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FROM RAGS TO RICHES? IMMIGRATION AND POVERTY IN SPAIN

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ABSTRACT

This paper explores for the first time the relationship between immigration and poverty in Spain. Using the *EU Statistics on Income and Living Conditions 2006*, we find that both moderate and severe poverty are more acute among migrants than among nationals and social transfers play no substantial role in reducing poverty in the former case. In addition, using an econometric non-linear decomposition, we show the gap in deprivation incidence is fully explained by the different effects of household characteristics on poverty reduction for immigrants and locals.

KEYWORDS: Immigration, Poverty, Spain, Non-linear decomposition.

JEL CLASSIFICATION: F22, I32, O15.

1. INTRODUCTION¹

Though Spain has been a country of emigrants for a long time, this situation has changed since the early 90s, being Spain one of the highest recipients of immigrants in the European Union (EU) now (Izquierdo, 1997).² In 2006,

Furthermore, there has been also a change in the countries of origin of foreigners: while immigration from EU-15 countries has been decreasing from mid-90s; on the other hand, people from the rest of Europe and Latin Americans -that is, from nations with a lower level of development- have gained importance in the foreign population (Muñoz de Bustillo and Antón, forthcoming).

This relevant shift has produced accompanied by a growing concern among the national public opinion about the social and economic implications of immigration flows. In fact, according to surveys carried out before the beginning of the financial and economic crisis, the massive and recent arrival of foreign workers was seen as the major problem faced by Spaniards (CIS, 2006).

The aim of this paper is to address, for the first time in Spain, the connection between immigration and poverty, determining the scope of the latter among immigrants and explaining whether there are differences in the characteristics of the population below the poverty line according to nationality (nationals and EU members versus non-EU).

¹ A previous version of this work was presented at the 9th *World Economy Meeting*, Madrid, 2007. The authors are grateful to Branko Milanovic for useful comments. The usual disclaimer applies.

² Three decades ago, at the height of its intensity, Spain had up to 3 million workers abroad (from a population of 34 millions) and around 10% of imports could be financed with their remittances (Oporto del Olmo, 1992). The impact of the economic crisis of 1973 in the host countries, and the modernization and development experienced by the Spanish economy since then reduced greatly, almost eliminating, the emigration of Spanish workers abroad, even after the joining of the EU in 1986. Until recently, Spain was a country of emigrants. On the receiving side, a decade ago Spain was one of the countries of the EU with a lower proportion of immigrants, as only roughly 1% had born abroad. In sharp contrast to this and dwarfing all expectations, in the last few years Spain has witnessed a gargantuan increase in the number of immigrants. In barely a decade, the percentage of immigrants in Spain increased from 1.4% of total population in 1996.

Although immigration –as mentioned- is not an old phenomenon in Spain, there is a growing literature in this field. While some authors have focused on purely demographic issues, mainly dealing with the quantitative measurement of migration trends and flows (Bover and Velilla, 1999; Izquierdo and Martínez Buján, 2003; Ortega and Del Rey, 2009; Muñoz de Bustillo y Antón, forthcoming), another part of the literature has emphasized the impact of immigration labour market outcomes of native workers, especially low-skilled ones (Dolado, Jimeno and Duce, 1997; Carrasco, García-Serrano and Malo, 2003; Carrasco, Jimeno and Ortega, 2008) or has paid attention to the existence of wage or other labour market outcomes differentials among foreign and Spanish employees (Simón, Sanromá y Ramos, 2008; Canal-Domínguez and Rodríguez-Gutiérrez, 2008). Furthermore, some authors have tried to assess the impact of immigration on the Welfare State or the take-up among immigrants (Brücker *et al.*, 2002; Rodríguez-Cabrero, 2003; Collado, Iturbe-Ormaetxe and Valera, 2004; Muñoz de Bustillo and Antón, 2007). However, so far, there is no relevant study about the relationship between poverty and immigration in Spain, probably because of both the lack of statistical sources available to perform this type of work and the novelty of the phenomenon. On the other hand, this topic has deserved some attention in other Western countries, like Sweden and Denmark (Galloway and Mogstad, 2006), Norway (Galloway and Aaberge, 2005; Galloway, 2006), Canada (Ley and Smith, 1997; Kazemipur and Halli, 2001; Fleury, 2007) and the United States (Chapman and Bernstein, 2003; Raphael and Smolensky, 2008), among others.

This paper means several contributions to the literature. Apart from being the first study on this issue in Spain, this research help to shed some light on the effects of migration on poverty in countries which traditionally had been foreign to this demographic phenomenon, of which the Spanish economy is a paradigmatic example. In addition, we apply recent developed non-linear econometric decomposition techniques that allow splitting the gap in poverty rates between migrants and nationals into the effects of family characteristics and the impact of different returns to the mentioned household endowments.

This paper unfolds in four sections that follow these introductory remarks. Section 2 briefly describes the database used in the paper. In the third one, we analyze the incidence, intensity and severity of poverty among migrants and natives and the role of cash transfers in reducing it. Then, in order to better understand the reasons behind the detected difference in poverty rates between locals and foreigners, we apply a nonlinear econometric decomposition of the gap in poverty rates between both groups of population. As usual, the last section summarizes the major conclusions of the article.

2. DATABASE

The data source for our analysis of immigrant poverty rates is the *EU Statistics on Income and Living Conditions* (SILC) for the years 2004, 2005 and 2006, i.e., the household survey that has replaced the former *European Community Household Panel* (ECHP). The SILC has two important advantages over previous databases. Firstly, it includes data on income and social inclusion referring to nationals and foreign-born people for the previous year, when immigration in Spain was already a very relevant phenomenon. In second place, the size of the SILC has increased considerably compared to the ECHP: each wave surveys more than 10,000 households, including more than 500 headed by individuals born outside of the EU. This survey follows the common rules regarding sampling design and other features present in modern household surveys, that is, it follows a two-stage and stratified sampling design (Eurostat, 2005).³

Before analyzing the link between immigration and poverty, three issues related to the database must be addressed. The first decision is to define who is considered an immigrant. In order to define the migrant status, one may choose between two alternatives: the country of origin or the citizenship. The existence of different naturalization requirements rules depending on the country of birth (, for example, law especially favours Latin American migrants), make us favour the former criterion, like, for example, Castronova *et al.* (2001), Brücker *et al.* (2002) and Anastossova and Paligorova (2006). Secondly, we allow the migrant status of the household head to

³ See Eurostat (2005) for detailed information on sampling procedures and survey design.

determine the national/immigrant status of the household, another common procedure in the literature (Borjas and Trejo, 1991; Castronova *et al.*, 2001; Hansen and Lofstrom, 2003). A final issue refers to which foreigners should be considered immigrants. According to the perception among Spaniards of immigrants as foreigners arrived from middle-income and poor countries, for comparative purposes, one should identify as ‘migrants’ all people born in developing countries. For instance, a suitable rule would be to consider foreigners born outside EU-15 as immigrants. Unfortunately, the SILC contains little information about the specific country of immigrants, as it is only possible to distinguish between Spanish, EU-citizens (i.e., from a country belonging to the European Union in 2003), other Europeans and people from other foreign countries. Therefore, we opt to label people born in Spain or the EU-25 and people whose country of birth is outside of the EU as natives and immigrants, respectively.⁴ It is important to bear in mind that this rule, though far from the optimum, does not exclude Romanians or Bulgarians, two very important groups among immigrant workers.⁵

All calculations were carried out using the software Stata 10 and the codes applied in the empirical analysis are available from the authors on request.

4. MAIN DESCRIPTIVE EVIDENCE ON POVERTY AND IMMIGRATION IN SPAIN.

4.1. CHARACTERISTICS OF EU CITIZENS *VERSUS* IMMIGRANTS

Since poverty is not randomly distributed across population, a necessary first step in the comparative analysis of poverty incidence among local and immigrant population is to study the differences in demographic and economic characteristics that may potentially affect the risk of deprivation among both groups. Since the characteristics and results found in this section are remarkably stable from 2003 to 2005, we only show the results for the latter year. There are several relevant differences between both collectives, depicted in tables 1 and 2, which are worthy to highlight:

⁴ This criterion –considering only people born outside the EU as immigrants- is followed by Brücker *et al.* (2002) in their exploitation of the ECHP.

⁵ See, for example, Muñoz de Bustillo and Antón (forthcoming) for details.

- Immigrant population is younger. While the native population is ageing, immigrants are heavily concentrated in the working ages, especially in the 20-50 age groups.
- In contrast with the popular belief, immigrants have a higher level of educational attainment than the native population, an understandable feature if one bears in mind the low schooling level of the elderly in Spain, associated to the relatively poor performance of the Spanish educational system until the seventies.
- Regarding other personal characteristics, while the family status and the distribution by sex are quite similar, the relation with activity is significantly different: immigrants show a higher labour market attainment than locals and the percentage of retirees among nationals is much larger, which is mainly explained by age composition.
- Regarding occupational characteristics, it is relevant to point out that migrants are employed in a higher share than nationals; they mainly work in low-skilled jobs and their main sectors of employment are Construction and some types of activities in the services sector (especially Hotels and Restaurants and Other activities, which include domestic servants).⁶ Furthermore, foreign population tends to be employed in small firms and in temporary jobs in a higher proportion than locals are.

⁶ According to the Spanish *Active Population Survey*, half of domestic servants were foreigners in 2006 and, according to Institute for the Elderly and Social Services, in 2005, 40% of workers employed in elderly care were immigrants.

Table 1. Personal characteristics of EU citizens and immigrants (%) (2005)

		EU citizens	Immigrants
% of total population		95,2	4,8
Gender	Men	49.3	49.4
	Women	50.7	50.6
Age	Less than 15 years old	14.1	24.1
	Between 15 and 39 years old	36.4	48.0
	Between 40 and 64 years old	32.3	24.2
	65 years old or more	17.2	3.7
Civil status	Single	30.0	38.1
	Married	59.0	52.1
	Divorced	3.0	7.0
	Widow - Widower	8.0	2.8
Educational level	No education	5.8	5.3
	Primary	30.5	18.8
	Lower Secondary	21.5	21.1
	Upper Secondary	18.8	31.5
	Vocational training	1.1	1.2
	Higher education	22.3	22.1
Most frequent activity status in 2005	Working	42.1	51.1
	Unemployed	5.5	6.5
	Retired	14.7	2.8
	Other	37.8	39.7

Note: Population aged 16 years old or more (except sex and age).

Source: Authors' analysis from SILC 2006.

Table 2. Occupational characteristics of EU citizens and immigrants (%) (2005)

		EU citizens	Immigrants
Professional status	Employer	4.0	2.5
	Self-employed	11.5	7.9
	Employee	83.1	88.9
	Family worker	1.4	0.8
Occupation (ISCO)	Legislators, senior officials and managers	5.5	3.6
	Professionals	9.6	5.2
	Technicians and associate professionals	8.5	4.2
	Clerks	11.7	4.5
	Service workers and shop and market sales workers	15.5	21.5
	Skilled agricultural and fishery workers	5.2	2.5
	Craft and related trades workers	17.2	15.7
	Plant and machine operators and assemblers	6.9	7.7
	Elementary occupations	19.9	35.0
	Sector of activity (NACE)	Agriculture, forestry and fishing	5.2
Mining and quarrying, manufacturing, electricity, gas and water supply		17.9	10.3
Construction		11.5	20.4
Wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods		14.4	12.1
Hotels and restaurants		5.5	14.7
Transport, storage and communication		6.7	4.8
Financial intermediation		2.7	0.6
Real estate, renting and business activities		7.7	5.7
Public administration and defence; compulsory social security		9.2	3.5
Education		6.2	2.2
Health and social work		5.4	3.1
Other activities		7.6	17.6
Firm size		Less than 10 employees	43.0
	From 11 to 19	13.4	11.6
	From 20 to 49	12.9	13.2
	More than 50	30.7	17.8
Type of contract (only employees)	Open ended	66.8	45.1
	Fixed term	33.2	54.9

Note: Working population aged 16 years old or more.

Source: Authors' analysis from SILC 2006.

4.2. RISK OF POVERTY AND THE EFFECT OF SOCIAL TRANSFERS

In order to analyse the risk of poverty of population living in immigrant and EU-15 households, this paper makes use of the well-known measures proposed by Foster, Greer and Thorbecke (1984), i.e., the FGT index, which is defined as follows:

$$P_{\alpha}(y; z) = \frac{1}{n} \sum_{i=1}^q \left(\frac{g_i}{z} \right)^{\alpha} \quad (1)$$

where y denotes income; n , the number of households or individuals; z , the poverty line; q , the number of poor households or individuals (having an income below z), and $g_i = z - y_i$, the income shortfall of the i^{th} household or individual. α is a parameter that takes the value 0 for the Poverty Headcount Index (which measures the incidence of poverty); the value 1 for the Poverty Gap Index (which makes reference to the intensity of poverty) and the value 2 for the Squared Poverty Gap Index (which captures the severity of poverty).

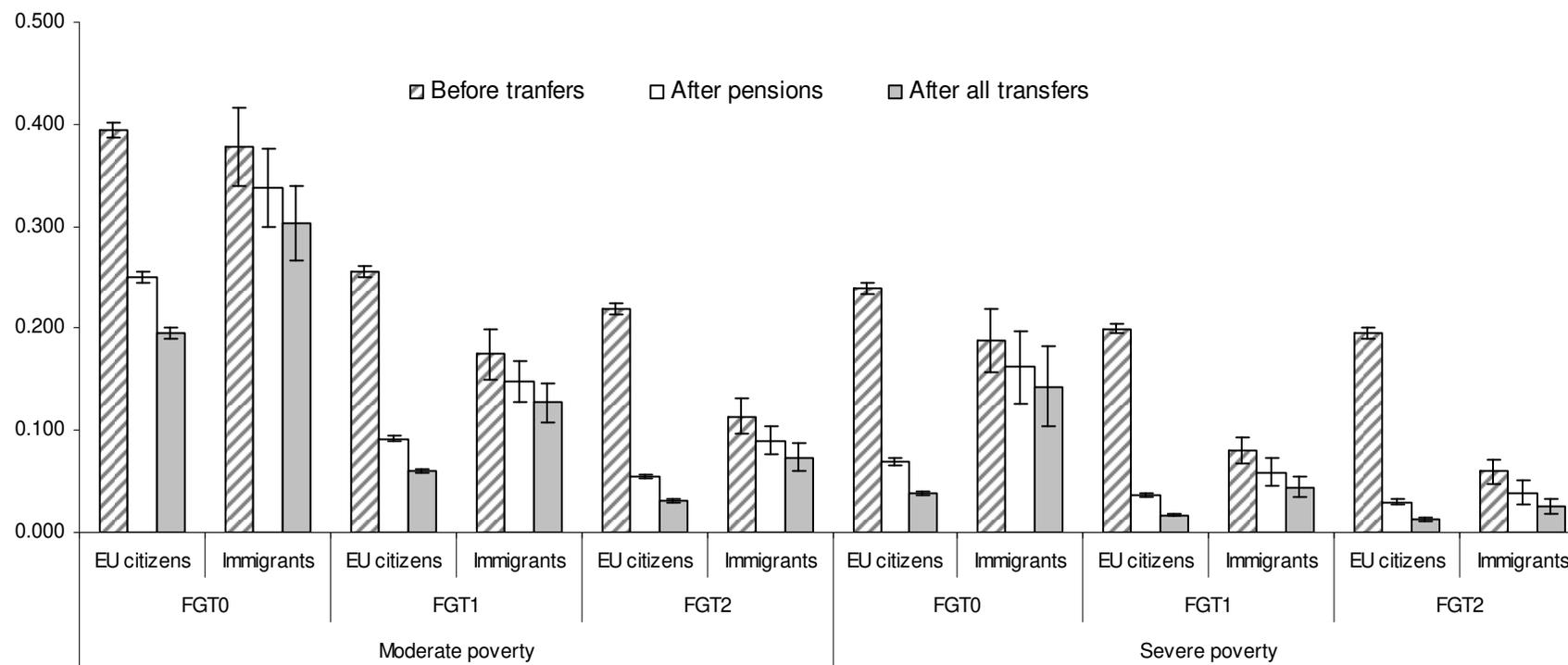
Adopting the criterion established by the European Union in 2001 and followed by Spanish authorities when making reference to official poverty figures, the poverty line is set at 60% of the national median equivalised income using the OECD modified. Hence, thus, as it is well-known, we use a relative measure of poverty. Moreover, we define a threshold for extreme poverty at a half of the poverty line. As the focus is on individuals living in the EU and immigrant households, this approach implies that we are going to apply the same relative poverty line to both groups, immigrants and nationals, even though, coming from countries with lower per capita income, the subjective minimum standards of reference for immigrants might be different from those of the locals.

The main results of our analysis of poverty are summarized in figure 1. When focusing on moderate poverty, it is clear that the incidence, the intensity and the severity of poverty are higher for immigrants than for locals. Although the former have a higher attachment to the labour market and higher human capital, at the end their poverty rate is 50% higher than the incidence for the latter group and the intensity of their poverty roughly twice as high. Nevertheless, it would be a mistake to associate immigration and poverty, as more than 2/3 of immigrants are above the poverty line.

In this context, it is particularly interesting to analyse the effect of social transfers on poverty in both population groups. In order to so, a non-behavioural and merely countable approach is adopted.⁷ The first finding is that the incidence of moderate poverty as well as extreme monetary deprivation before any social benefit is higher for nationals than for immigrants. In second place, while the headcount poverty is reduced to half by social welfare for EU citizens (pensions are responsible for most of this effect), state benefits barely put 5% of immigrants above the poverty line. An even more extreme pattern occurs in terms of severe deprivation: a much higher proportion of locals than immigrants (14 *versus* 4%) are extremely poor, but the impact of social transfers on extreme poverty amounts to around 23 and 4 percentage points for nationals and foreigners, respectively. The interpretation of this apparently shocking fact is the following: the Spanish Welfare State covers mainly pensions and does not spend much on other types of benefits -like, for example, social assistance or on work benefits-, which explains why the immigrant population -as mentioned above, concentrated in working ages and which shows a higher labour market attainment- does not benefit very much from it. In addition, another study points out lower take-up rates among immigrants for the main Spanish social welfare programs: unemployment insurance and pensions (Muñoz de Bustillo and Antón, 2006).

⁷ This is the strategy commonly followed in the literature. An alternative approach considers hypothetical labour supply responses of individuals in the absence of social benefits. This perspective is usually reserved to the analysis of specific welfare programs.

Figure 1. Poverty and social transfers in Spain



Note: Bootstrapped confidence intervals (using 400 replications) are showed in the figure.

Source: Authors' analysis from SILC 2006.

5. DECOMPOSING THE GAP IN POVERTY RATES

5.1. EMPIRICAL STRATEGY

In order to improve our information about the patterns of poverty in nationals and immigrants, this section carries out an econometric decomposition in order to explore why the incidence of poverty among immigrant households is higher than among national ones. Particularly, we follow an approach firstly proposed by and Bhaumik, Gang and Yun (2006) and Gang, Sen and Yun (2008) and used, among others, by Gradín (2007 and 2008), Carrera and Antón (2007) and Quiroga (2008).

The first step of our strategy consists in carrying out a *probit* analysis separately for immigrant and EU households. In order to enlarge the sample, we pool SILC data from 2004, 2005 and 2006, adding year dummies. The dependent variable is a binary variable, P_i , which adopts value 1 for poor households and value 0 for non-poor ones. Hence, we proceed to estimate the following model:

$$P_i^j = \Phi(X_i^j \beta^j) \quad i = 1, 2, \dots, N^j ; j = n, m. \quad (2)$$

where

$\Phi(\cdot)$ = the normal cumulative density function.

i = subscript that denotes the i^{th} household.

j = superscript denoting the population group (n = nationals; m = immigrants)

X_i^j = vector (1 x K) of observable characteristics of each household:

β^j = vector (K x 1) of coefficients for each characteristic.

k = subscript that denotes each covariate; $k = 1, \dots, K$.

In the second place, we proceed to decompose differences in means. The most common strategy to decompose differences in means is the Oaxaca-Blinder approach (Blinder, 1973; Oaxaca, 1973), a methodology that allows discriminating between differences related to characteristics or endowments and those related to the econometric coefficients. The original and common use of the Oaxaca-Blinder technique implies carrying out a linear regression, so the application of this tool with non-linear models -like the *probit*- requires some refinements. Gomulka and Stern

(1990) were the first who applied the Oaxaca-Blinder decomposition to a binary variable using a non-linear model (a *probit*), but they did not show a way of determining the importance of each variable in the decomposition. Other authors like Nielsen (1998), Fairlie (2005) and Yun (2000 and 2004) have offered different solutions to this question. Several problems concerning Fairlie's proposal (based on a methodology of sequential replacement that is path-dependent) have been highlighted in the literature (Yun, 2005), and Nielsen (1998) only provides a way to decompose coefficients effects in *logit* model. Therefore, the approach adopted here is that suggested by the last author, Yun, whose strategy consists in developing weights that make it possible to calculate the importance of each variable in the explanation of the differences related to endowments and coefficients, respectively. Moreover, using the well-known Delta method, the same author is able to derive analytical expressions for the standard errors of both aggregate and detailed effects, a task rarely addressed by most of empirical works.

In brief, the strategy is relatively simple. Firstly, in the *probit* the mean of the variable -which, in this case, is coincident with the poverty rate- equals asymptotically to predictions, that is:

$$\overline{P^k} = \frac{1}{N_j} \sum_{i=1}^{N_j} \Phi(b^j X_i^j) \quad (3)$$

Therefore, one can write

$$\overline{P^m} - \overline{P^n} = \frac{1}{N_m} \sum_{i=1}^{N_m} \Phi(b^m X_i^m) - \frac{1}{N_n} \sum_{i=1}^{N_n} \Phi(b^n X_i^n) \quad (4)$$

We will take EU citizens as a reference group, as in this case choosing immigrants does not seem reasonable as the base collective. The next step consists in computing the mean of predictions using the econometric coefficients of nationals and the characteristics (covariates) of immigrants and adding and subtracting this term as follows:

$$\begin{aligned}
\overline{P^m} - \overline{P^n} = & \\
& \left[\frac{1}{N_m} \sum_{i=1}^{N_m} \Phi(b^n X_i^m) - \frac{1}{N_n} \sum_{i=1}^{N_n} \Phi(b^n X_i^n) \right] \rightarrow \text{Characteristics effect} \quad (5) \\
& + \\
& \left[\frac{1}{N_m} \sum_{i=1}^{N_m} \Phi(b^m X_i^m) - \frac{1}{N_m} \sum_{i=1}^{N_m} \Phi(b^n X_i^m) \right] \rightarrow \text{Coefficients effect}
\end{aligned}$$

According to Yun (2004) the weight of each covariate in each of the first effect is given by⁸

$$W_{\Delta x}^k = \frac{(\overline{X_k^m} - \overline{X_k^n}) b_k^n}{\sum_{k=1}^K (\overline{X_k^m} - \overline{X_k^n}) b_k^n} \quad \text{where} \quad \sum_{k=1}^K W_{\Delta x}^k = 1 \quad (6)$$

And in the case of the coefficients effect by

$$W_{\Delta \beta}^k = \frac{\overline{X_k^m} (\widehat{\beta}_k^m - \widehat{\beta}_k^n)}{\sum_{k=1}^K \overline{X_k^m} (\beta_k^m - b_k^n)} \quad \text{where} \quad \sum_{k=1}^K W_{\Delta \beta}^k = 1 \quad (7)$$

One has to bear in mind that if dummy variables are included in the model, identification of detailed characteristics and coefficients effects are not identified. As pointed out by Oaxaca and Ransom (1999), when we include fictitious variables in the model regression, the amount of the gap that it is aimed to explain by each set of dummies critically depends on the choice of the reference category. In order to address this problem, this work follows the proposal of Gardeazábal and Ugidos (2004), who suggests a simple remedy to this shortcoming consisting in estimating the model also including the reference categories and imposing a normalising restriction on the estimated coefficients of the dummy variables requiring that the sum of each set of

⁸ These weights can be obtained in a relatively simple way writing down the first order Taylor expansion of equation 5. See Yun (2004) for details.

coefficients equals zero. This strategy guarantees that the total effect amounted by each variable is the same irrespective of the reference category chosen.

When carrying out this type of analysis, some authors, like Coudouel, Hentschel and Wodon (2002) and Kakwani and Son (2005), have pointed that this approach implies focusing only on whether a household is above or below the poverty line, disregarding other information like the relative position of each household with respect to the poverty threshold. However, this approach does not provide a consistent estimate of the actual gap, as the *probit* approach. For example, in our case, the difference in poverty incidence predicted using this approach exceeds the actual difference by more than 5 percent points.

As explanatory variables of the probability of being poor, we consider several household head and household socio-demographic characteristics. Among the former, we include gender, age, years of schooling and most frequent activity status, while the latter are household size, number of children below 5 and between 5 and 14, number of people aged 65 or more, number of households members employed (others than the head) and two dummies capturing if the household receives capital income or makes transfers to other households (a proxy variable of remittance sending behaviour), respectively. Furthermore, a constant, six seven regional dummies, two dummies making reference to urbanization and two year fictitious variables are also included.

The main descriptive statistics of the variables used in the econometric model are presented in tables 3 and 4. The incidence of poverty among immigrants is almost always higher no matter the category we focus on. In general, for both groups it is found that poverty risk is higher among families making transfers to other households, not receiving capital income and headed by an unemployed, inactive, old-age and low-educated person. Moreover, the number of employed people in the household (others than the reference person) increases the probability of escaping poverty. Regarding differences between both groups, one can highlight the impressive risk of deprivation experienced by immigrant households headed by unemployed individuals and large families. There are also important discrepancies when focusing on households with

retired heads and few members employed, suggesting a larger importance of these characteristics regarding poverty risk faced by households. Table 4 shows the means and proportions of the variables considered in the analysis, pointing out that immigrant households are headed by older and more educated persons, but also more affected by unemployment and receiving capital income in a higher proportion and making transfers (probably related to remittances sent to home countries) in a lower extent than families headed by EU citizens. Unsurprisingly, migrant households are larger, with more children but a smaller presence of elderly than in the national case. Finally, in relation to geographical distribution, it is remarkable that immigrant households are located in a higher proportion in urban areas, which seems reasonable if taking into account that most of migration to Spain is linked to economic reasons.

Table 3. Main descriptive statistics (I): Poverty risk among national and immigrant households (%)

	EU citizens			Immigrants		
	2003	2004	2005	2003	2004	2005
Total	24.3	23.3	23.6	38.3	32.0	33.9
<i>Household head characteristics</i>						
Head gender						
Male	22.1	20.4	21.0	38.9	27.0	34.6
Female	28.5	29.2	28.5	37.0	41.3	32.6
Head age						
Less than 25	27.7	19.1	33.8	31.3	19.1	56.5
Between 25 and 39	18.2	17.1	16.7	32.1	32.4	30.8
Between 40 and 59	18.9	18.4	18.9	46.8	29.6	32.8
60 or more	32.9	32.2	32.0	46.5	45.7	40.7
Head education						
8 years of schooling or less	31.4	30.5	31.2	47.9	47.6	46.4
More than 8 years of schooling	16.0	14.0	14.4	31.0	25.1	25.3
Head most frequent activity status						
Employee	9.1	7.6	9.2	29.5	21.7	25.2
Self-employed	38.8	37.0	32.5	54.8	53.3	46.7
Unemployed	52.2	44.8	45.5	72.1	66.7	62.2
Retired	29.0	28.6	27.9	40.9	33.3	29.2
Other inactivity	38.8	40.5	40.5	51.2	57.1	64.0
<i>Household characteristics</i>						
Household size						
Household size 2 or less	31.1	28.9	29.2	33.5	28.7	31.1
Household size 3 or more	18.6	18.8	19.0	41.1	33.8	35.2
Household receiving capital income						
Not receiving capital income	26.5	26.1	27.7	40.3	33.8	35.2
Receiving capital income	20.9	17.9	14.6	31.4	22.4	27.6
Household making transfers to other households						
Making transfers to other households	24.6	23.6	23.9	36.6	33.3	33.4
Not making transfers to other households	16.7	15.9	14.9	41.5	28.9	34.8
No. Of children						
0-1 children below 5	24.3	23.2	23.6	36.6	30.8	32.6
2 or more children below 5	21.2	18.2	21.4	39.2	45.3	43.5
0-1 children between 5-14	23.8	22.9	23.3	32.7	28.1	28.8
2 or more children between 5-14	25.1	24.8	24.5	48.2	40.5	47.3
No. of people aged 65 or more						
No people aged 65 or more	19.7	18.6	18.8	38.2	31.3	32.8
Any member aged 65 or more	32.1	31.5	32.1	39.0	37.7	42.1
No. of other members employed						
No other member is employed	32.3	33.8	35.1	45.4	53.0	52.4
Some other member is employed	11.3	11.0	10.6	28.1	14.3	20.5

Note: Poverty incidence by region and population density is not showed in the table, but those figures are available on request.

Source: Authors' analysis from SILC.

Table 4. Main descriptive statistics (II): characteristics of national and immigrant households

	EU citizens			Immigrants		
	2003	2004	2005	2003	2004	2005
<i>Household head characteristics</i>						
Female head (%)	33.7	32.8	34.4	34.8	34.9	37.6
Head age (%)						
Less than 25	0.7	0.9	0.7	3.4	4.4	4.6
Between 25 and 39	21.3	21.1	20.1	54.2	46.4	44.4
Between 40 and 59	39.2	40.6	40.8	33.1	39.5	40.4
60 or more	38.9	37.4	38.4	9.3	9.6	10.7
Head years of schooling (mean)	8.5	8.3	8.4	10.3	10.4	10.1
Head most frequent activity status (%)						
Employee	41.7	42.0	41.4	67.7	68.6	69.1
Self-employed	9.3	11.4	10.8	9.0	9.4	8.9
Unemployed	4.3	4.6	4.5	9.3	8.2	7.3
Retired	27.6	26.7	26.4	4.7	5.0	4.8
Other inactivity	17.0	15.2	16.9	9.3	8.8	9.9
<i>Household characteristics</i>						
Household size (mean)	2.8	2.9	2.8	3.3	3.4	3.3
Receiving capital income (%)	39.4	35.0	31.7	22.6	15.9	17.2
Making transfers to other households (%)	4.4	4.0	4.2	34.2	29.7	31.9
No. of children aged between 5 and 14 (mean)	0.142	0.140	0.140	0.327	0.322	0.319
No. of children below 6 (mean)	0.325	0.326	0.319	0.540	0.615	0.628
No. of people aged 65 or more (mean)	0.521	0.509	0.509	0.110	0.146	0.141
No. of other members employed (mean)	0.466	0.579	0.582	0.518	0.720	0.774
<i>Regional variables (%)</i>						
North-West	14.5	14.7	15.2	5.8	5.0	5.2
North-East	16.5	16.3	16.1	15.5	14.0	16.4
Madrid (capital)	7.5	5.9	5.5	10.5	13.0	9.7
Center	16.6	17.0	17.0	9.3	8.2	8.1
East	22.4	22.8	22.7	28.8	29.5	32.7
South	18.0	18.6	18.6	21.7	22.6	21.4
Canary Islands	4.6	4.8	4.8	8.4	7.7	6.5
<i>Urbanization variables (%)</i>						
High-population density area	47.5	46.7	46.3	57.0	59.0	55.3
Medium-population density area	20.3	20.7	20.6	25.2	22.4	25.2
Low-population density area	32.2	32.6	33.1	17.9	18.6	19.6
Observations	13,403	12,325	11,542	465	478	505

Source: Authors' analysis from SILC.

The results normalized regressions described above, which coefficients are not always directly interpretable (because of the normalization of dummies) are placed in table A1, in the appendix, so we focus here on the results of the econometric decomposition, reproduced in table 5 and which can be found with a higher level of

disaggregation in the annex (table A2). First of all, it should be mentioned that predicted gap (11%) is very close to real one (10.8%). Secondly, characteristics effects as well as coefficients effects are statistically different from zero. Thirdly, regarding the relative importance of both effects several points must be stated. On the one hand, the characteristics effect is negative (-47% of the gap), which indicates that, if the estimated coefficients of national households were applied to immigrant households, the poverty risk among foreigners would be lower than among EU citizens. This feature is

The most relevant of these characteristics are household head schooling, head activity and the number of people employed living in the household (other than the reference person), which is related to the immigrant's higher labour market attainment. On the other hand, the returns effect is positive (147% of the gap), of which roughly 40 percent points can be attributed to the constant, often interpreted as unexplained differences. These results are similar to those reported by Bhaumik, Gang and Yun (2006) for Serbians and Albanians in Kosovo and different from Gradín's (2007 and 2008) findings for ethnic minorities and whites in Brazil and the United States, respectively. Focusing on the rest of the coefficients, it is remarkable the role of head activity status and household characteristics, especially household size, which exhibit much lower returns in terms of poverty reduction among migrants than among EU citizens. This can be interpreted considering that, though immigrant heads show a high labour market participation rate and the dependency rate among this group is lower because of the relative absence of old-age people, age and household size differences have important implications in terms of making the immigrant household poorer, since the receipt of pensions and other social transfers in Spain is highly dependent on this variables. Though statistically insignificant, the relative high importance of the constant term can be linked to discrimination practices that we might be not capturing in our model. In fact, labour market literature has pointed out a non-negligible gender-based role of discrimination in terms of monetary deprivation in Spain (Del R o, Grad n and Cant o, 2008).

Table 5. Decomposition of the gap in poverty rates between EU citizens and immigrants

	Total difference (raw gap)	Characteristics effects		Coefficients effects	
		Absolute	% gap	Absolute	% gap
Total	0.110	-0.052 [0.003] ***	-46.8	0.162 [0.011] ***	146.8
Constant				0.044 [0.040]	39.7
Head sex		0.000 [0.001]	0.1	-0.005 0.020	-4.9
Head age		0.003 [0.002]	2.5	-0.024 [0.015] *	-21.5
Head years of schooling		-0.024 [0.001] ***	-21.8	0.030 0.022	27.1
Head activity status		-0.038 [0.002] ***	-34.8	0.032 [0.013] **	28.7
Household characteristics		0.015 [0.003] ***	13.9	0.079 [0.028] ***	71.4
Household size		0.000 [0.001]	0.3	0.110 [0.041] ***	99.7
Capital income		0.008 [0.001] ***	7.5	0.007 [0.008]	6.2
Transfers made to other households		-0.001 [0.002]	-0.5	-0.017 [0.004] ***	-15.4
Children below 5		0.005 [0.001] ***	4.8	0.004 [0.007]	3.3
Children aged 5-14		0.013 [0.001] ***	12.2	0.000 [0.010]	-0.4
People aged 65 or more		0.007 [0.001] ***	6.0	-0.004 [0.004]	-3.9
No. of other members employed		-0.018 [0.000] ***	-16.4	-0.020 [0.013]	-18.1
Geographical variables		-0.008 [0.001] ***	-6.8	0.007 [0.007]	6.3
Year dummies		0.000 [0.000]	-0.1	0.000 [0.000]	0.0

Delta standard errors in brackets. *** significant at 1%; ** significant at 5%; * significant at 10%.

Source: Authors' analysis from SILC.

It is important to point out that it is not our intention to do a (this analysis does not have to be mistaken with) labour market study or native-immigrant wage gap decomposition. It is also relevant to note that many factors that we have not taken into

consideration in our model -because our purpose of making the econometric exercise as parsimonious as possible and the unobservability of some variables- might be behind the large differentials in the returns to characteristics.⁹ Therefore, it seems essential to follow closely the performance of immigrants in Spain in the next years in order to detect whether there is a process of assimilation as immigrants accumulate years of labour experience in the host country.

7. CONCLUSIONS

This article has aimed at tackling the relation between immigration and poverty in Spain, which until recently had been a country of emigrants. From the analyses performed here the following conclusions can be highlighted. Firstly, we have found that in Spain poverty incidence, intensity and severity are higher among immigrants than among locals (including in this group all EU-25 citizens). In addition, social transfers do not seem to substantially amend this situation for the foreign population, in contrast with a large effect on poverty among locals. In the second place, we have analysed the gap in poverty rates between locals and immigrants, finding that, while differences in characteristics contribute to reduce such discrepancy, the difference in poverty risk is fully explained by different returns to observable socio-demographic characteristics (especially by the impact of household head age and activity status and household size to escape from poverty, which is related to the non-fulfilment of the requirements to access to some cash transfers).

A couple of years back, the Peruvian author Mario Vargas-Llosa wrote a newspaper about the life of his Guatemalan cleaning lady in the States, arguing about how some immigrants might be very poor in their country but, when they migrated, despite mainly filling low skilled jobs, they performed very well in comparison with their previous situation in their home countries.¹⁰ In fact, most of Spanish immigrants would face a almost negligible poverty risk if they lived in the main home countries of Spanish foreign population. For example, some simple simulations using Power Parity

⁹ Anyway we carried out different set of regressions including the number of family members with different levels of education, being all of them not significant.

¹⁰ Mario Vargas-Llosa, "Un muro de mentiras", *El País* 22/10/2006.

Purchasing a relative national poverty lines points out that less than 5% of Spanish immigrants would be poor in Bolivia, Ecuador or Bulgaria, for example.¹¹ If, in the short run, immigrants compared their living standards with those common in their home country, the higher “local” poverty rate of immigrants could not be taken by itself as a sign of failure. In short, if immigrants compare themselves with their compatriots, facing a higher poverty risk in terms of the host country standards can be compatible with a sense of accomplishment and success among the immigrant population.

However, from a point of view of benevolent public authorities worried about guaranteeing social stability and avoiding ghettos, racism-driven problems and ethnic confrontations, to tackle with the (relative) poverty risk of immigrants is without question a relevant policy issue. Moreover, as it is well-known from the insights of the Economics of Happiness, in terms of income, individuals care more about their relative than about their absolute position, being the former a major determinant of subjective well-being, at least when a certain vital threshold has been crossed (Layard, 2003).

Therefore, as long as immigrants take as reference local citizens, then the above argument would be senseless to a great extent. If locals become the group of comparisons of immigrants in the long run, then the same, or even lower, poverty rate can have very different implications in terms of (subjective) well-being and social integration. In any case, it is reasonable to suppose that with the passing of time the locals will become more and more the comparison group of immigrants, too. When that moment comes the differences in poverty rates between locals and immigrants would come into their full meaning and implications. This interpretation is backed by the conclusions of a qualitative study on perceptions of discrimination and islamophobia recently released by the European Monitoring Centre on Racism and Xenophobia (2006). In their own words: “*the interviews suggest that most Muslims see the second and third generations as [...] more integrated [...]. However, the expectations [...] are also greater*” (p. 27).

¹¹ These calculations are available on request. See Muñoz de Bustillo and Antón (2006) for details.

REFERENCES

- Anastossova L, Paligorova T (2006) What is behind Native-Immigrant Social Income. LIS Working Paper 432.
- Bhaumik SK, Gang IN, Yun M (2006) A Note on Decomposing Differences in Poverty Incidence Using Regression Estimates: Algorithm and Example. IZA Working Paper 2262.
- Blinder AS (1973) Wage Discrimination: Reduced Form and Structural Estimates. *Journal of Human Resources* 8(4):436-455.
- Borjas GJ, Trejo SJ (1991) Immigrant Participation in the Welfare System. NBER Working Paper 3423.
- Bover O, and Velilla P (1999) Migration in Spain: Historical Background and Current Trends. Libro de Zimmerman
- Brücker H, Epstein G, McCormick B, Saint-Paul G, Venturini A and Zimmermann K (2002) Welfare State Provision. In Boeri T, Hanson GH, McCormick B. (eds.) *Immigration Policy and the Welfare System*. Oxford University Press, London, pp. 66-90.
- Carrasco R, García-Serrano C, Malo MA (2003) Mercado de trabajo e inmigración. In Izquierdo, A. (dir.) *Inmigración: Mercado de Trabajo y Protección Social en España*. CES, Madrid, pp. 183-238.
- Carrasco R, Jimeno, JF, Ortega AC (2004) The Effect of Immigration on the Employment Opportunities of Native-Born Workers: Some Evidence for Spain. FEDEA Working Paper 2004-17.
- Centro de Investigaciones Sociológicas (CIS) (2006) Barómetro Septiembre 2006. CIS, Madrid.
- Collado MD, Iturbe-Ormaetxe I, Valera G (2004) Quantifying the Impact of Immigration on the Spanish Welfare State. *International Tax and Public Finance* 11(3):335-353.
- Coudouel A, Hentschel JS, Wodon QT (2002) Poverty Measurement and Analysis. In World Bank (ed.) *A Sourcebook for Poverty Reduction Strategies*. The World Bank, Washington, pp. 27-64.
- Dolado JJ, Jimeno JF, Duce R (1997) Los efectos de la inmigración sobre la demanda relativa de trabajo cualificado vs. poco cualificado: evidencia para España. *Cuadernos Económicos del ICE* 63:11-29.
- Economic Commission for Latin America and Caribbean (ECLAC) (2006) *Social Panorama of Latin America 2005*, ECLAC, Santiago de Chile.
- European Monitoring Centre on Racism and Xenophobia (2006) *Perceptions of discrimination and islamophobia. Voices from members of Muslim communities in the European Union*. Available at <http://eumc.europa.eu/eumc/>.
- Eurostat (2005) *EU-SILC User Database Description*. Eurostat, Brussels.
- Eurostat (2006) *Non-national populations in the EU Member States. Statistics in focus* 8/2006.
- Fairlie RW (2005) An extension of the Blinder-Oaxaca decomposition technique to logit and probit models. *Journal of Economic and Social Measurement* 30(4):305-316.
- Fernández C, Ortega C (2006) Labour Market Assimilation of Immigrants in Spain: employment at the expense of bad job-matches? Paper presented at the XXXI

- Symposium on Economic Analysis, University of Oviedo, Spain, 14-16 December.
- Foster J, Greer J, Thorbecke E (1984) A Class of Decomposable Poverty Measures. *Econometrica* 52(3): 761-766.
- Gang IN, Sen K, Yun M (2005) Caste Ethnicity Poverty in Rural India. *Review of Development Economics* 9(3): 399-414.
- Gomulka J, Stern N (1990) The Employment of Married Women in the United Kingdom in 1970-83. *Economica* 57:171-199.
- Hansen J, Lofstrom M (2003) Immigrant Assimilation and Welfare Participation: Do Immigrants Assimilate Into or Out-of Welfare? *Journal of Human Resources* 38(1):74-98.
- Izquierdo A, Martínez Buján R (2004) La inmigración en España en 2001. In Izquierdo A. (dir.) *Inmigración: Mercado de Trabajo y Protección Social en España*. CES, Madrid, pp. 99-182.
- Izquierdo A (1997) La población extranjera en España.” In Puyol R. (ed.) *Dinámica de la Población en España*. Síntesis, Madrid, pp. 217-264.
- Kakwani N, Son HH (2005) Poverty Analysis for Policy Use: Poverty Profiles and Mapping. In United Nations (ed.) *Handbook of Poverty Statistics: Concepts, Methods and Policy Use*. United Nations Statistics Division, New York, pp. 292-369.
- Milanovic B (2005) *Worlds Apart. Measuring international and global inequality*. Princeton University Press, Princeton.
- Muñoz de Bustillo R, Antón JI (2007) Inmigración y Estado de Bienestar: una aproximación al caso español. In Domínguez R (ed.) *Inmigración: Crecimiento económico e integración social*. Parlamento de Cantabria-Universidad de Cantabria, Santander, pp. 117-145.
- Nielsen HS (1998) Discrimination and detailed decomposition in a logit model. *Economic Letters* 61:115-120.
- Oaxaca RL (1973) Male-Female Wage Differentials in Urban Labour Markets. *International Economic Review* 14(3):693-709.
- Oporto del Olmo A (1992) *Emigración y ahorro en España 1959-1986*. Ministerio de Trabajo y Seguridad Social, Madrid.
- Rendón S (2007) The Catalan Premium: Language and Employment in Catalonia. *Journal of Population Economics*, 20:669-686.
- Rodríguez-Cabrero G (2003) Protección Social de los inmigrantes extranjeros. In Izquierdo A (ed.) *Inmigración: Mercado de Trabajo y Protección Social en España*. CES, Madrid, pp. 249-300.
- Yun M (2002) Decomposition analysis for a binary choice model. IZA Working Paper 145.
- Yun M (2004) Decomposing differences in the first moment. *Economic Letters* 82:275-280.
- Yun, M.

Table A1. Normalized *probit* regressions of the probability of being poor

	Estimated coefficients	
	EU citizens	Immigrants
Female head	0.017 [0.011] *	0.101 [0.047] **
Head aged 25-39	-0.079 [0.030] ***	-0.263 [0.088] ***
Head aged 40-59	-0.092 [0.027] ***	-0.221 [0.088] **
Head aged 60 or more	-0.089 [0.032] ***	0.248 [0.166]
Head years of schooling	-0.067 [0.002] ***	-0.054 [0.009] ***
Self-employed	0.332 0.022 ***	0.304 [0.120] **
Unemployed	[0.457] 0.028 ***	0.512 [0.128] ***
Retired	-0.123 [0.022] ***	-0.487 [0.191] ***
Other inactivity	0.186 [0.021] ***	0.315 [0.116] ***
Household size	0.003 [0.011]	0.149 [0.048] ***
Capital income	-0.128 [0.009] ***	-0.176 [0.056] ***
Transfers made to other households	-0.006 [0.023]	0.201 [0.045] ***
Children below 5	0.153 [0.027] ***	0.204 [0.090] **
Children aged 5-14	0.261 [0.017] ***	0.258 [0.069] ***
People aged 65 or more	-0.092 [0.016] ***	-0.236 [0.141]
No. of other members employed	-0.707 [0.019] ***	-0.837 [0.083] ***
Observations	37,270	1,448
LR test: χ^2 (26)	9632.4 ***	545.1 ***
McFadden R2	0.236	0.292
% correctly predicted		
Non-poor	82.6	80.2
Poor	63.0	72.6

Robust standard errors in brackets. *** significant at 1%; ** significant at 5%; * significant at 10%.

Notes:

- A constant, year dummies and fictitious variables capturing region and population density are also included in the model. The estimated coefficients for these covariates are available from the authors on request.

- The reference household is headed by a man aged less than 25, employed, living in a household neither receiving capital income nor making any transfer to other households and placed in the North-West in a high-populated area in 2003.

Source: Authors' analysis from SILC.