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## Childbearing Patterns of Foreign Women in a New Immigration Country. The Case of Spain

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MARTA ROIG VILA\* AND TERESA CASTRO MARTÍN\*\*

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## Childbearing Patterns of Foreign Women in a New Immigration Country: The Case of Spain

*Since the early 1990s, Spanish fertility has been among the lowest in the world, despite a small upturn observed in the last few years (1.35 children per woman in 2006). In this context, and despite a steady increase in life expectancy, population growth is set to level off and become negative in the coming decades. Yet at the same time, thanks to unprecedented economic prosperity, Spain's population has risen by 5 million over the last decade and now exceeds 45 million. This rapid growth, unique in Europe, is almost entirely attributable to immigration: the number of foreigners rose from 200,000 in 1981 to almost 4.5 million in early 2007. In this article, MARTA ROIG VILA and TERESA CASTRO MARTÍN examine the contribution of foreigners' fertility to population growth, both today and in the future. They approach the question by examining differences in fertility behaviour between Spanish women and foreign women, and between foreign women of different origins. After meticulous analysis of all available data, they interpret the observed differences with caution and conclude that a broader range of data is required before more detailed analyses can be attempted.*

After nearly three decades of below-replacement fertility in Europe, there is general acceptance that low fertility is here to stay and that population ageing is an unavoidable prospect. But acceptance does not imply full resignation. In recent years, increasing attention has been paid to the role of immigrant populations, and on whether their youthful age pyramids and higher fertility would help lessen the anticipated consequences of Europe's subfertile, labour-short, ageing and declining populations (United Nations, 2001; Lutz and Scherbov, 2002; Teitelbaum, 2004). The debate has mainly focused on the rejuvenating effect of sustained entries of young adults, and less attention has been paid to the contribution of immigrant fertility, despite the fact that the proportion of children from foreign-born mothers is increasing significantly (Haug, Compton and Courbage, 2002).

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In Spain, the immigration debate is relatively recent and has mainly focused on economic integration and social cohesion issues (Pérez Díaz et al., 2001; Colectivo IOÉ, 2002). However, Spain has had for several years one of the world's lowest fertility rates (less than 1.2 children per woman in the period 1995-1999) and has been singled by the United Nations as one of the countries with possibly the oldest age structure in the world in 2050 (United Nations, 2003). Therefore, the demographic impact of immigration is no longer absent from the debate. In particular, since the modest but sustained rise in fertility observed in recent years has coincided with an increase in immigration, this rise has been attributed to the presence of immigrant women (Instituto Nacional de Estadística, 2005). There are, however, important caveats concerning available evidence. How large is the fertility gap between foreign and Spanish women? Are conventional fertility rates appropriate to measure this gap? To what extent is the observed gap attributable to educational differentials? Are immigrants' childbearing patterns influenced by length of stay in the host country?

The existing literature has put forward different hypotheses to explain and predict the fertility patterns of immigrants (Kulu, 2005). Some authors suggest that the first generation of certain immigrant groups tend to *maintain* the reproductive norms and patterns of the country of origin (Abbasi-Shavazi and McDonald, 2002). A considerable number of studies support the *adaptation* hypothesis, which predicts that immigrants gradually adjust their reproductive behaviour to that of the host country (Andersson, 2004). Past research has also shown that convergence between the fertility patterns of migrants and those of the host country cannot be entirely attributed to behavioural change but also to the fact that migrants are a *selected* group of individuals, regarding education, marital status or parity, as well as other characteristics which are not as easily measured, such as work ethic and social mobility aspirations (Feliciano, 2005). There is also evidence that the *disruption* caused by international migration depresses fertility, at least temporarily, because of the economic costs and the separation from partners it often involves, as well as the difficulties of the settling-in process (Carter, 2000). However, challenging this view, some authors have documented a fertility-enhancing effect of migration: immigrants may experience high fertility shortly after arrival at destination, particularly when migration is motivated by union formation and family building (Alders, 2000). Toulemon (2004) argues that higher-than-average fertility among immigrant women in France is partly due to deliberate postponement of childbearing until the post-arrival period.

Recent studies have also placed special emphasis on the socioeconomic and political context of the host society. According to Frank and Heuveline (2005), social stratification and differential opportunity structures at destination are more relevant in shaping immigrants' reproductive behaviour than influences from the home society, and could even encourage earlier and higher fertility. The fertility patterns adopted by undocumented immigrants might also be

influenced by the fact that giving birth in the host country entitles these immigrants to certain legal rights for their family, namely easier access to legal residence (Bledsoe, 2004). All of these hypotheses have received support in some studies, but have been challenged in others. This suggests that they are more complementary than competing and that the effect of migration on fertility might be contingent on socioeconomic context, legislation, time period and immigrants' origin.

This paper aims at providing some insights into the reproductive behaviour of foreign women in Spain, taking into account the heterogeneity of the immigrant population, in terms of origin, demographic and socioeconomic characteristics. We first describe differentials in total fertility rates in 2002 – a date close to the census, which was conducted in November 2001 – and discuss the limitations of this measure. We also compare foreign and Spanish women regarding other reproductive indicators, such as proportion of adolescent births, non-marital births and low-weight births. Then, based on census data, we conduct a multivariate analysis on recent fertility in order to assess the influence of demographic and educational composition on observed fertility differentials. Lastly, since some of the hypothesized effects of migration on fertility are contingent on duration of stay in the host country, we compare the fertility behaviour of successive migrant cohorts.

### Spain: a new country of immigration

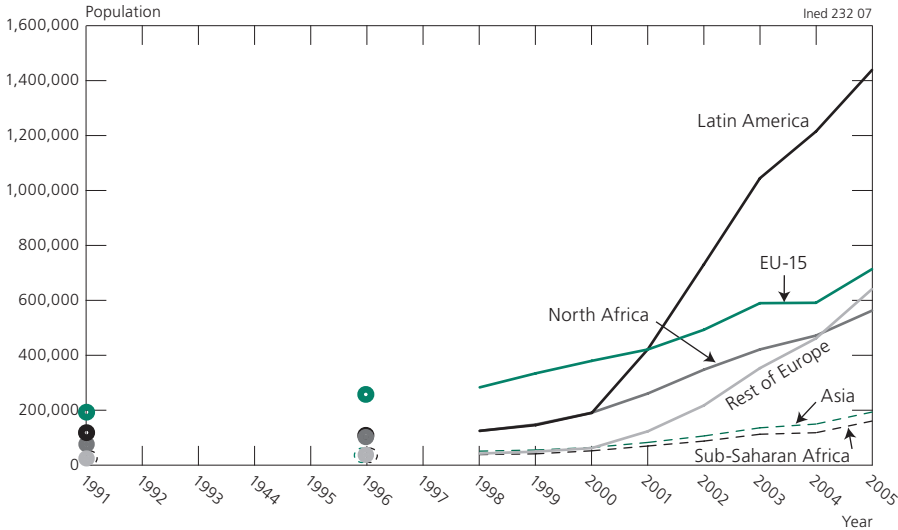
Spain, for centuries a country of emigration<sup>(1)</sup>, has become a country of immigration in the last twenty years (Muñoz-Pérez and Izquierdo, 1989; Arango, 2000). According to census and population register data, Spain hosted 350,000 foreigners in 1991, 1.5 million in 2001 and 3.7 million in 2005 (Figure 1). With an inflow of 652,000 foreigners in 2005, Spain is currently the main receiving country of Europe (Eurostat, 2006).

At the onset of Spain's transition from a sending to a receiving country, a large proportion of foreign residents were European citizens. As immigration increased, origins diversified. Since the mid-1990s, Spain has received a large number of immigrants from Latin America – mainly Ecuador and Colombia but also Peru, Argentina and the Dominican Republic<sup>(2)</sup>. The number of Latin

(1) Between 1846 and 1932, some 5 million Spaniards migrated away from their country of origin, mainly to South America. Between 1962 and 1976, 2 to 3 million Spaniards moved to other European countries, notably as labour migrants to France, Germany and Switzerland. Although return migration has been significant, particularly since the mid-1970s, there are currently around 2 million Spaniards living outside Spain (Arango and Martin, 2005).

(2) The inflow of Latin Americans is not new. From the mid-1970s, Spain was the main destination for exiles from the dictatorships of Argentina, Chile and Uruguay. However, labour migration has grown at an unprecedented rate since the mid-1990s. Both push factors, such as deep economic crises in many Latin American countries, and pull factors, such as common language and strong cultural links, have played a role, together with the inclusion of a large number of Latin American countries in the EU visa waiver programme, although Ecuador (in 2001), Colombia (in 2002) and Bolivia (in 2007) have recently been excluded.

**Figure 1. Trends in the number of foreign residents in Spain, by region of origin, 1991-2005**



Sources: Instituto Nacional de Estadística (INE), Census 1991 and continuous population register (data available online at [www.ine.es](http://www.ine.es)).

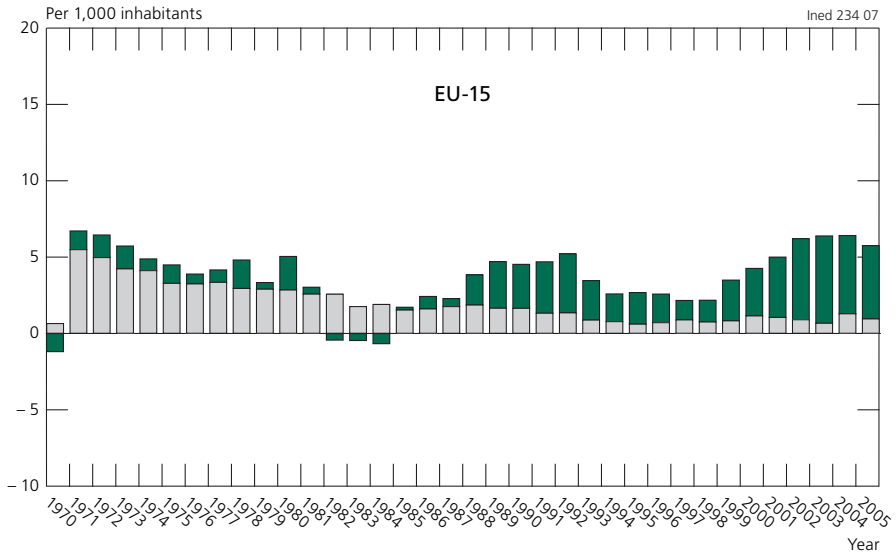
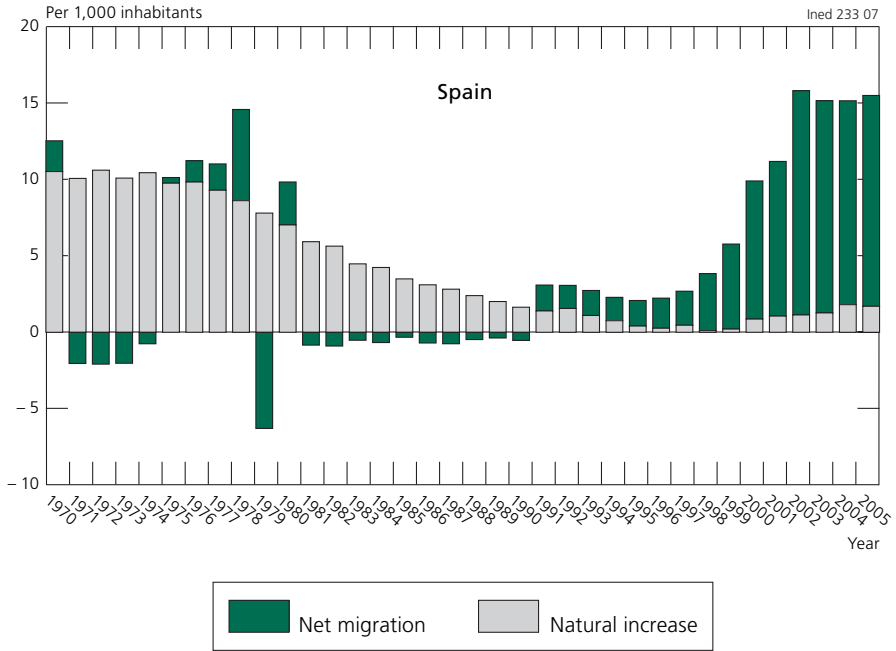
Americans increased from 66,000 in 1991 to 594,000 in 2001 and reached over 1.4 million in early 2005, representing 38% of the total immigrant population (Izquierdo et al., 2003). The Eastern European population has also grown considerably, from 150,000 in 2001 to nearly 600,000 in early 2005. At present, Eastern Europeans comprise 16% of all foreigners, a percentage similar to that of North Africans (15%). It is important to note that many of these foreigners do not hold the proper documentation required for residing and working in Spain. For instance, in early 2005, the number of foreigners with a valid residence permit was 2 million, 1.7 million below the number of foreigners enumerated by the population register<sup>(3)</sup>. In the last regularization campaign carried out in mid-2005, 560,000 undocumented immigrants were granted a residence permit conditional on a labour contract (Sandell, 2006)<sup>(4)</sup>.

As a result of recent migration trends, the proportion of foreigners in the total population of Spain has increased rapidly: from 0.9% in 1991 to 8.5% in 2005. The demographic effects of these trends are evident in the increasing contribution of immigration to population growth. As shown in Figure 2, the contribution of net international migration to the rate of population growth

(3) Only one-third of this difference can be attributed to the presence of EU citizens, who are not required to apply for a residence permit.

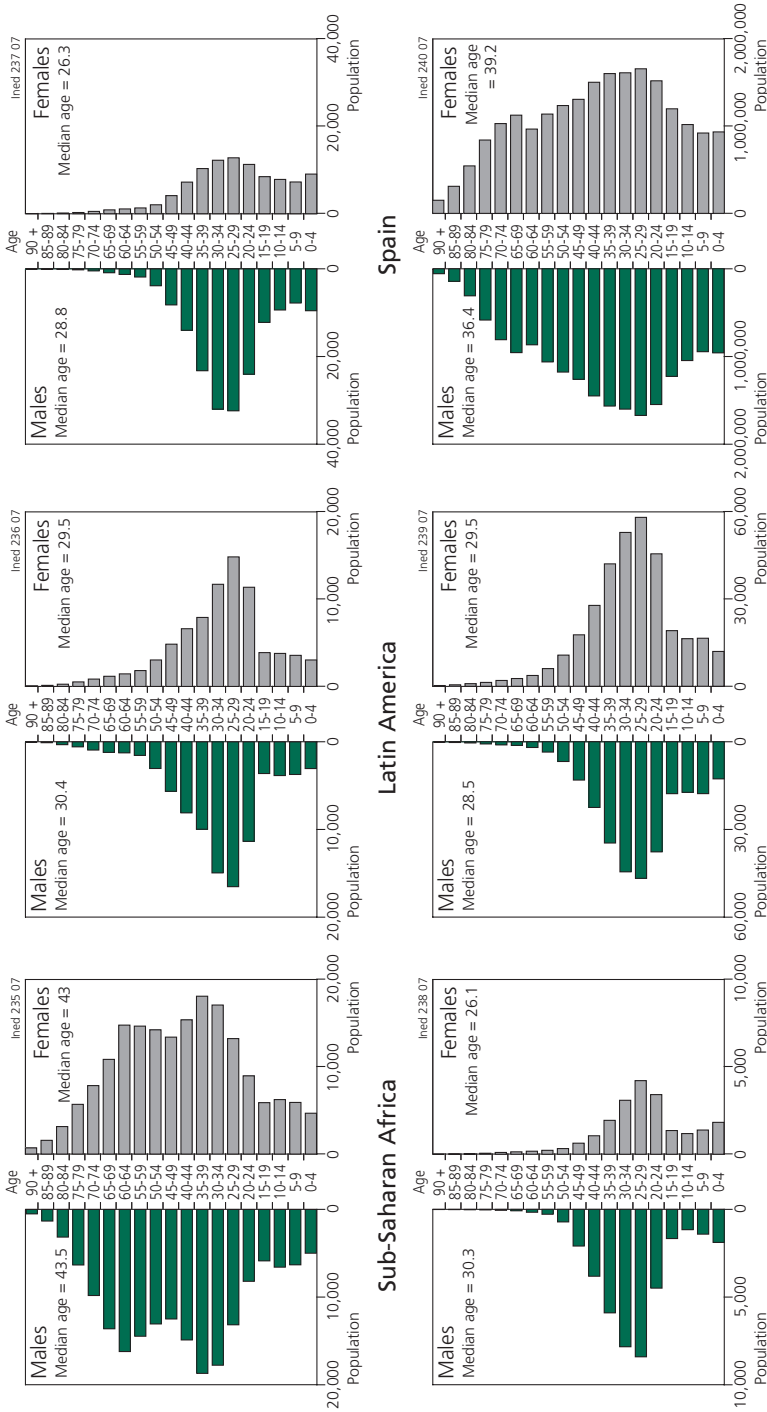
(4) Exceptional regularization programmes were implemented in 1986, 1991, 1996, 2000, 2001 and 2005. These programmes granted temporary residency permits and allowed a significant proportion of immigrants in the informal economy to enter the formal labour market.

Figure 2. Components of crude population growth rates, Spain and EU-15, 1970-2005



Source: Eurostat, <http://epp.eurostat.ec.europa.eu>

Figure 3. Population pyramids of Spanish nationals and immigrants by region of origin, 2001



Source: Instituto Nacional de Estadística (INE), Census 2001.

was either negative or insignificant during the 1970s and 1980s, but its weight rose swiftly during the 1990s. Since 2000, net migration has accounted for approximately 90% of Spain's population growth. The net migration rates observed in Spain in recent years are unique in the European context: Spain's net migration rate of 14.8 per thousand in 2005 is well above the average of the EU-15 (4.7 per thousand) and is even above the peak rates recorded by Germany in the early 1990s (9.6 per thousand in 1992) or by France in the early 1970s.

Coinciding with the growing presence of immigrants, there has also been a rise in the crude birth rate (from 9.2 per thousand in 1996 to 10.6 per thousand in 2004). This coincidence is not fortuitous: in 2004, the crude birth rate of the foreign population was 20.6 per thousand, double that of Spaniards (9.8). This gap is partly explained by differences in age structure, since the median age of the foreign population (31.2 years in 2001), is well below that of the Spanish population (37.8), and the proportion of women of childbearing age is significantly higher among foreigners (70.6%) than among nationals (52%). There is, however, considerable variability in the age distribution of the foreign population according to region of origin. As shown in Figure 3, individuals from EU-15 countries other than Spain are, on average, older than Spaniards, while those from less developed countries are younger, reflecting recent immigration of working-age young adults. The proportion of women also differs significantly by region of origin. Women are slightly under-represented in the total foreign population (48.1% in 2001) and strongly under-represented among Africans (34%), but the opposite is true for immigrants originating in Latin America, 55.3% of whom are women.

## Data and methods

The data available to measure female immigrant fertility have important limitations. The coverage of birth statistics is virtually complete, but data on live births by mother's nationality only became available in 1996. Therefore, the period available for fertility trend analysis is rather short. In order to calculate fertility rates, we turned to the continuous population register to obtain immigrant population estimates by age<sup>(5)</sup>. The coverage of municipal population registers is assumed to be high, since registration provides access to education and health services and is a prerequisite for immigrants wishing to apply for a legal residence permit. It is probably not complete, however. Previous research suggests that certain foreign groups are undercounted (Devolder, Domingo and García, 2003) and that there is a time-lag between arrival and registration. Over-registration is also possible because double-registration is difficult to detect among foreign residents without a unique

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(5) Population registers constitute a more reliable source of information on the immigrant population than alternative sources such as the Ministry of Interior Foreign Yearbook, which only covers immigrants with legal residence permits.



identity document, and because immigrants do not usually deregister when they return to their country of origin or move on to another country<sup>(6)</sup>. The comparison of the number of births in the periods 1994-1998 and 1999-2003 from vital statistics and the number of Spanish-born children counted in the population register as of 1 January 2004 suggests under-registration of approximately 7% among children aged 0-4 and of 1% among children aged 5-9<sup>(7)</sup>.

Another limitation of these sources for fertility analysis is that they contain little information on the background characteristics of the population. Vital registration statistics record mother's nationality<sup>(8)</sup>, age, marital status and parity, but they provide no information on education, and population registers only contain data on age, sex, nationality and country of birth. Because of this limited information and the problems associated with combining two different data sources, we also examine fertility differentials among various immigrant groups using the 2001 Census, which contains extensive information on the characteristics of immigrants. The analysis is conducted at the individual level and is based on a 5% systematic census sample.

For the first time since 1920, the census did not include a question on children ever born. Hence, fertility can only be estimated indirectly, i.e. by matching children enumerated in the household records to mothers within the household. We base our analysis on an indicator of recent fertility: co-residing with a child under age one. We focus on recent fertility because children under one are most likely to reside with their mothers, irrespective of mothers' nationality, and also because, for most immigrant women, length of residence in Spain – and hence exposure to giving birth in the host country – is short. Comparison with birth statistics provides an estimated 3% under-enumeration of children under age one in the census for the overall population.

The analysis is based on a sample of 528,511 women of reproductive age (age 15-49), 4.8% of whom are foreigners (25,620). Although the census provides

(6) Following the legal modifications introduced in 2003, as from December 2005, foreigners from outside the EU are required to renew their registration in the population register every two years, or else be automatically removed from the register. This measure will probably reduce the likelihood of overestimation in the population register from 2006 on.

(7) Under-registration is highest among children aged 0-3, but diminishes after that age because a certificate from the municipal population register is required for school admission.

(8) Vital registration statistics classify mothers by country of citizenship and not country of birth so they do not identify immigrants who have acquired Spanish citizenship. However, although a large proportion of immigrant women, particularly those from Latin America or those married to a Spaniard, qualify for expedited citizenship status (after two years of residence for the former and one year for the latter instead of the ten-year standard requirement), the naturalization statistics reveal lower levels of naturalization than in other European countries with a longer immigration tradition. We have not calculated naturalization rates because of the difficulties involved in determining who is eligible for citizenship – only those who have met the requirements for naturalization are truly “at risk” of being naturalized – but the total number of naturalizations between 1991 and 2004 (195,753) is well below the potentially eligible population.

information on both country of birth and country of citizenship, we use the latter so as to maintain comparability with vital statistics data<sup>(9)</sup>. In order to capture the large heterogeneity of cultural and social background represented in the immigrant population as well as the potential influence of the fertility levels prevailing in the sending countries, we classified foreign women into six large regional groups: EU-15 countries other than Spain, other European countries, North Africa (mainly Morocco, 94%), Sub-Saharan Africa, Latin America and Asia.

A series of logistic regression models were estimated to compare the probability of having given birth in the year prior to the census for foreign and Spanish women aged 15-49, before and after controlling for age, marital status, education and a proxy of prior parity – the number of children in the household above age one. Age is coded into five-year age groups and marital status differentiates between single, married and previously married women. Education refers to the highest completed level of education and is coded into five different categories: no schooling or uncompleted primary, primary schooling, lower secondary, upper secondary<sup>(10)</sup> and university studies. The results are presented as odds ratios, keeping Spanish women as the reference category.

Since fertility patterns have been shown to be influenced by duration of stay in the host society and by the stage in the migratory cycle, we also examined the combined effect of region of origin and length of residence, distinguishing the following arrival cohorts: pre-1990, 1990-1994, 1995-1999 and 2000-2001. Ideally, the pre-1990 arrival cohort should be further disaggregated into several cohorts. Adaptation, in the sense of adopting the social norms and behaviours of the host country, may occur very gradually. However, since large-scale immigration is a recent phenomenon in Spain, further disaggregation is not possible at this point.

### The gap in fertility rates

Spain has one of the lowest fertility levels in the world. In 1981 the country fell below the replacement threshold and in 1993 it entered the lowest-low fertility group (below 1.3 children per woman) (Billari and Kohler, 2002). The total fertility rate for some Autonomous Communities within Spain, such as Asturias or Galicia, has been below 1 for more than a decade. Although the late timing of fertility – Spain also has one of the oldest mean ages at first birth in the world (29.3 in 2004) – may lead to underestimation of the true level of

(9) According to census data, the number of foreign-born women aged 15-49 is 752,112, while only 524,809 (70% of all foreign-born) are of foreign nationality. The percentage of foreign-born Spanish citizens varies greatly by region of origin. For instance, only 50% of women born in other countries of the EU-15 are foreigners, compared with 77% of Latin Americans, 75% of Africans or 81% of Asians. Given Spain's past as a country of emigration, a significant number of women born abroad are, in fact, descendants of Spanish former emigrants.

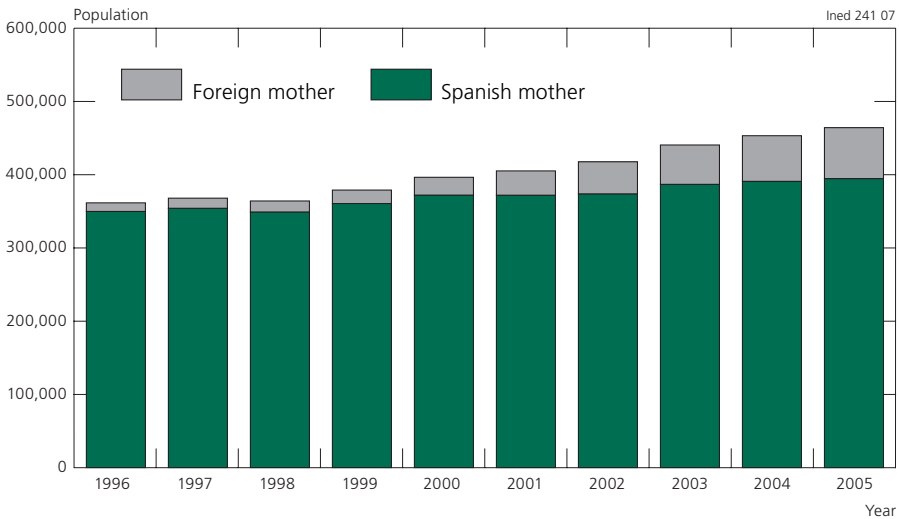
(10) The distinction between lower and upper secondary schooling corresponds to the current cut-off point for compulsory education in Spain.

cohort fertility, there is no sign yet that the postponement of fertility is receding.

In this context of “lowest-low” and “latest-late” fertility, the 5.6% mean annual increase in the number of births over the past 6 years – from 365,193 in 1998 to 454,591 in 2004 – after decades of uninterrupted decline, and the slight rise in total fertility – from 1.16 children per woman in 1998 to 1.33 in 2004 – has attracted considerable attention. The media have emphasized the role of immigrants’ childbearing in what they portray as a turning trend towards higher fertility<sup>(11)</sup>. However, the impact of immigrants’ fertility on recent trends needs more careful examination.

There is no doubt that the proportion of births to foreign women has increased remarkably in recent years (Figure 4). In 2005, 15% of all live births were to foreign mothers, and 17.6% to either a foreign mother or a foreign father, a proportion that exceeded the proportion of foreign nationals in the overall population (8.5%). Also, as noted earlier, the crude birth rate of the foreign population is twice that of Spaniards, but this could be partly due to immigrants’ younger age profile (Izquierdo and López de Lera, 2003).

**Figure 4. Number of births to foreign mothers and share of total births, Spain, 1996-2005**



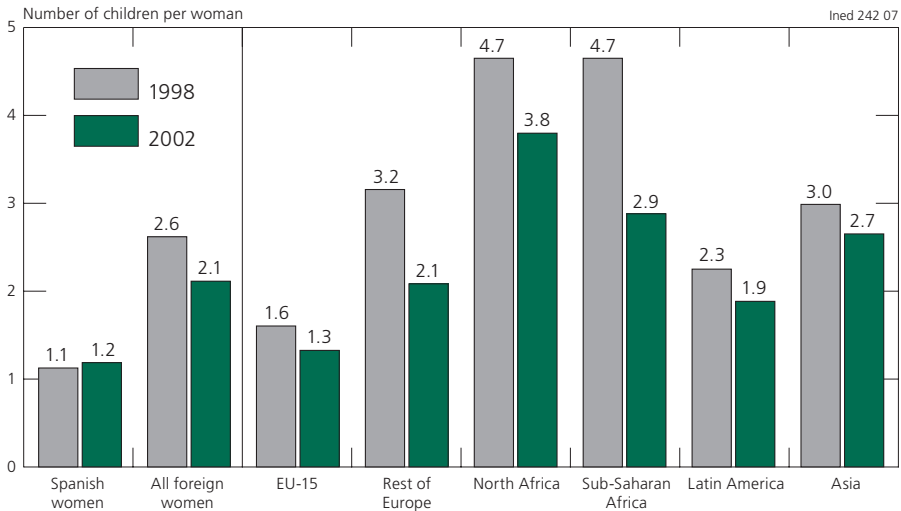
Source: Instituto Nacional de Estadística (INE), birth statistics.

Total fertility rates can obviate the problem of different age structures. However, this synthetic indicator is typically applied to relatively stable populations, whereas the foreign population resident in Spain is far from stable. Due to the continuous addition of new immigrants, the foreign population

(11) “Births on the rise for the sixth consecutive year thanks to immigrants” (*El País*, 23 June 2005).

varies considerably from one year to another, and each immigration cohort has a different sociodemographic make-up, making it difficult to interpret trends. Period fertility rates are also affected by the timing of childbearing. Since migrant women have an earlier fertility schedule, differentials with native women are probably overestimated relative to completed fertility. We need also to keep in mind that fertility behaviour among immigrant women is probably influenced by age at migration (Toulemon and Mazuy, 2004) and by whether they left behind any children in the country of origin, information which is not available at present. Despite these limitations, we will present total fertility rates by region of origin as a preliminary assessment of the fertility gap between Spanish and foreign women.

**Figure 5. Total fertility rates of Spanish and foreign women by region of origin, 1998 and 2002**



**Source:** Instituto Nacional de Estadística (INE), Birth Statistics microdata and Population Register.

According to Figure 5, in 2002, the total fertility rate for foreign women residing in Spain was 2.12 children compared with 1.19 children for Spanish women<sup>(12)</sup>. There are, however, large differences according to region of origin. We find the highest fertility level among North African women (3.8), followed by Sub-Saharan African women (2.9), and Asian women (2.7). We should bear in mind that the accuracy of these rates is highly dependent on the reliability of population denominators. For example, the total fertility rate of all foreign women would be 1.9 (instead of 2.1) if we assumed a hypothetical level of 10%

(12) We conducted the analysis for 2002 in order to maximize comparability with the Census, which was carried out in November 2001, but the gap in fertility rates in 2004 is even narrower: 1.89 children among foreign women compared with 1.25 children among Spanish women.

under-registration in the population register and 2.35 in the case of 10% over-registration .

With regard to recent trends, the comparison of the fertility rates for 1998 and 2002 points towards a downward trend in the fertility level of all immigrant groups, particularly Sub-Saharan and North African women. Whether the narrowing of the fertility gap between foreign and Spanish women should be interpreted as evidence of a process of convergence towards the host society in this short period of time is not clear, since the composition of many immigrant groups has changed (regarding country of origin and time elapsed since migration), the coverage of the population register has improved, and fertility has also declined in the regions of origin.

### **Immigrant fertility: a level between those of the sending and receiving countries**

In order to explore the interactions between migration and fertility, reproductive patterns of immigrant women can be compared with those of native women, but also with women in their home country. Table 1 compares the total fertility rate and the educational level of women residing in Spain from five countries which are representative of the largest immigration flows – Morocco, Ecuador, Colombia, Peru and the Dominican Republic – and women in the country of origin. The women from these five countries comprised 49.7% of all foreign women aged 15-49 residing in Spain in 2001 and contributed 49.1% of all births to foreign mothers in the period 1998-2002.

According to the data presented, the fertility of migrant women residing in Spain is lower than the fertility of women in their country of origin for all Latin American countries examined, although higher for Moroccan women<sup>(13)</sup>. The observed differentials could be partly due to selective migration. As shown in Table 1, the proportion of women with secondary or higher education is significantly larger among Ecuadorian, Colombian and Peruvian women residing in Spain than among women in their home countries, and several studies have documented that the fertility level of better educated Latin American women is close to replacement (Rosero-Bixby, 2004; United Nations, 2005). An additional explanation for the differences observed may be that a large proportion of Latin American women have recently arrived in Spain without their spouses (Oso, 1998). Many of them had children before migrating<sup>(14)</sup> but leave them with relatives in the country of origin until they obtain the legal residence and a stable job. Through family reunification, many of these

(13) The 2003-2004 Demographic and Health Survey for Morocco reports a total fertility rate of 2.5, reflecting a remarkably rapid fertility decline – the average number of children was 7 in the early 1970s and 5 in the early 1980s.

(14) The mean age at arrival in Spain for recent female immigration cohorts (1995-2001) from Latin America is 28.8 while the average age at first birth in most Latin American countries ranges from 21 to 24 (United Nations, 2004).

**Table 1. Total fertility rates and educational composition of foreign women aged 15-49 residing in Spain and women in the sending country**

Country of origin	Total Fertility Rate (children per woman)				Women with secondary ed. or more (%)	
	In Spain	In country of origin			In Spain	In country of origin
	TFR 2002	TFR 2000-2005	TFR Women with secondary ed. or more	Projected TFR 2015-2020		
Morocco	3.81	2.52	1.8	2.16	36.2	30.2
Ecuador	2.31	2.82	2.2	2.22	71.7	52.5
Colombia	1.69	2.47	2.2	2.00	76.0	64.8
Peru	1.32	2.70	2.2	2.25	86.2	66.2
Dominican Republic	1.29	2.95	2.5	2.51	52.3	50.6

*Sources:* Fertility estimates and projections in countries of origin: *United Nations, World Population Prospects: The 2006 Revision* (<<http://esa.un.org/unpp/>>). Educational composition and fertility estimates by education in countries of origin: Morocco DHS 2003/4, Ecuador ENDEMAIN 2004 and Census 2001, Colombia DHS 2000, Peru DHS 2000, Dominican Republic DHS 2002 (<<http://www.measuredhs.com/>>).

children will eventually come to Spain, although they will not be reflected in the birth statistics.

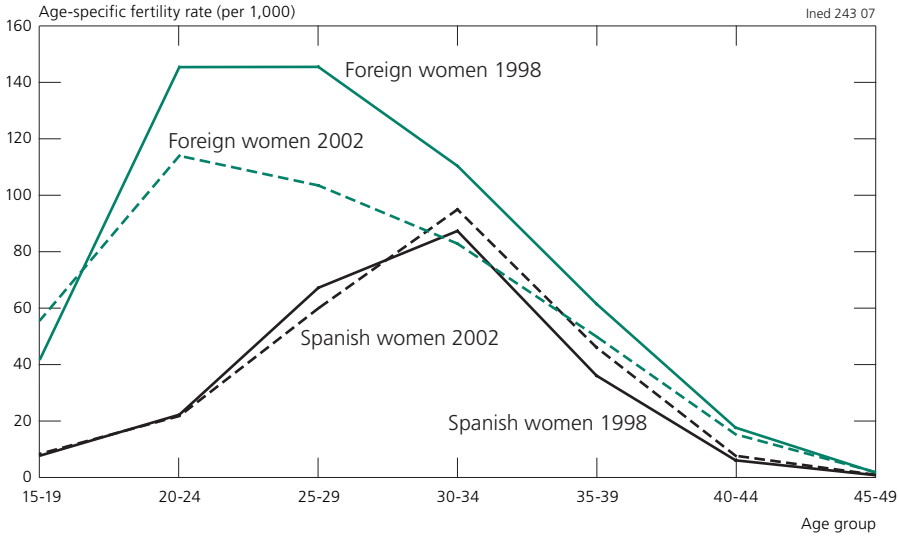
With regard to the foreseeable future, according to United Nations projections, the fertility in the five countries examined will range from 2.0 to 2.5 in 2015-2020 (United Nations, 2005)<sup>(15)</sup>. Thus, in the next decade, immigrants not only will depart from a country with an average fertility close to replacement, but if educational selection continues to play a role, they will have lower fertility than the national average.

### Other divergences in reproductive behaviour

Differentials between Spanish and foreign women are not confined to fertility levels but encompass other reproductive dimensions as well, such as the timing and the marital context of fertility. We have already mentioned that differentials in the timing of childbearing could be amplifying the gap in total fertility rates of Spanish and foreign women. Figure 6 shows that foreign women have a considerably earlier pattern of childbearing than their Spanish counterparts. Between 1998 and 2002, there was a general decline in immigrant fertility among all age groups except adolescents, but the age schedule of fertility remained practically stable.

(15) The Latin American and Caribbean region is forecasted to reach replacement level fertility in 2020-2025 (United Nations, 2005).

Figure 6. Age pattern of fertility for Spanish and foreign women, 1998 and 2002



Source: Instituto Nacional de Estadística (INE), Birth Statistics and Population Register.

Table 2 presents a series of indicators related to reproductive behaviour by region of origin. Indicators such as adolescent fertility rates and the mean age at first birth confirm that foreign women from all regions except EU-15 have an earlier fertility schedule than their Spanish counterparts. Large differentials regarding the marital context of fertility can also be found: in 2002, the proportion of out-of-wedlock births ranged from 13.1% among North African women to 59.6% among Latin American women<sup>(16)</sup>. These indicators point towards a maintenance of family formation patterns from the region of origin.

Another relevant aspect related to inequality that can be analysed through vital statistics is whether there are significant health differentials among newborns according to mother's nationality. Table 2 displays the proportion of preterm (less than 37 completed weeks of gestation) and low-weight births (less than 2,500 grams) by region of origin, two indicators that have been shown in the literature to reflect mothers' reproductive health status and predict child morbidity as well as long-term health and psychosocial development

(16) Since we do not have data on cohabitation at the time of birth, we cannot ascertain whether the mother is a lone parent or is cohabiting with the father of the newborn. However, if we take the declaration of father's age in the birth certificate as a proxy for father's acknowledgement of the child, the proportion of births to Latin American women recognized by the father (93.5%) is only slightly lower than among Spaniards (98.7%). Hence, the large proportion of out-of-wedlock births among Latin American women residing in Spain is probably linked to their higher likelihood of forming consensual unions, a pattern that prevails also in their home countries (Castro Martín, 2002).

Table 2. Reproductive indicators of Spanish and foreign women by region of origin, 1998 and 2002 (women aged 15-49)

	Spanish women		All foreign women		Region of origin											
					EU-15		Rest Europe		North Africa		Sub-Saharan Africa		Latin America		Asia	
	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002	1998	2002
Adolescent fertility rate (%)	7.2	7.9	41.9	55.8	20.5	13.9	63.9	80.6	72.5	60.6	90.3	65.2	39.2	68.1	23.7	21.6
Mean age at first birth (years)	28.9	29.7	28.1	27.0	29.5	30.3	26.9	26.0	27.3	27.2	26.5	26.7	28.2	26.3	27.8	27.7
Percentage of 3rd+ births	11.3	9.8	15.0	15.1	12.7	12.4	8.7	6.3	19.5	21.1	26.4	21.2	11.8	15.2	10.6	10.5
Percentage of non-marital births	13.8	19.3	29.6	43.0	40.4	45.7	34.9	44.8	13.5	13.1	24.5	30.5	41.9	59.6	19.8	26.5
Percentage of pre-term births	7.1	7.8	6.7	7.1	6.9	8.4	7.5	7.3	6.3	6.1	7.3	7.5	7.1	7.3	5.0	5.2
Percentage of low-weight births	7.3	8.3	7.4	7.0	7.6	8.4	9.7	7.4	6.9	6.6	9.7	9.4	6.8	6.5	6.8	7.0
Contraceptive prevalence rate (%)	72.5		65.1													
Ideal number of children	2.08		2.18													

Source: Instituto Nacional de Estadística (INE), Birth Statistics microdata and 1999 fertility survey (for data on contraceptive prevalence and ideal number of children)



(Conley and Bennet, 2000). The data in Table 2 suggest that the health status of newborns to foreign mothers is similar – and for some regions superior – to that of newborns to Spanish women. Since these results could be influenced by differences in mothers' age at birth, we estimated the probability of having a preterm and a low weight birth, controlling for age, marital status and parity, with a logit model. The odds ratios presented in Table 3 confirm the health advantage of newborns to foreign women residing in Spain. This is an encouraging result, which may reflect the selectivity of migrants, in terms of good health and other unmeasured characteristics, but also the benefits of universal access to the health care system.

**Table 3. Effect of region of origin on the probability of having a preterm birth and a low-weight birth, Spain, 2002 (logistic regression)**

Region of origin	Preterm birth		Low birth weight ( $\leq 2,500$ gr)	
	Unadjusted odds ratio	Adjusted odds ratio <sup>(a)</sup>	Unadjusted odds ratio	Adjusted odds ratio <sup>(a)</sup>
Spain ( <i>ref.</i> )	1.00	1.00	1.00	1.00
EU-15	1.07	1.02	1.02	0.94
Rest of Europe	0.93	0.94	0.88 *	0.89 *
North Africa	0.77 ***	0.70 ***	0.79 ***	0.73 ***
Sub-Saharan Africa	0.96	0.86 *	1.15 *	1.04
Latin America	0.93 *	0.83 ***	0.77 ***	0.67 ***
Asia	0.64 ***	0.64 ***	0.83 *	0.82 *

<sup>(a)</sup> Adjusted for age, marital status and parity.  
 \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$   
 N = 418,846  
 Source: Instituto Nacional de Estadística (INE), Birth Statistics microdata.

## New insights from the 2001 Census

In order to overcome the limitations inherent in combining two different data sources – vital statistics and the population register – for the estimation of fertility, we now confine our analysis to the 2001 census. Table 4 describes the main characteristics of the women in our sample. From a socioeconomic perspective, women of reproductive age from less developed countries constitute a heterogeneous group. For instance, over 60% of North African women and close to 45% of sub-Saharan African women have not completed secondary education, as compared to 20% of Spaniards. In contrast, Latin American women and those from non-EU European countries are almost as educated as Spanish women. Past research has documented analogous educational differentials by region of origin among men, and shown that the proportion of foreigners without schooling is larger among recent arrivals across all immigrant groups (Recaño and Roig, 2004). There are also noticeable differences in work status.

Labour market participation is lower among North African women (47% are economically active) than among Spaniards (62%), but higher for all other foreign groups. Although their occupational structure is far from homogenous, foreign women are generally drawn to unskilled manual activities and, in particular, to domestic work. It can be noted, for instance, that despite having an educational composition similar to Spanish women, 42.1% of employed Latin American women and 34% of Eastern European women are occupied in the domestic service sector, often part of the informal economy (Baldwin-Edwards and Arango, 1999).

Information on household composition indicates that, at ages 15-49, foreigners are more likely to live in non-traditional households. One-person households are more frequent among foreigners (6.5%) than among nationals (3.8%), and so are single-parent families, although their prevalence varies greatly by region of origin: they are less common among North African and Eastern European women than among Spaniards, but more frequent among women from Latin America and sub-Saharan Africa. Except for women from EU-15, foreign women tend to live in larger households than Spanish women. For instance, the proportion of North African and Latin American women living in households with 6 or more members is 39.7% and 35.8% respectively compared with 9.4% among Spanish women. It is also more frequent to find more than one family and non-relatives living in foreign women's households. An unanticipated finding is that the proportion of women of reproductive age with no children present in the household is considerably higher among foreigners – particularly from Latin America (70.9%) and from Eastern Europe (75.9%) – than among Spanish women (53.5%). This could be due to the fact that a large proportion of immigrants in these groups arrived in Spain a few years prior to the census, leaving their family behind.

### The influence of region of origin on recent fertility

The results of the logistic regression models of recent fertility, defined as the occurrence of a birth in the year prior to the census, are presented in Table 5. The first model includes only the effect of region of origin on the odds of having a birth in the previous year, the second model controls for women's age and the third model controls also for marital status, number of children present in the household one year prior to the census (as a proxy for parity) and educational level. Other variables available, such as employment status and household composition, were not included in the analysis because the lack of retrospective information makes it difficult to discard reverse causality.

The first model shows that foreign women, except those from European and Asian countries, present significantly higher levels of recent fertility than Spanish women. North African women, in particular, are much more likely than Spanish women to have had a birth in the preceding year: the odds ratio (OR) is 2.36. The odds ratio is also significantly higher among sub-Saharan

Table 4. Sociodemographic background and household composition by region of origin (women aged 15-49)

	Spanish women	All foreign women	Region of origin						
			EU-15	Rest Europe	North Africa	Sub-Saharan Africa	Latin America	Asia	
<b>Sociodemographic background</b>									
<b>Age (%)</b>									
15-19	11.5	7.6	6.5	6.1	13.3	9.5	6.9	7.7	
20-24	14.6	16.0	9.3	19.5	16.3	22.0	17.2	13.6	
25-29	15.9	21.0	15.7	24.5	19.0	27.6	22.3	19.9	
30-34	15.5	19.5	17.9	18.9	19.1	19.9	20.6	17.8	
35-39	15.4	16.4	19.3	12.9	16.0	12.0	16.3	18.8	
40-44	14.5	11.7	17.1	10.4	11.2	5.5	10.6	12.4	
45-49	12.6	7.7	14.2	7.6	5.2	3.6	6.1	10.0	
<b>Marital Status (%)</b>									
Single	45.5	45.0	43.7	38.9	35.3	49.2	49.7	37.6	
Married	49.2	46.8	46.7	52.3	59.4	45.3	41.5	56.5	
Separated/divorced/widow	5.3	8.2	9.6	8.8	5.4	5.5	8.8	5.9	
<b>Education (%)</b>									
No schooling/incomplete primary	3.9	10.3	4.2	6.9	35.5	20.5	6.6	11.3	
Primary	16.1	18.1	13.3	16.9	26.8	24.2	17.7	18.8	
Lower secondary	31.0	27.7	25.5	27.6	20.3	32.3	30.1	31.0	
Upper secondary	28.8	28.7	31.8	31.8	12.6	18.8	31.6	24.9	
University	20.1	15.1	25.3	16.7	4.9	4.3	13.9	14.1	

	Spanish women	All foreign women	Region of origin							
			EU-15	Rest Europe	North Africa	Sub-Saharan Africa	Latin America	Asia		
<b>Work Status (%)</b>										
Employed	49.7	54.0	50.3	57.4	35.6	46.0	59.3	54.4		
Unemployed	11.9	12.8	12.5	13.3	11.6	15.1	13.0	11.7		
Student	16.3	8.7	9.9	7.7	8.8	10.7	8.0	11.0		
Inactive	22.1	24.6	27.2	21.6	43.9	28.2	19.7	22.9		
Employed in domestic service (among those employed) (%)	8.0	33.5	7.3	34.0			42.1	30.0		
Home ownership (%)	83.7	35.0	58.8	29.5	31.6	31.7	28.6	40.0		
<b>Household composition</b>										
Mean household size	3.8	4.7	3.2	4.3	5.2	4.9	5.1	4.8		
One-person household (%)	3.8	6.5	12.9	6.0	4.5	6.0	5.1	5.6		
Households with 6+ members (%)	9.4	29.5	7.3	24.2	39.7	31.3	35.8	31.6		
2+ families in household (%)	0.7	13.3	3.1	14.1	9.2	11.5	18.0	10.5		
Households with 1+ unrelated members (%)	2.2	30.1	14.0	36.1	24.7	37.1	36.1	22.7		
Single-parent families (%)	13.5	15.9	13.5	10.2	7.7	22.8	20.5	11.1		
<b>No. of co-resident children (%)</b>										
0	53.5	69.4	62.6	75.9	67.1	69.5	70.9	71.1		
1	17.0	15.3	17.4	14.9	12.6	13.9	15.5	14.2		
2	22.6	10.0	15.2	6.7	8.7	8.8	9.2	10.3		
3+	6.9	5.3	4.8	2.5	11.7	7.8	4.5	4.4		
<b>Sample size</b>	502,891	25,620	4,322	3,010	3,139	728	13,075	1,092		

Source: Instituto Nacional de Estadística (INE), Census 2001, 5% sample microdata.

**Table 5. Recent fertility of women living in Spain by region of origin (logistic regressions)**

Region of origin	Birth in last year		
	Unadjusted odds ratio	Age-adjusted odds ratio	Odds ratio adjusted for 4 variables <sup>(a)</sup>
Spain ( <i>ref.</i> )	1.00	1.00	1.00
EU-15	0.86 †	0.79 **	0.79 *
Rest of Europe	1.06	0.91	0.60 ***
Northern Africa	2.36 ***	2.14 ***	1.23 **
Sub-Saharan Africa	1.68 ***	1.38 *	0.99
Latin America	1.32 ***	1.09 *	0.95
Asia	1.24	1.09	0.71 *

<sup>(a)</sup> Adjusted for age, marital status, number of co-resident children and education.  
 † p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001  
 N = 528,511  
 Source: Instituto Nacional de Estadística (INE), Census 2001, 5% sample microdata.

African women (OR = 1.68) and among Latin American women (OR = 1.32) than among Spanish women. Differences in age-adjusted odds ratios (third column) are of a lesser magnitude, suggesting that observed fertility differentials are partly due to the younger age composition of foreign women. Nonetheless, differentials remain statistically significant for most regions.

However, when differences in marital status, parity and educational level are taken into account (third column), only North African women present significantly higher odds of having given birth in the preceding year. In fact, the relative risk of having a recent birth among sub-Saharan African and Latin American women is not significantly different from that of Spanish women. We can thus conclude that the observed fertility gaps between women from these regions and Spanish women are largely attributable to their different socio-demographic composition. These results also suggest that fertility differentials are likely to diminish as immigrants’ demographic and socioeconomic characteristics converge towards those of the Spanish population.

### The influence of length of residence

One of the reasons for the relatively lower fertility of Latin American women, as compared to North African women, may be that a larger proportion of the former arrived in Spain in recent times, and their reproductive patterns may have been disrupted by the move. Table 6 shows that although nearly two-thirds of all foreign women arrived during the seven years preceding the census (1995-2001), there are significant differences by region of origin: 40% of all Latin American women arrived in 2000-2001 – and hence have resided

**Table 6. Percentage distribution of foreign women aged 15-49 according to year of arrival in Spain and region of origin**

Region of origin	Year of arrival			
	Before 1989	1990-1994	1995-1999	2000-2001
EU-15	44.1	16.7	24.9	14.3
Rest of Europe	17.4	9.0	33.8	39.8
North Africa	22.4	16.1	41.6	20.0
Sub-Saharan Africa	29.8	17.2	36.0	17.0
Latin America	19.0	8.8	32.3	39.9
Asia	32.2	18.8	34.2	14.8
All foreign women	24.5	11.8	32.5	31.2

N = 25,620  
**Source:** Instituto Nacional de Estadística (INE), Census 2001, 5% sample microdata.

in Spain less than two years by the census date – compared with 20% of North Africans.

Several studies have shown that length of residence in the host country influences the fertility patterns of immigrant women (Andersson, 2004; Frank and Heuveline, 2005). Despite the limitations of cross-sectional information to study processes that take place over time, the analysis of successive arrival cohorts of immigrants has often been used to test the adaptation and the disruption hypotheses.

Although adaptation is a gradual process which may take place over more than one generation, and most immigrants have arrived in Spain from the late 1990s onwards, we can tentatively explore whether their fertility patterns vary as a function of duration of stay. Table 7 compares recent fertility for successive immigrant cohorts from various regions of origin. Across all major immigrant groups, the unadjusted odds ratio falls with duration of stay in Spain. For instance, recent fertility of Latin American women who arrived before 1990 is much lower than that of their counterparts who arrived in 1995-1999 (OR = 0.48). After controlling for age, marital status, number of co-resident children and educational level, the basic pattern of declining odds of having a recent birth with increasing duration of stay in Spain remains, although in some groups, such as European women, differentials lose statistical significance. Recently arrived women (2000-2001) constitute an exception to this pattern, since their recent fertility is lower than that of women who arrived during 1995-1999. This could reflect a temporary disruption of their reproductive trajectories due to the economic costs and uncertainty associated with the international move. It is also consistent with a pattern of labour-oriented “chain migration” involving temporary marital separation.

When we combine in a single model the effect of region of origin and arrival cohort (Table 8), the results are equivalent. Net of compositional

Table 7. Recent fertility among foreign women aged 15-49 by region of origin and year of arrival in Spain (logistic regressions)

Region of origin	Birth in last year							
	Unadjusted odds ratio				Adjusted odds ratio <sup>(a)</sup>			
	Year of arrival				Year of arrival			
	before 1990	1990-94	1995-99 (ref.)	2000-01	before 1990	1990-94	1995-99 (ref.)	2000-01
EU-15	0.52 **	0.99	1.00	0.63	0.70	0.98	1.00	0.75
Rest of Europe	0.52 *	0.67	1.00	0.62 *	0.74	0.74	1.00	0.57 *
Northern Africa	0.43 ***	0.69 †	1.00	0.79	0.63 *	0.71 †	1.00	0.92
Sub-Saharan Africa	0.46 †	0.78	1.00	0.48	0.50	0.55	1.00	0.60
Latin America	0.48 ***	0.61 **	1.00	0.59 ***	0.54 ***	0.63 **	1.00	0.59 ***
All foreign women	0.43 ***	0.70 ***	1.00	0.61 ***	0.56 ***	0.72 ***	1.00	0.66 ***

<sup>(a)</sup> Adjusted for age, marital status, number of co-resident children and education.  
† p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001  
N = 25,620  
Source: Instituto Nacional de Estadística (INE), Census 2001, 5% sample microdata.

**Table 8. Recent fertility among Spanish and foreign women by immigration cohort and region of origin (logistic regressions)**

Region of origin and immigration cohort	Birth in last year		
	Unadjusted odds ratio	Age-adjusted odds ratio	Odds ratio adjusted for 4 variables <sup>(a)</sup>
Spain ( <i>ref.</i> )	1.00	1.00	1.00
EU-15	0.86 †	0.79 **	0.79 †
Rest of Europe	1.06	0.91	0.60 ***
North Africa			
Before 1990	1.30	1.32	0.94
1990-94	2.09 ***	1.83 ***	1.11
1995-99	3.03 ***	2.65 ***	1.43 ***
2000-01	2.39 ***	2.15 ***	1.13
Sub-Saharan Africa			
Before 1990	1.08	0.93	0.74
1990-94	1.84 †	1.27	0.90
1995-99	2.37 ***	1.95 **	1.47
2000-01	1.14	1.03	0.58
Latin America			
Before 1990	0.91	0.85	0.71 **
1990-94	1.15	0.88	0.84
1995-99	1.87 ***	1.41 ***	1.32 ***
2000-01	1.11	0.95	0.79 **
Asia	1.24	1.09	0.71 *
Other	1.25	1.24	0.94

<sup>(a)</sup> Adjusted for age, marital status, number of co-resident children and education.  
† p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001  
N = 528,511  
Source: Instituto Nacional de Estadística (INE), Census 2001, 5% sample microdata.

differences, the odds of having a recent birth among African and Latin American women who arrived in Spain before 1995 do not diverge significantly from those of Spaniards. Only those women who arrived in 1995-1999 display higher fertility than Spanish women. In fact, the odds of having given birth in the year prior to the census among Latin American women who arrived before 1990, as well as among those in the most recent arrival cohorts (2000-2001), are even lower than those among Spaniards. Our results are in line with those of Andersson (2004), who found that after a period of approximately five years, the fertility of immigrants in Sweden did not deviate much from that of the native-born population.



## Discussion

Although immigration is often portrayed as a potential solution to the ageing of populations in the developed world, the prevailing opinion among demographers is that the likely efficacy of immigration as a means of halting the inevitable demographic ageing process is limited, because immigrants themselves age and because the root cause of population ageing is fertility decline (Grant et al., 2004). Numerous studies have focused on the direct demographic impact of sustained entries of new immigrants, but fewer studies have paid attention to the secondary impact of immigration via differential fertility (Swicegood et al., 2006). However, we cannot discard a priori the potential rejuvenating impact that the joint effect of increasing immigration flows and higher immigrant fertility could have in a lowest-low fertility society like Spain.

The impact of immigrant fertility largely depends on the size and composition of the immigrant population – particularly with regard to age, region of origin and education –, the fertility gap between immigrants and natives, and the persistence of this gap over time. This paper has examined all these issues. Our results show that, despite considerable variability, immigrants have higher fertility rates than Spanish women. Nevertheless, although the relative weight of immigrants among women of reproductive age has increased remarkably in recent years (from 1.8% in 1998 to 8.9% in 2004), their contribution to overall fertility rates is modest. In 2004, the total fertility rate in absence of immigration would have been 1.25 instead of 1.33, i.e. immigration increased the national fertility rate by 0.08 children. If the number of immigrants continues to grow in the future, their contribution to overall fertility will also increase, but we should bear in mind that fertility is expected to continue declining in the countries of origin of future immigrant cohorts. Our results also suggest that the fertility gap between foreign and Spanish women, as measured by fertility rates, has narrowed in recent years, though these trends should be interpreted with caution. It is unclear whether this decline can be attributed to behavioural changes occurring over the short period examined, to improved coverage by the population register or to changes in the composition of the immigrant population.

In order to take into account various socio-demographic factors that shape fertility decisions, we performed an individual-level analysis based on a 5% sample of the 2001 Census. Our findings reveal that, after controlling for age, marital status, number of co-resident children and educational composition, the fertility gap between foreign and Spanish women narrows considerably. In fact, only North African women have significantly higher odds of having had a birth in the year preceding the census than Spaniards. This may reflect the fact that women from this region are more likely to migrate to Spain for marriage or family reunification rather than for work – as reflected in their

low participation in the labour force – contrary to immigrant women of all other origins.

Since large-scale immigration is a relatively recent phenomenon in Spain, it might be too early to appropriately test whether a process of convergence towards the reproductive behaviour of Spanish women is taking place, but it is important to keep track of ongoing changes (Bledsoe et al., 2005). On the one hand, several indicators of immigrants' reproductive patterns resemble those of their home countries. For instance, the timing of childbearing is considerably earlier than that of Spaniards and, in the case of Latin American women, the prevailing context of childbearing is non-marital. On the other hand, the effect of length of residence in Spain is consistent with the adaptation hypothesis: the risk of recent fertility declines with increasing time in Spain. Only the most recent arrival cohort (2000-2001) does not follow this pattern. This finding would be consistent with the disruption hypothesis, but it also suggests that the disruption effect is temporary.

Due to the cross-sectional nature of the comparison, all inferences about changes over time based on cohort differentials must be made cautiously. In order to confirm whether differences across arrival cohorts are actually due to temporary disruption – and possible “catch-up” afterwards – or to adaptation, in the sense of convergence of cultural norms regarding childbearing preferences<sup>(17)</sup>, it is necessary to adopt a more life-course oriented approach than is typical of differential fertility research. Immigrants from different arrival cohorts and natives may not be comparable, even when differences in age, marital status, parity and education are accounted for. Beyond the fact that immigrants from different arrival cohorts might have different motivations and expectations, there may be issues related to legal status and social capital that cannot be adequately measured with census information. Also, different immigration cohorts have faced different housing and labour market opportunities. Whether gradual fertility adjustment occurs because of immigrants' adoption of low fertility norms or because of the increased material and opportunity costs of having children is another issue that deserves further research. Informal and temporary labour relations, long and atypical work hours and low availability of close kin support networks are likely to discourage childbearing even if fertility preferences remain unchanged<sup>(18)</sup>.

There is another effect of immigration on Spanish fertility that we have not examined, but that is worth mentioning. In Spain, as in other developed countries, immigrant women are filling the domestic “caring gap”, taking care

(17) Although the Fertility Survey 1999 does not allow meaningful analyses by region of origin because of small sample sizes, it shows that the ideal number of children among all foreign women (2.18) is only slightly higher than among Spanish women (2.08) (Table 2).

(18) The high rates of abortion among foreign women residing in Spain suggest a high incidence of unwanted pregnancy. According to estimations from the Ministry of Health, 40-50% of all abortions in Spain are to foreign women.

of the old, the disabled, and the children. Even if their direct contribution to overall fertility is relatively modest, their indirect contribution is probably important. Given the scarcity of affordable of child care services in Spain and men's limited involvement in family responsibilities, women's labour force participation and childrearing is usually reconciled by relying on the care provided by grandparents and immigrants (Tobío, 2001). Hence, if fertility levels are now among the lowest in the world, they would certainly be even lower without the contribution of immigrants to child care.

The other side of the coin is that many immigrant women must leave their own children in their home countries with relatives, in order to take care of the children of others. Since the sources available only take into consideration children born or residing in Spain, the relatively low fertility levels found among certain immigrant groups – namely, Latin American – is probably linked to women's reproductive histories prior to migration. Therefore, low fertility should not be necessarily interpreted as a sign of integration in the host society, but could reflect difficult settlement experiences, particularly the barriers to attaining legal residence and a stable job, prerequisites to both bringing over children left behind in the home country and to having additional children in Spain.

Further research is clearly needed. Not only has immigrants' childbearing behaviour emerged as an interesting research topic in itself – it provides the opportunity to examine how a rapid change in socioeconomic and cultural context affects fertility dynamics – but it can also contribute to enhance our understanding of recent fertility trends and to think about the demographic and social future of many lowest-low fertility societies. However, cross-sectional data, such as those used in this paper, are ill-equipped for a proper assessment of fertility dynamics or for comprehending the multiple mechanisms through which migration affects fertility. Longitudinal data with complete migration and birth histories would allow a better understanding of the complex interplay of migration and fertility. The National Immigrant Survey 2007 (ENI), recently conducted by the Spanish National Institute of Statistics, could potentially fill these gaps.

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### MARTA ROIG VILA, TERESA CASTRO MARTÍN • CHILD BEARING PATTERNS OF FOREIGN WOMEN IN A NEW IMMIGRATION COUNTRY: THE CASE OF SPAIN

Spain, a country of emigration during centuries, has become a country of immigration in the last twenty years: the foreign population increased from 0.9% in 1991 to 8.5% in 2005. Since Spain also has one of the lowest fertility rates in the world, the potential impact of immigration on the demographic future of the country is large. Yet immigrants' fertility patterns have received relatively little attention. This study compares a series of reproductive indicators for Spanish and foreign women using birth microdata and presents an analysis of recent fertility by region of origin based on the 2001 Census. The results show that observed fertility gaps between Spanish and foreign women are largely explained by differential socio-demographic characteristics, in particular, by age and education. Since some of the hypothesized effects of migration on fertility are contingent on length of residence in the host country, the study also compares fertility levels across migrant cohorts and detects patterns consistent with both the adaptation and the disruption hypotheses.

### MARTA ROIG VILA, TERESA CASTRO MARTÍN • LA FÉCONDITÉ DES ÉTRANGÈRES DANS UN PAYS D'IMMIGRATION RÉCENTE : LE CAS DE L'ESPAGNE

Pays d'émigration pendant des siècles, l'Espagne est devenue un pays d'immigration depuis une vingtaine d'années : la part de la population étrangère y est passée de 0,9 % en 1991 à 8,5 % en 2005. L'Espagne ayant un taux de fécondité parmi les plus bas du monde, l'impact potentiel de l'immigration sur son avenir démographique est important. Pourtant, on s'y est encore assez peu intéressé à la fécondité des immigrées. Cet article compare les indicateurs de fécondité respectifs des Espagnoles et des immigrées en exploitant les données individuelles de l'état civil et analyse l'évolution récente de la fécondité en fonction de la région d'origine à partir des données du recensement de 2001. Les résultats montrent que les écarts de fécondité constatés entre les Espagnoles et les étrangères s'expliquent en grande partie par des différences de profil socio-démographique, en particulier en termes d'âge et de niveau d'instruction. Comme certains effets supposés de l'immigration sur la fécondité dépendent de la durée de séjour dans le pays d'accueil, l'article compare aussi les niveaux de fécondité de différentes cohortes d'immigrées et met en évidence des modèles qui s'accordent à la fois avec l'hypothèse de l'adaptation et avec celle de la rupture.

### MARTA ROIG VILA, TERESA CASTRO MARTÍN • LA FECUNDIDAD DE LAS MUJERES EXTRANJERAS EN UN PAÍS DE INMIGRACIÓN RECIENTE: EL CASO DE ESPAÑA

País de emigración durante siglos, España se ha convertido, en los últimos veinte años, en un país de inmigración: la población extranjera ha pasado de representar el 0,9% del total de población en 1991 a 8,5% en 2005. Dado que España tiene uno de los niveles de fecundidad más bajos del mundo, el impacto potencial de la inmigración en el futuro demográfico del país es importante. Sin embargo, nuestro conocimiento de los patrones reproductivos de la población inmigrante es limitado. Este artículo compara una serie de indicadores reproductivos para las mujeres españolas y extranjeras utilizando los microdatos de nacimientos. También presenta un análisis de los niveles recientes de fecundidad de las mujeres extranjeras según región de origen basado en el censo de 2001. Los resultados muestran que las diferencias observadas en los niveles de fecundidad entre mujeres españolas y extranjeras son en parte debidos a disparidades socio-demográficas, en particular a la estructura de edades y al nivel educativo. Puesto que algunas de las hipótesis que relacionan migración y fecundidad están condicionadas por la duración de residencia en el país de acogida, también se comparan los niveles de fecundidad de varias cohortes de inmigrantes, detectándose patrones que son consistentes con la hipótesis de adaptación y con la hipótesis de interrupción.