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Marital fertility and religion in Spain, 1985 and 1999

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Since the transition to democracy in Spain in 1975, both total fertility and rates of church attendance of Catholics have dropped dramatically. In this study the 1985 and 1999 Spanish Fertility Surveys were used to investigate whether the significance of religion for fertility behaviour—current family size and the spacing of births—changed between the survey dates. In the 1985 survey, family size was similar for those Catholics who actively participated in religious activities and those who, though nominally Catholic, were not active participants. By 1999, the family size of the latter was lower and comparable to the family size of those without religious affiliation. These findings accord with the declines in both church attendance and fertility in Spain. The small groups of Protestants and Muslims had the highest fertility. Women in inter-faith unions had relatively low fertility.

Keywords: religion; fertility; Spain; Catholic; Protestant

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Introduction

Total fertility in Europe has recently plummeted to previously unknown levels. Within the Continent, Spain has suffered the sharpest declines. Total fertility fell from 2.8 in 1975 to 1.15 in 1997 and increased only slightly to 1.2 in subsequent years. The percentage of women childless at age 30 rose from 9.6 per cent among those born 1949–53 to 24.7 per cent for the 1964–68 cohorts. Even though the postponement of childbearing may temporarily make the decline in fertility seem greater than it is, the decline is still remarkable. Since the mid-1970s Spain has also undergone important economic, social, and political transformations. In one of these, a country traditionally considered a bastion of Catholicism became one that now has a very low rate of church attendance, particularly among young cohorts. In this paper I use information on religious affiliation and religious practice from the 1985 and 1999 Spanish Fertility Surveys (SFSs) to study the effects of these variables and of changes in them on Spanish fertility. In particular I investigate the effects on current family size of being a practising Catholic (that is, one who follows the Church's rules on religious observance) and of the religious composition of married couples. I also investigate the timing of the first three births in order to investigate the parity at which differences in current family size between religious groups appear.

Several factors are responsible for recent demographic transformations in Spain. The fertility decline coincided with a period of high and persistent unemployment. The increase in uncertainty about unemployment from the mid-1980s played a key role in delaying childbearing and causing the subsequent decline in family size throughout Western Europe (Adsera 2004, 2005). In Spain mature workers held protected jobs, while young cohorts could take only precarious jobs in a very segmented labour market (Adam 1996). Young women faced a choice between motherhood and career: they could either delay childbearing until they had achieved secure employment, or they could have their children first and then struggle to re-enter the labour force later. The lack of stable employment for young men also contributed to the fertility decline (Ahn and Mira 2001; Gutierrez-Domenech 2002; Adsera 2004).

Another important factor was the expansion of education for women. Few European countries have witnessed changes in women's education more dramatic than those that have occurred in Spain during the last 30 years. Whereas 74 per cent of women born between 1935 and 1949 had an education level lower than eighth grade (age 13) and only 1.9 per cent had successfully completed a 4-year

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university degree course, for those born between 1964 and 1968 those percentages were 17.5 and 12.3 per cent, respectively.

In addition to those factors, the effect of the country's rapid secularization on family size deserves close attention. Previous research has extensively highlighted the relevance of religious affiliation and religiosity for a wide range of economic and demographic outcomes, such as marital stability (Lehrer and Chiswick 1993), union formation (Thornton et al. 1992; Sander 1993; Lehrer 2004b), educational attainment (Chiswick 1988; Lehrer 1999) and, at the macro level, economic growth (Barro and McCleary 2003). With regard to fertility, most research has focused on interdenominational differences in the population of the USA. After years of consensus that Catholic fertility was higher than non-Catholic in that country, Westoff and Jones (1979) showed a convergence in the fertility of both groups driven by the sharp decrease in Catholic fertility, a result subsequently confirmed for the USA and Northern Ireland (O'Grada and Walsh 1995; Lehrer 1996). The focus of research shifted to the effect of religiosity on childbearing choices and found an increased polarization among US Catholics, with significantly higher fertility among 'practising' Catholics, that is, those who participated actively in religious activities (Mosher and Hendershot 1984; Williams and Zimmer 1990; Sander 1992).

In the study reported in this paper, I found a similar increase in the extent to which religious practice could predict marital fertility. In the 1985 survey the current family size of married women was similar for practising and non-practising Catholics, but in the 1999 survey the family size of non-practising Catholics was significantly lower and comparable to that of women without a religious affiliation. Further, it was particularly high among women in minority religious communities, such as Protestants and Muslims, but relatively low among women in inter-faith marriages.

The next section presents the main hypotheses of the paper. A description of the data and method follows. Subsequently two sections discuss the differences in the estimated effect of religious practice on predicted family size and on the timing of the first three births among different religious groups.

The analytical framework

I tested three main hypotheses about the effect on Spain's fertility of affiliation to the Catholic Church and to minority denominations, and of the religious composition of couples.

The effect of Catholic affiliation

The first hypothesis is based on the argument that, because the influence of the Catholic Church declined with the coming of democracy, individuals who nevertheless continued to attend church were likely to be those who remained faithful to its doctrines, including its doctrines on reproductive behaviour. In consequence (Hypothesis 1) there was an increase in the difference between the fertility rates of practising and non-practising Catholics.

During the Franco regime from 1939 until 1975, Catholicism was recognized as the official religion of the country, the Catholic Church received considerable financial support, and its educational and social-service networks were thoroughly protected. In this period, participation in the Church's practices was widespread, particularly among women (Brañas-Garza 2004). Fertility was high, and therefore in tune with the relatively pronatalist views of the Church, which supported, among other things, a restriction on the use of contraception (Lehrer 1996; McQuillan 2004).

After the transition to democracy in the mid-1970s, the constitution of 1978 separated State and Church. In the absence of official support, church attendance and participation in any other religious activities and networks of the dominant religion (Catholicism) ceased to confer any social, professional, or even psychological benefits to uncommitted or nominal adherents. As predicted by current theories on the effects of religious deregulation where the religious organization had previously been dominant in the public and private sphere (Stark and Iannaccone 1994), church attendance and religious practice declined substantially in the following decades. A majority of Spaniards still defined themselves as Catholic (Brañas-Garza and Neuman 2004), but only a minority attended Mass (the Church's most important form of regular worship) regularly (25 per cent in the 1995–97 World Values Survey), prayed, and strongly believed in some teachings of the Church such as the afterlife, heaven, hell, or miracles. Data from the 1980 European Values Survey (EVS) show that 12.8 per cent of women and 6.7 per cent of men were doing voluntary work for religious or church organizations; by the time of the 1990 EVS those proportions had declined sharply to 4 and 2.7 per cent, respectively.

Similarly, the proportion of women and men belonging to religious organizations fell from 18.2 and 10.7 per cent in the 1980 EVS to 5.9 and 4.5 per cent in the 1990 EVS.

The collapse of the Church's official status had an important side effect. For many people, participation in religious activities before 1975 had been more of a social activity than a religious one. After 1975 a high proportion of 'social' Catholics became non-participating members of the Church, leaving participation to those who were more committed to the Church's doctrines. This, it will be argued, had important implications for fertility behaviour.

The growth in the number of non-practising Catholics encouraged the rapid adoption in Spanish society of changes now often described as constituting the 'second demographic transition', such as increases in age at marriage and age at first birth together with increases in extramarital childbearing and cohabitation (Van de Kaa 1987). At the core of these changes are an accentuation of individual autonomy, rapid secularization (defined as a reduction in religious practice), the abandonment of traditional religious beliefs, and a decline in sentiments of religiosity among individuals (Lesthaeghe and Surkyn 1988; Bumpass 1990). This transformation, which had already become widespread in most of Western Europe, has been increasingly apparent in Spain since the middle of the 1980s. It was probably boosted by the massive entrance of women into the labour market and by information flowing from neighbouring countries (Becker and Murphy 2001; Surkyn and Lesthaeghe 2004).

With the loss of the Catholic Church's influence in the public sphere, the individual's decisions about such issues as family formation and fertility behaviour gradually ceased to be governed by the Church's moral doctrines, becoming determined by personal choice instead. In the 1999 EVS about 70 per cent of individuals surveyed in Spain believed that religious leaders should not influence people's votes and, by implication, any policy choices; only about 10 per cent disagreed.

Contrary to general expectations, methods of contraception are used as extensively among Spanish Catholics as they are in the USA (Mosher et al. 1986; Goldscheider and Mosher 1991). In Spain 67.5 per cent of all married women of reproductive age use modern contraceptive methods, and 81 per cent use some type of contraceptive method (United Nations 2002). This is a level similar to that of northern European countries and the USA, and well above that of other traditionally Catholic countries such as Italy or Austria (where 39 and 46.8 per cent of women, respectively, use modern contraceptive methods) (United Nations 2002). Furthermore, differences in contraceptive use between practising and non-practising Catholics had become small by 1999. Among married women in the 1985 survey, 58 per cent of practising Catholics, 69 per cent of non-practising Catholics, and 73 per cent of those without religion had used contraceptives; among respondents to the 1999 survey the corresponding percentages were 82, 91, and 92.3 per cent, respectively.

While religious practice may not affect the use of contraceptives, it is clearly associated with a distinctive preference for larger families. In the International Social Survey Programme study of 1994 on 'Family and Gender Roles', the mean ideal number of children among non-practising Catholic and non-affiliated women under 30 years of age was found to be similar in 13 OECD countries—around 2.55. But the mean for practising Catholics was significantly higher, at 2.86 (Adsera 2006). The high value the Church places on the family is an important way in which Catholic teachings continue to influence family size.

Fertility of minority religions

Even though most Spaniards consider themselves Catholics, the country's Muslim and Protestant minorities (the Protestants mainly from conservative denominations) are steadily growing in size. Individuals who belong to religious minorities in a country where the religious landscape is dominated by another religion are likely to be strongly committed to their beliefs. Both Islam and conservative Protestantism can be considered pronatalist. Conservative Protestants make less use of contraceptive methods and both want and have more children than other denominations in the USA (Goldscheider and Mosher 1991; Lehrer 1996; Adsera 2006). Morgan et al. (2002) analyse the reasons for the higher fertility of Muslims and provide a useful overview of the relevant literature. The existing evidence on this issue is the basis for another hypothesis (Hypothesis 2) to be tested with the SFS data: the mean family size of members of small (pronatalist) churches in an emerging pluralistic society is larger than that of the rest of society.

Religious composition of the couple

The final hypothesis of the paper is about the effect of the religious composition of the couple on fertility. Becker et al. (1977) suggest that the expected lower stability of inter-faith (heterogamous) marriages should have the effect of reducing the number of births within those marriages ('the marital stability effect'). They argue that children represent 'spouse-specific' human capital, capital that decreases in value following marriage dissolution. Lehrer (1996, 2004a) notes a second pathway linking inter-faith marriage to low fertility. Differences between spouses in religious affiliation may be the basis of conflicting views about family size. Whether and how spouses settle those differences ('the bargaining effect') may also affect completed family size. She found that inter-faith couples restricted their fertility in the USA even while the marriage was intact, and that for women from the pronatalist Mormon and Catholic churches there was a significant negative effect on fertility of marrying someone of a different religious affiliation (Lehrer 1996). These considerations and findings lead to the final hypothesis (Hypothesis 3): the mean completed family size of women in inter-faith marriages will be smaller than that of women in homogamous unions. The 1999 SFS can be used to test this hypothesis, since it includes the husband's religious affiliation. In the data analysis below, the marriage of a practising Catholic to a non-practising Catholic is treated as a heterogamous union. Because the majority of Spaniards have a Catholic upbringing, the marriage of a practising Catholic to a non-Catholic means the difference in religious background is likely to be larger than for a marriage between practising and non-practising Catholics, perhaps exacerbating any effect of inter-marriage.

Data

The data used are from the 1985 and 1999 SFSs of women aged 15–49. Both surveys followed United Nations guidelines on Fertility Surveys. Their main purpose was to obtain information about the demographic characteristics of women of childbearing age, their social and family environments, and the factors that determine the level of fertility. One woman was interviewed in each household. The total number of interviews was 8,782 in 1985 and 7,749 in 1999.

The analyses in this paper are restricted to marital fertility. Until very recently, Spaniards moved out of their parents' homes at the time of marriage. Consensual unions were rare. In the 1999 survey these unions were still relatively uncommon, though their prevalence had increased rapidly among the youngest cohort of respondents. First births within a consensual union constituted 2.5 per cent of total first births reported in the 1999 SFS and 3.9 per cent of those among women born in 1960 or later. The difficulty of establishing a proper comparative date of start of the relationship was the reason for restricting the analysis to marital fertility. (The conclusions of the paper were unaffected when an alternative sample that included cohabitants was used. The results of that analysis are available from the author.)

The data available include complete information on 5,437 currently married women in the 1985 SFS and on 4,346 in the 1999 SFS. To study the spacing of births within those marriages, we have complete information for 4,466 first births, 3,264 second births, and 1,521 third births from the 1985 survey, and on 3,804 first births, 2,745 second births, and 756 third births from the 1999 survey. Only 4 of the marriages in the 1985 SFS and 51 in the 1999 SFS were second marriages; in these cases I control for the number of previous children.

The analysis is restricted to currently married women because the surveys provide no information about the first husband of women who are widowed, remarried, separated, or divorced. In fact the proportion of individuals in those categories is relatively small. Only 1 per cent of women were widows in both surveys and there is no good reason to believe that their exclusion biases the results in any important way. The proportion of women separated or divorced was 1 per cent in the 1985 SFS and at 4 per cent in the 1999 SFS. To make sure that the exclusion of these women did not bias the results, statistical models were estimated after excluding all controls for the spouse, first for the sample of all current marriages and then for the sample of all first marriages, including those that had ended by the time of the survey. The results are similar for both samples. (Details available from the author.)

Information on the religious affiliation of the woman and her spouse was obtained in the 1999 survey, but only on that of the woman in the 1985 survey. In both surveys the question asks about current religious beliefs; no information was obtained on the religious background of the

respondent's family. As noted, the majority of Spaniards have a Catholic upbringing, and the main religious distinction between them is whether or not they consider themselves to be practising Catholics. Because respondents were not asked the number of times they attended religious services, the analysis is based on self-reported religious practice. In the 1985 survey, there were four response categories: practising Catholic, non-practising Catholic, no religion, and other religion (a small mixed group containing mainly Muslims and conservative Protestants). Columns (1) and (2) of Table 1 show the percentage distribution of women by religious category in the 1985 survey, for all respondents and for those born after 1950. The majority of married women (61.2 per cent) consider themselves practising Catholics. Among those born in 1950 and later, the proportion practising and non-practising is similar, at 49 and 47 per cent, respectively.

The first panel of columns (3) and (4) in the table show the percentage distribution of women by religious category, first for all married women in the 1999 survey and then for those born in 1960 or thereafter. The 1999 survey divided respondents into five distinct categories: practising Catholic, non-practising Catholic, no beliefs, other religion (mainly Muslims and conservative Protestants), and own beliefs. The last of these self-reported religious categories is what is to be expected from non-conformist individuals according to Surkyn and Lesthaeghe (2004). The proportion of Spaniards in the category is not negligible, and the findings (see below) suggest that their fertility behaviour is slightly different from that of individuals without beliefs. The majority of women in the 1999 survey (48.8 per cent) are non-practising Catholics, and the proportion is higher for the younger generation (54.3 per cent). The percentages of women in the 'Other

Table 1 Percentage distributions of married couples by various religious categories and birth cohort, Spain 1985 and 1999

	1985 survey		1999 survey	
	Cohorts		Cohorts	
	1935–67	1951–67	1948–82	1960–82
Wife's religious category				
Practising Catholic	61.2	49.1	43.2	36.6
Non-practising Catholic	35.8	46.9	48.8	54.3
Other religion	1.1	1.3	2.0	2.4
No beliefs	1.9	2.7	2.8	2.9
Own beliefs			3.2	3.7
Relationship of husband's religious category to wife's				
Same as wife's			84.7	85.3
Different and Catholic			10.5	9.5
Different and not Catholic			4.8	5.2
Wife's religious category when husband's is different				
Practising Catholic			9.2	8.0
Other religion			0.2	0.2
No beliefs			1.2	1.6
Own beliefs			1.1	1.5
Religious category of couple				
Both practising Catholics			33.9	28.7
Both non-practising Catholics			44.8	50.1
Wife practising Catholic/husband non-practising Catholic			8.5	7.2
Wife practising Catholic/husband no affiliation[1]			0.6	0.6
Wife non-practising Catholic/husband practising Catholic			1.0	0.9
Wife non-Catholic/husband no affiliation[1]			2.3	2.4
Wife no affiliation[1]/husband practising or non-practising Catholic			0.9	1.3
At least one spouse 'Other religion'			2.3	2.8
Both no affiliation[1]			5.8	6.1
N	5,437	2,220	4,346	2,344

Note:
[1]'No affiliation' includes individuals in the categories 'No beliefs' and 'Own beliefs'.
Source: Spanish Fertility Surveys (INE) 1985 and 1989.

religion' category and of those without affiliation ('Own beliefs' and 'No beliefs') are double those in the 1985 survey.

In addition to the woman's own religious category, the 1999 survey contains information on that of her current spouse. Husbands have a different religious background in around 15 per cent of the cases, and in two-thirds of these the husband is Catholic, either practising or non-practising. Also shown in columns (3) and (4) of Table 1 is the distribution of the wife's religious category for those whose husband is in a different category. The woman is a practising Catholic in the majority of these heterogamous marriages, which constitute around 9 per cent of the sample. The bottom panel of the table shows the distribution of each combination of wife's and husband's religious category. Around 45 per cent of the couples are homogamous non-practising Catholics (column (3)) and one-third of the unions are homogamous practising Catholics. For around 6 per cent of couples, both members are without affiliation. Couples formed by the union of a practising Catholic woman and either a practising or a non-practising Catholic man are the most prevalent among heterogamous unions—8.5 per cent in the 1999 survey. The other categories are much smaller. They include more than one heterogeneous composition in an attempt to increase sample size and boost statistical power. Unions in which at least one member belongs to a minority religion comprise a little over 2 per cent of the sample. Unions of a non-practising Catholic woman to either a practising Catholic man or a man without affiliation comprise 1 and 2.3 per cent, respectively, of the 1999 sample. The remaining two categories—either a woman without affiliation married to a Catholic man or a non-practising Catholic woman married to a practising Catholic man—represent less than 1 per cent of the sample.

Table 2 shows the percentage distribution of women by characteristics used as control variables in the analyses. Benchmark values are reported in parentheses. The following variables are used in the analyses of both samples: age, age at marriage, duration of marriage, wife's and husband's education at the time of the survey, birth cohort, current region of residence, and size of the city of residence, either at age 12 in the 1985 survey or at birth in the 1999 survey. Educational groups comprise those with none, primary, low secondary (the omitted, benchmark, category), completed high school, vocational school, and 2-year and 4-year university degree courses. For the 1999 analyses, 'None' and 'Primary education' are pooled. In addition, the 1985 analyses

Table 2 Mean age, mean age at marriage, and percentage distributions of women by other control variables used for a study of the effect of religion on fertility behaviour, Spain 1985 and 1999

	1985 survey	1999 survey
Mean age	36.7	37.6
Mean age at marriage	23.2	23.6
Duration of marriage (years)		
0–2	7.2	5.7
3–4	6.1	6.6
5–6	7.4	7.2
7–8	8.6	7.7
9–10	9.2	8.1
11–12	9.3	8.1
13–14	9.1	8.4
15 or more	(43.1)	(48.2)
Siblings		
Wife 2+ siblings	42.5	n/a[1]
Husband 2+ siblings	45.3	n/a[1]
Size of city[2]		
Rural	55.8	17.2
Small	(22.3)	(24.6)
Medium		46.3
Large	21.9	11.9
Wife's education		
No formal education	16.4	3.4
Primary	48.3	24.0
Low secondary	(19.1)	(31.4)
High school	9.0	12.1
Vocational		14.8
College (2 years)	5.2	6.7
College (4 years)	2.1	7.6
Husband's education		
No formal education	12.8	3.2
Primary	44.0	21.9
Low secondary	(17.5)	(30.5)
High school	15.6	13.3
Vocational		15.3
College (2 years)	5.1	6.1
College (4 years)	5.0	9.8
Region of residence		
Andalucia	10.7	15.1
Aragon	4.2	4.5
Asturias	4.1	3.7
Cantabria	3.3	2.3
Castilla La Mancha	5.3	4.8
Castilla Leon	6.2	7.0
Catalunya	10.7	9.5
Extremadura	4.1	4.3
Galicia	6.9	7.4
Baleares	3.5	2.6
Canarias	4.5	6.0
La Rioja	3.4	2.5
Madrid	8.3	8.3
Murcia	4.3	5.1

Table 2 (*Continued*)

	1985 survey	1999 survey
Navarra	3.6	2.5
Pais Vasco	5.8	4.3
Valencia	8.1	7.5
Ceuta Melilla	(3.1)	(2.6)
Birth cohort		
1935–47	(43.0)	
1947–55	35.0	
1955–67	22.0	
1948–59		(46.0)
1960–68		42.0
1969–82		12.0
N	5,437	4,346

Notes:
Benchmark values in parentheses.
[1]Information on siblings is not available in the 1999 SFS.
[2]City size in the 1985 survey refers to the city residence at age 12 and in the 1999 survey to the city where the woman was born. The categories in the 1985 survey are rural, small (under 100,000 inhabitants), and large (over 100,000). In the 1999 survey the categories are rural (under 10,000), small (10,000–50,000), medium (50,000–500,000), and large (over 500,000).
Source: As for Table 1.

control for whether either the wife or the husband had more than two siblings, information that is not available in the 1999 survey. The coefficients of the control variables are not reported since the focus of the paper is on the role of religion, but there are comments on the results for these controls at the end of each section and details are available from the author.

Specification of models

The first analyses investigate differences in current family size by the woman's religious category and by the religious composition of the union, using ordinary least squares (OLS) with robust errors. The dependent variable is the number of children born within the current marriage plus any current pregnancy. The results are robust to the inclusion of controls for the number of out-of-wedlock children, and to the use of Poisson models. The models contain all the controls shown in Table 2 with the exception of age at marriage, which is made redundant by the inclusion of both current age and year of marriage. These latter two controls are essential to the analysis, not only because the longer the marriage, the greater the opportunity for more births, but also because the woman's current age (and birth cohort) controls for the fact that the more religious individuals in the sample tend to be older, and for the effect that religious affiliation may have on age of marriage.

In subsequent analyses, Cox proportional hazard models are used to study the differences in timing for the first three births across women and couples in different religious categories. For women $I=1, \ldots, N$, who each enter a state (e.g., first birth) at time $t=0$, the (instantaneous) hazard rate function for the ith person at time $t>0$ is assumed to take the proportional hazards form

$$\lambda_{it} = \lambda_0(t)\exp(X'_{it}\beta) \quad (1)$$

where $\lambda_0(t)$ is the non-parametric baseline hazard function; X_{it} is a vector of covariates summarizing observed differences between individuals such as the difference in their own religious category and that of their husband, as well as the controls shown in Table 2 including birth cohort; and β is a vector of parameters to be estimated. Grouped robust variance, as proposed by Lin and Wei (1989), is used to account for unobserved heterogeneity among individuals. The dependent variable in all estimates is months between a birth and the previous birth or, in the case of the first birth, months from marriage to the birth. Since age of marriage is included in all models, year of marriage and age are not. The models also include parity-specific information. For second births, I control for the sex of the first born, whether the first birth was multiple, and the months between marriage and first birth. For third births, the additional covariates include months between the first two births, a dummy for multiple births, and dummies to indicate that the two previous children are of the same sex.

Results

Family size and religion

Table 3 presents the OLS estimates of the effect of religion on family size among married women for both surveys. Non-practising Catholics are the benchmark group in all columns. Column (1) shows the estimated coefficient for the effect of the wife's religion for respondents in the 1985 survey. The family size of women without religious affiliation is significantly lower than that of women in other categories (around 10 per cent lower). Religious affiliation matters, but being a practising Catholic does not predict distinctive fertility behaviour for those surveyed in 1985. Similar results are obtained when the sample is restricted to those born after

Table 3 Ordinary least squares estimates of the effects of religion on current family size among married women, Spain 1985 and 1999

	1985 survey	1999 survey		
	(1)	(2)	(3)	(4)
Wife's religious category				
(Non-practising Catholic)				
Practising Catholic	−0.008 (−0.22)	0.124 (4.28)**	0.133 (4.36)**	
Other religion	0.122 (0.79)	0.238 (2.03)**	0.239 (2.05)**	
No beliefs	−0.203 (−1.69)*	−0.061 (−0.82)	−0.048 (−0.64)	
Own beliefs		−0.062 (−0.85)	−0.039 (−0.53)	
Relation of husband's religious category to wife's				
(Same as wife's)				
Different and Catholic			−0.076 (−1.67)*	
Different and not Catholic			−0.119 (−2.15)**	
Religious category of couple				
(Both non-practising Catholic)				
Both practising Catholic				0.146 (4.59)**
Wife practising Catholic/husband non-practising Catholic				0.035 (0.70)
Wife practising Catholic/husband no affiliation[1]				0.073 (0.37)
Wife non-practising Catholic/husband practising Catholic				0.068 (0.51)
Wife non-practising Catholic/husband no affiliation[1]				−0.080 (−1.14)
Wife no affiliation[1]/husband practising and non-practising Catholic				0.008 (0.07)
At least one spouse in 'Other religion' group				0.194 (1.79)*
Both no affiliation[1]				−0.084 (−1.35)
Wife's current age	−0.0002 (−0.04)	0.011 (2.04)**	0.011 (2.05)**	0.011 (2.01)*
Birth cohort 2	0.024 (0.35)	0.122 (2.31)*	0.123 (2.33)*	0.120 (2.28)*
Birth cohort 3	0.081 (0.73)	0.111 (1.28)	0.108 (1.24)	0.105 (1.21)
Constant	2.940 (14.08)**	2.067 (8.52)**	2.075 (8.54)**	2.084 (8.56)**
Adjusted R^2	0.346	0.312	0.313	0.310
Sample size	5,437	4,346	4,346	4,346

Notes:
Method: Ordinary least squares with robust errors.
[1]'No affiliation' includes individuals in the categories 'No beliefs' and 'Own beliefs'.
Regressions include all control variables in Table 2 except age at marriage. Birth cohort 1 is the benchmark (1935 −47 in the 1985 SFS and 1948–59 in the 1999 SFS).
t-statistics in parentheses.
*p <0.10, **p <0.05.
Sources: As for Table 1.

1949. Column (1) of Table 4 shows predicted current family size by wife's religion at the mean age of a benchmark individual born between 1935 and 1947. The predicted family size for all women is around 3, except for those without affiliation for whom it is 2.7.

Columns (2)–(4) in Table 3 show the effects of religion on current family size and column (2) in Table 4 shows the predicted current family size for a benchmark individual born between 1948 and 1959 for respondents in the 1999 survey. The coefficients of the wife's religion in column (2) of Table 3 show that now both practising Catholics and those categorized as 'Other religion' have significantly larger families than women in other categories. Because the 'Other religion' sample is rather small, results for this group should be treated with caution. The families of non-practising Catholics and of those without affiliation are of similar size (Table 4, column (2)). The decline in the effect of being a Catholic among respondents in the 1999 survey, together with the increased difference in current

Table 4 Predicted current family size by wife's religious category from the estimates in Table 3, Spain 1985 and 1999

	1985 survey	1999 survey
Wife's religion (based on columns (1) and (2) of Table 3)		
Non-practising Catholic	2.933	2.481
Practising Catholic	2.925	2.605**
Other religion	3.055	2.719**
No beliefs	2.730*	2.420
Own beliefs		2.419
Couple's religious categories in homogamous unions (based on column (3))		
Both non-practising Catholics		2.489
Both practising Catholics		2.622**
Both 'Other religion'		2.728**
Both 'No beliefs'		2.441
Both 'Own beliefs'		2.450
Couple's religious category (based on column (4))		
Both non-practising Catholics		2.50
Both practising Catholics		2.64**
Wife practising Catholic/husband non-practising Catholic		2.53
Wife practising Catholic/husband no affiliation[1]		2.57
Wife non-practising Catholic/husband practising Catholic		2.57
Wife non-practising Catholic/husband no affiliation[1]		2.42
Wife no affiliation[1]/husband practising and non-practising Catholic		2.51
At least one spouse 'Other religion'		2.69*
Both no affiliation[1]		2.41

Notes:
[1]'No affiliation' includes individuals in the categories 'No beliefs' and 'Own beliefs'.
Predicted current family size is based on results in Table 3 by setting the controls to benchmark values and the age of the individual to the mean.
*p <0.10, **p <0.05.
Source: Estimates in Table 3.

family size between practising and non-practising Catholics, supports Hypothesis 1.

The specification in column (3) of Table 3 includes two additional covariates that indicate whether the husband has the same religious affiliation as the wife, and if not whether he is Catholic. Coefficients for both variables are significant and negative. The lower current family size of heterogamous couples is consistent with Hypothesis 3. Two factors may account for the larger effect when the husband is not Catholic. First, given that most Spaniards are at least nominally Catholic, the difference in values between spouses is likely to be wider when the husband's affiliation is not Catholic. Second, since around three-quarters of non-Catholic husbands in the sample have no religious affiliation, the expected negative effect on family size of the husband's lack of religious attachment may reinforce that of the heterogeneous make-up of the couple, in line with Lehrer's (1966) expectation that conflicting views about family size may have an impact on the size achieved.

Finally, column (4) of Table 3 includes a classification, introduced in Table 1, of all couples according to their religious composition. The results confirm those in columns (2) and (3). The family of a marriage formed by two practising Catholics is significantly larger than the benchmark family of two non-practising Catholics, and larger than the family of any other type of union except for those that include at least one spouse of a minority religion. The coefficient for this last group is particularly large, but the small number of Muslims and Protestants in the sample is probably what limits its significance to the 10-per-cent level. The large family size predicted by the presence of an individual in the 'Other religion' group is consistent with Hypothesis 2.

Note that in column (1) neither age nor birth cohort is significant. Within cohorts in the 1985 survey, year of marriage already captures any differences in age at marriage and family size across cohorts. However, in columns (2)–(4) the significant positive coefficient of current age indicates that older women have larger families, for the same marriage duration, than younger women. This result is consistent with the progressive delay of childbearing observed in Spain in recent years.

The simulated current family sizes in Table 4 show an extraordinary decrease in family size between the 1985 and 1999 surveys: the predicted family size for non-practising Catholic women falls from 2.93 to 2.5. In separate estimates the predicted family size for those born after 1959 falls even further, to 2.26. These trends correspond with the sharp decrease in fertility that has occurred in Spain over the last three decades. Homogamous unions in the 'Other religion' group have the largest predicted family size, 2.73, followed closely by homogamous unions of practising Catholics, with a predicted size of 2.62; these figures are 10 and 5 per cent higher, respectively, than that of homogamous non-practising Catholic unions.

Confirming the main hypothesis of the paper, the results in Tables 3 and 4 indicate that women's religious characteristics have steadily gained in importance as a determinant of fertility choices. The homogeneous demographic behaviour of Catholics

in the 1985 survey reveals the large influence that the Catholic Church exerted until the mid-1970s. After the retreat of religious institutions from the centre-stage of the public arena, the nominally Catholic began to behave like those with no religious affiliation in determining family size.

Whether religious affiliation and practice affect the likelihood of participating actively in the labour market, and whether doing so has an effect on the final fertility of women, is an important issue that cannot be completely addressed with the limited data on the subject available in both surveys. However, while neither of them contains complete employment histories, the 1985 survey asked whether the woman worked after marriage and for how many years, and the 1999 survey asked about current employment. Since most labour-market transitions among Spanish women are from work to inactivity and almost none are from non-work to work (Adam 1996), the data on current employment in the 1999 survey will not be available for women who have left the labour force, unable to find a way to combine family and work, or who have weaker preferences for a career. As expected, analyses using the data that exist show that women who are currently working or who have worked for many years have smaller families than those who have remained inactive. However, the relationship between religious category and current family size remains the same as shown in Table 3. (Detailed results available from the author.)

With regard to control variables in the model, predicted current family size is larger for longer marriages and for couples—particularly for wives—who come from large families. The size of city of residence has no significant effect in 1985. In 1999 the fertility of individuals born in rural areas is higher by a modest amount than for those born in other areas. For respondents in the 1985 survey, wife's education slightly decreases fertility, but husband's education has no effect. In 1999 the coefficients for the effect of education is U-shaped: weaker for the wife but highly significant for the spouse. Husbands whose highest educational attainment is either completion of high school or a vocational qualification have the smallest families. In periods of economic hardship, the higher earnings potential of husbands with a college education may boost family size above that of those with medium education.

Separate analyses (not shown) of interactions between the wife's educational attainment and religious category found a significant U-shaped effect of education for both practising Catholics and women in the 'Own beliefs' category.

Timing of births

To unravel whether differences in current family size between religious groups are a product of the general postponement of childbearing in some religious groups or emerge only at high-parity transitions, Cox proportional hazards models of the transitions are used to estimate the effects of religious category on the first three births in both surveys.

Fertility postponement is widely recognized as one of the forces behind the sharp fall in family size during recent decades. A control for birth cohort is used in the model to account for these changes. Although slower transitions to parenthood already occur in the younger cohorts of the 1985 survey, the progressive delay of childbearing is particularly evident in Kaplan–Meier estimates for the 1999 survey. Three years after marriage, around 80 per cent of those born before 1960, two-thirds of those born between 1960 and 1968, but only just over 50 per cent of those born after 1968 have had a first child. Similarly, 5 years after the first birth, around two-thirds of those born before 1960, half of those born between 1960 and 1968, and only one-third of those born after 1968 have had a second child.

Tables 5 and 6 present the results of the proportional hazards models. Columns (1)–(3) in Table 5 display the hazard ratios for the wife's religion in the 1985 survey. Results for the 1999 survey, presented in columns (4)–(6), include both the wife's religious category and controls for whether it differs from her spouse's. Table 6 presents estimates of the hazard ratios for the particular religious make-up of each couple.

First child

There is no variation across religious categories in the timing of a first child in the 1985 survey (Table 5, column (1)). By contrast, in the 1999 survey practising Catholics show slightly faster transitions than non-practising Catholics, whereas transitions of women from minority denominations are significantly slower (Table 5, column (4)). This change in the effect of religious practice between the surveys is consistent with Hypothesis 1.

Table 5 Estimated hazard ratios from Cox proportional hazards models of the effect of religion on rate of transition to first, second, and third child among married women, Spain 1985 and 1999

	1985 survey			1999 survey		
	(1) Parity	(2)	(3)	(4) Parity	(5)	(6)
	First	Second	Third	First	Second	Third
Wife's religious category						
(Non-practising Catholic)						
Practising Catholic	1.040 (1.12)	1.125 (2.87)**	1.170 (2.56)**	1.068 (1.77)*	1.147 (3.16)**	1.397 (4.04)**
Other religion	1.003 (0.02)	1.292 (1.52)	1.493 (1.63)	0.770 (−1.94)*	1.361 (1.85)*	2.117 (3.62)**
No beliefs	0.892 (0.94)	0.871 (0.85)	0.957 (0.16)	0.874 (−1.44)	0.926 (−0.62)	1.125 (0.41)
Own beliefs				0.910	1.257	0.955
Relationship of husband's religious category to wife's						
(Same as wife's)						
Different and Catholic				1.088 (1.38)	0.900 (−1.62)	0.833 (−1.42)
Different and not Catholic				1.028 (0.36)	1.012 (0.12)	0.612 (−2.19)*
Birth cohort 2	0.988 (−0.34)	0.851 (−4.04)**	0.708 (−0.80)**	0.800 (−6.06)**	0.774 (−6.11)**	0.608 (−5.57)**
Birth cohort 3	0.871 (−2.94)**	0.500 (−10.25)**	0.487 (−5.62)**	0.568 (−9.06)**	0.480 (−7.31)**	0.507 (−2.33)*
Subjects	5,229	4,345	3,279	4,250	3,763	2,737
Failures	4,466	3,264	1,521	3,804	2,696	756
Log likelihood	−35,138	−24,944	−11,301	−28,409	−19,985	−5,423

Notes:
The dependent variable is the number of months to a birth from either the previous birth or marriage (in the case of the first birth).
Models include all control variables in Table 2, except year of marriage and age, as well as parity-specific information.
Birth cohort 1 is the benchmark (1935–47 in the 1985 SFS and 1948–59 in the 1999 SFS).
t-statistics in parentheses.
*$p < 0.10$, **$p < 0.05$.
Source: As for Table 1.

Table 6 Estimated hazard ratios from Cox proportional hazards models of rate of transition to first, second, and third child among married women, Spain 1999

Parity	(1) First birth from marriage	(2) First from 7 months after marriage	(3) Second	(4) Third
Religious category of couple				
(Both non-practising Catholics)				
Both practising Catholics	1.072 (1.79)*	1.118 (2.60)**	1.145 (3.02)**	1.458 (4.47)**
Wife practising Catholic/husband non-practising Catholic	1.136 (1.91)*	1.178 (2.12)**	1.060 (0.85)	1.151 (0.99)
Wife practising Catholic/husband no affiliation[1]	1.190 (0.87)	1.113 (0.49)	1.022 (0.06)	0.732 (0.56)
Wife non-practising Catholic/husband practising Catholic	1.018 (0.09)	0.983 (0.08)	0.921 (0.33)	1.753 (1.53)
Wife non-practising Catholic/husband no affiliation[1]	1.083 (0.78)	1.019 (0.17)	1.085 (0.60)	0.730 (0.99)
Wife no affiliation[1]/ husband practising and non-practising Catholic	1.540 (2.69)**	1.224 (1.20)	0.808 (0.95)	0.730 (0.66)
At least one spouse in 'Other religion' group	0.795 (1.87)*	0.878 (0.97)	1.262 (1.49)	1.979 (3.34)**
Both no affiliation[1]	0.822 (2.32)**	0.760 (3.14)**	1.130 (1.33)	1.052 (0.23)
Birth cohort 2	0.798 (6.13)**	0.708 (8.67)**	0.777 (6.03)**	0.608 (5.56)**
Birth cohort 3	0.563 (9.18)**	0.454 (11.84)**	0.483 (7.26)**	0.508 (2.31)*
Subjects	4,250	3,583	3,763	2,737
Failures	3,804	3,164	2,696	756
Log likelihood	−28,404	−23,119	−19,986	−5,423

Notes:
The dependent variable is the number of months to a birth from either the previous birth or 7 months after marriage in the case of the first birth.
[1]'No affiliation' includes individuals in the categories 'No beliefs' and 'Own beliefs'.
Birth cohort 1 is the benchmark (1948–59).
Models include all control variables in Table 2, except years of marriage and age, as well as parity-specific information.
t-statistics in parentheses.
*$p < 0.10$, **$p < 0.05$.
Source: Spanish Fertility Surveys (INE) 1999.

Even though the models control for age at marriage, their results may be influenced by differences in the rate of entry into marriage. Table A1 in the Appendix includes estimates of the effect of religious category on transition to first birth from age 15 for all women, regardless of their marital status at the time. Again, in 1985 there are no differences among religious categories; in 1999, however, women in the 'Other religion' group do not behave differently from non-practising Catholics in estimates from age 15 but they do when the analysis is conducted from the time of marriage (column (4) of Table 5). Though women in these minority groups are the slowest to have their first birth after marriage, they are the earliest to marry. Only for women in the 'Own beliefs' category is the period between age 15 and first birth significantly longer than for the rest. This is consistent with their comparatively late (or non-existent) marriages. For example, the mean age at marriage among women born after 1959 ranges from 23 for those in minority groups to 25.5 for those in the 'Own beliefs' category.

The inclusion of age at marriage as a control in the model is controversial. On the one hand, its exclusion may lead to omitted-variable bias, though the results in Tables 5 and 6 are robust to its exclusion. On the other hand, decisions on marriage and family are likely to be simultaneous (Lehrer 1996; Baizan et al. 2001). One way to explore this issue more closely is to estimate the effects of religious category on the timing of first birth from 7 months after marriage, thus excluding individuals pregnant on their wedding day. The last two columns of Table A1 display these results. The proportion of first births occurring within the first 7 months of a marriage is 13.5 per cent in the 1985 survey and 16 per cent in the 1999 survey.

In both surveys, practising Catholics display faster transitions to first births than the rest when the period of risk starts 7 months after marriage. Further, in the 1999 survey their estimated hazard ratio is 1.131, an increase from 1.068 in Table 5.

Women in minority groups have their first births at the same rate as non-practising women. Thus, their significantly lower speed when transitions are measured from the time of marriage (Table 5) probably indicates a lower prevalence of pregnant brides in these groups. Finally, once marriages of pregnant women are excluded, individuals without a religious affiliation exhibit significantly slower transitions to parenthood than others. Interestingly, though, the proportion of women in that group who marry when pregnant is similar to that for women with some religious affiliation. In general, the differences between the estimates in last two columns of Table A1 and those in Table 5 are consistent with a lower incidence of premarital sexual intercourse among religious individuals (Petersen and Donnenwerth 1997). Hence practising Catholics and (particularly) those in minority groups are more likely than others to wait to be married before getting pregnant. But once married, practising Catholics rapidly become mothers, consistently with the pronatalist teachings of the Church.

In line with these results, when both married couples and those in consensual unions are included in analyses of the 1999 data, religious category plays a larger role. As might be predicted from the finding that religious practice is associated with a low probability of cohabitation (Thornton et al. 1992; Lehrer 2004b), the hazard ratio for practising Catholics in the transition to first births is larger than that in Table 5 when the sample is limited to married couples. (Results not shown but available from the author.)

The estimated hazard ratios shown in Table 6 for different combinations of religious category in the couple confirm the conclusions reached above. A comparison of the first two columns—estimates of the transition to first birth from the time of marriage and from 7 months after that date, respectively—shows a significantly higher hazard for couples with a practising Catholic wife and a Catholic husband, either practising or non-practising, which increases further once the sample excludes women pregnant at marriage. Couples formed by Catholic men married to women without affiliation (a very small group) become parents within their marriages at a faster rate than homogamous couples of non-practising Catholics, but that difference disappears if the starting period is set at 7 months after marriage. As expected, the negative effect on fertility of lack of religious affiliation is reinforced when both spouses are in this category—the results are significant in both specifications.

Finally, column (4) of Table 5 shows that none of the dummies for inter-faith unions is significant. This result challenges the hypothesis that the lower family size found in inter-faith marriages arises because the couples concerned perceive their unions to be more fragile than those in homogamous unions, and therefore are less inclined to make union-specific commitments at the time of the first transition to parenthood.

Second and third children

In both surveys, practising Catholic women have a second child sooner than non-practising Catholics. The hazard ratios of members of minority groups are the largest in both surveys but are significant only in 1999. Again, the relatively small sample size of this group warrants a cautious interpretation of the results. Within marriage, differences between religious categories do not seem to have an effect on the second birth—the coefficient is only marginally significant at 11 per cent for the case of a Catholic husband with a wife in a different category. The results in Table 6 confirm these findings. Homogamous couples in which both are practising Catholics and (though significant at 15 per cent only) those with at least one spouse in the 'Other religion' group have a second birth sooner than the others. Overall, the absolute differences across religious categories for the second child are not very large, except for members of minority groups (i.e., those in the 'Other religion' category) in 1999.

Estimates for third births reveal a marked dissimilarity of behaviour across groups (Table 5). First, women in the 'Other religion' group, on average the least educated in the sample, proceed remarkably quickly to the third child—though the coefficient is only marginally significant at 10 per cent in 1985. Practising Catholics are the next most rapid, and have a third child at a significantly faster rate than any of the other groups. The gap between practising and non-practising Catholics increases noticeably between the 1985 and 1999 surveys. Finally, when the husband's religious category is different from that of the wife's, the effect is to slow down the transition to a third child, but the estimated hazard ratio is significant only for heterogamous couples with a non-Catholic husband—at the low value of 0.61. Perceived marital frailty and bargaining effects are probably at work when couples face the decision of whether to have a third child after several years of marriage.

Table 6 confirms these results. Homogamous practising Catholic couples and those with one spouse in the 'Other religion' group are notably faster in proceeding to a third birth. Couples with a practising Catholic husband and a non-practising wife display a high hazard ratio, only marginally significant at 15 per cent. This last evidence suggests that religious practice among husbands, when differences in the couple's religious values are not too large, also has an effect on fertility in modern Spain.

To sum up, differences in total family size do not rely heavily on the differential postponement of parenthood within marriage, though practising Catholics have a faster rate of childbearing than non-practising Catholics in the youngest cohorts. Pronatalist groups have a second child slightly more rapidly than other groups. The largest differentials occur in the transition to third births, which is faster for practising Catholics and individuals in minority religious groups and slower among heterogamous couples.

Results in the hazard models are robust to the inclusion of measures of women's employment. As expected, working women significantly delay motherhood. However, the impact of employment is not very strong for transitions to higher parities. With the inclusion of employment variables, the hazard ratio for women in minority groups becomes significant at 10 per cent in the transitions to a second birth in the 1985 survey.

Birth-cohort dummies are significant in Tables 5 and 6. The estimates confirm the progressive delay of childbearing in younger generations. Cohort differences are not too sharp in the transition to the first child for respondents in the 1985 survey. The delay in having the second and third children among individuals born between 1955 and 1967 (birth cohort 3) is already noticeable. In the 1999 survey, differences across cohorts are sharp, starting with the first child. The estimates of relative cohort changes in childbearing behaviour obtained separately from each survey are consistent with what would be expected from the partial overlap of generations in both samples—between cohorts 2 and 3 in the 1985 survey and between cohorts 1 and 2 in the 1999 survey.

The control variables show a variety of effects. The size of the city of residence does not affect any of the transitions. A wife with a large family proceeds more rapidly than others to a birth of any order. Highly educated couples postpone first births for the longest periods—particularly when risk is measured from age 15—but have a second child more quickly than less educated couples. The effect of education on third births has changed over birth cohorts. In the 1985 survey the husband's education has no effect and the least educated women have births significantly more quickly than more educated women. For respondents to the 1999 survey, though, the relation between third births and the husband's education—and to some extent the wife's—is U-shaped, consistently with previous findings reported in the literature (Hoem and Hoem 1989; Kravdal 2001; Heiland et al. 2005). Among those born after 1959, the fastest transitions to a third child are experienced by couples in which the husband obtained a 4-year college degree. Economic uncertainty since the 1980s in Spain has constrained childbearing choices for many couples. The relatively high earnings of individuals with tertiary education make it easier for them to take on the long-term financial commitments entailed in caring for children.

The sex of the first child has no impact on the transition to second births for the 1985 respondents, but respondents to the 1999 survey whose first-born is a son have a second birth more quickly than those whose first is a girl. When the sex of the first two children is the same, third births occur more quickly than when it is different, except for families with two girls in the 1999 survey.

Conclusion

This paper reports the findings of an investigation into whether recent changes in Spain, such as the dramatic drop in church attendance and the loss of influence of religion in the public sphere, are reflected in differential fertility behaviour among religious groups. The analyses use individual-level data on childbearing, religious affiliation, and religious practice from the 1985 and 1999 Spanish Fertility Surveys. Overall, the results support the three main hypotheses that the study was designed to test.

I argued that, since the transition to democracy in 1975, and with the loss of influence of religion in the public sphere, only those who are active worshipers were likely to remain faithful to those doctrines of the Church that bear on reproductive behaviour. In consequence, as rates of participation in Church activity decreased dramatically, religiosity, as reflected in whether individuals were active or merely

nominal Catholics, would become more predictive of fertility behaviour.

The findings show that, while there were no significant differences in current family size among practising and non-practising Catholics in the 1985 survey, in subsequent years the latter had significantly lower fertility. The fertility of nominal Catholics (the majority in the younger cohorts) is currently similar to that of individuals without religious affiliation. Muslims and conservative Protestants, still small groups in Spain, have relatively large families, in line with the pronatalist teachings of their religions. Finally, inter-faith marriages display lower fertility than homogamous unions, particularly when the husband is not Catholic. Conflicting preferences, as well as the perceived relative frailty of the union, are possible explanations of the low fertility of these couples.

To investigate the mechanisms through which current family-size differences arise, Cox proportional hazard models were used to estimate the effects of religious category on the rate of transition to each of the first three births. Minor differences in rate of transition to motherhood within marriage (faster among practising Catholics) have arisen in recent years, but the spacing of the second child is relatively homogeneous across groups. There are no significant differences in the rate of transition to the first two children between inter-faith and homogamous couples. Thus, behaviour early in the marriage does not seem to play a strong role in explaining smaller family sizes in inter-faith unions. Two forces dominate the dynamics of third births and decisively shape current family sizes: (i) a faster transition among those influenced by pronatalist religions, practising Catholics, and adherents of minority religions, and (ii) a remarkably slow progression to successive birth orders among inter-faith couples, particularly those in which the husband is not a Catholic.

In addition to other forces, such as harsh economic conditions and the entry of women into the labour force, the rapid secularization of Spanish society has clearly played a role in the recent decline of fertility in Spain.

Note

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Appendix

Table A1 Estimated hazard ratios from Cox proportional hazards models of rate of transition to first birth either from age 15 for all women regardless of marital status or from 7 months after marriage, Spain 1985 and 1999

	From age 15		From 7 months after marriage	
	1985 survey	1999 survey	1985 survey	1999 survey
Wife's religious category				
(Non-practising Catholic)				
Practising Catholic	0.999 (0.02)	0.978 (0.64)	1.106 (2.69)**	1.131 (3.09)**
Other religion	0.904 (0.76)	0.878 (0.96)	1.003 (0.02)	0.865 (−0.98)
No beliefs	0.901 (1.00)	0.965 (0.44)	0.866 (1.07)	0.810 (2.13)**
Own beliefs		0.833 (2.12)**		0.794 (1.95)*
Subjects	8,681	7,514	4,622	3,583
Failures	5,094	4,603	3,859	3,164
Log likelihood	−41,880	−36,503	−29,968	−23,121

Notes:
The dependent variable is number of months to first birth.
Models include all control variables in Table 2 except year of marriage and age. Age at marriage is not included in the models of transitions from age 15.
t-Statistics in parentheses.
*$p < 0.10$, **$p < 0.05$.
Birth cohort 1 is the benchmark (1935–47 in the 1985 SFS and 1948–59 in the 1999 SFS).
Source: As for Table 1.

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