43***	1.38***	1.58***	1.37***	1.20***	1.83***
Constant (not exp.)	0.86***	0.93	0.78***	0.73***	0.91**	0.69***
R <sup>2</sup>	0.276	0.249	0.485	0.35	0.43	0.401
-2 log likelihood	8492186.18	1480901.1	362012.11	42469.69	162559.26	87666.4
Chi2	2206420.1(17df)	34428.99(20df)	187051.0(20df)	12535.8(20df)	65750.5(20df)	31614.8(20df)

**Table 6.** – Odds ratios from logistic regression of holding a temporary contract, 2001

Variables	Exp(β)	Signif
<i>Region of birth by period of arrival</i>		
(Spain)		
Other OECD countries, pre-1990 arrival	<b>1.00</b>	
Other OECD countries, post-1990 arrival	<b>1.13</b>	*
Latin America, pre-1990 arrival	<b>1.11</b>	***
Latin America, post-1990 arrival	<b>1.45</b>	***
Africa, pre-1990 arrival	<b>1.19</b>	***
Africa, post-1990 arrival	<b>1.88</b>	***
Eastern Europe, pre-1990 arrival	<b>1.33</b>	***
Eastern Europe, post-1990 arrival	<b>2.06</b>	***
Asia, pre-1990 arrival	<b>0.99</b>	
Asia, post-1990 arrival	<b>1.13</b>	***
<i>Sex</i>		
(Male)		
Female	<b>1.56</b>	***
<i>Cohort</i>		
(Before 1950)		
1951-1960	<b>1.50</b>	***
1961-1970	<b>2.54</b>	***
1971-1980	<b>5.80</b>	***
After 1980	<b>13.10</b>	***
<i>Education</i>		
(No education)		
Primary education	<b>0.75</b>	***
Secondary education	<b>0.50</b>	***
University degree	<b>0.45</b>	***
<i>Citizenship</i>		
(Spanish)		
Foreign	<b>1.24</b>	***
<i>Occupation</i>		
(All non-manual, skilled and semi-skilled manual)		
Unskilled manual	<b>1.98</b>	***
<i>Labour market sector</i>		
(Agriculture)		
Industry	<b>0.24</b>	***
Construction	<b>0.75</b>	***
Hotels and catering	<b>0.37</b>	***
Services(1)	<b>0.24</b>	***
Services(2)- personal and domestic	<b>0.31</b>	***
Constant (not exp.)	<b>0.75</b>	***
R <sup>2</sup>	0.225	
-2 log likelihood	14754205.40	
Chi2	2368218.2(26df)	

**Table 7.** – Odds ratios from logistic regression models of being unemployed, 2001

Variables	All unemployment		Unemployment at labour market entry, individuals 19-35 of age	
	Exp(β)	Signif	Exp(β)	Signif
<i>Region of birth by period of arrival (Spain)</i>				
Other OECD countries, pre-1990 arrival	<b>1.10</b>	***	<b>0.95</b>	**
Other OECD countries, post-1990 arrival	<b>1.58</b>	***	<b>0.87</b>	***
Latin America, pre-1990 arrival	<b>1.12</b>	***	<b>1.02</b>	*
Latin America, post-1990 arrival	<b>1.18</b>	***	<b>1.64</b>	***
Africa, pre-1990 arrival	<b>1.28</b>	***	<b>1.29</b>	***
Africa, post-1990 arrival	<b>1.14</b>	***	<b>1.41</b>	***
Eastern Europe, pre-1990 arrival	<b>1.07</b>	***	<b>0.85</b>	**
Eastern Europe, post-1990 arrival	<b>1.20</b>	***	<b>1.77</b>	***
Asia, pre-1990 arrival	<b>1.02</b>		<b>1.16</b>	**
Asia, post-1990 arrival	<b>0.93</b>	***		
<i>Sex</i>				
(Male)				
Female	2.01	***	1.73	***
<i>Cohort</i>				
(Before 1950)				
1951-1960	1.00			
1961-1970	1.35	***	0.42 <sup>a</sup>	***
1971-1980	2.03	***	0.21	***
<i>Education</i>				
(No education)				
Primary education	0.68	***	0.65	***
Secondary education	0.45	***	0.48	***
University degree	0.28	***	0.94	***
<i>Citizenship</i>				
(Spanish)				
Foreign	0.93	***	1.11	***
Constant (not exp.)	0.17	***	0.11	***
R <sup>2</sup>	0.100		0.09	
-2 log likelihood	13906243.10			
Chi2	5619895.5(18df)			

a. For first unemployment, ref. category is youngest (20-24); then 25-29 and 30-34

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