The relationship between religion and fertility: the case of Bangladesh and Egypt

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Abstract

The paper explores the relationship between religion and fertility in Egypt and Bangladesh. The unique similarity that these two countries share is the fact that despite being pre-dominantly Muslim, strong family planning programmes were in place since the 1970s. The fertility decline in these countries over the last three decades has been facilitated by the population programmes which aided couples to revise their fertility aspirations in response to long-term socio-structural changes. Fertility has fallen rapidly among both Muslims and non-Muslims in these populations, in the absence of much apparent socio-economic development, especially in the case of Bangladesh. This paper examines in the first part the effect of religion along with other control variables on the two main proximate determinants of fertility, namely marriage and use of family planning in Bangladesh and Egypt. Linear, logistic and multi-nomial regressions were carried out using the 1993-94 and 1999-2000 Bangladesh Demographic and Health Surveys. The results suggest the effect of religion on age at marriage increased during the 1990s where as that on contraceptive use had fallen. Logistic regression were carried out also using 1988, 1992, 1995 Egypt Demographic and Health Surveys. Results show a weak effect of religion on fertility determinants. We will update those analyses using the latest Bangladesh and Egypt DHS data for 2005. Then, in the second part of our study following previous studies on religion and fertility, we will consider four main hypotheses: the characteristics one, the particularised theology hypothesis (Goldscheider, 1971), the religious institution hypothesis (McQuillan, 2004), and the interaction hypothesis (Chamie, 1981). This will allow us to show that the relationship between religion and fertility is in fact influenced by the political, economic and social context of the two countries.

In this extendend abstract we will present first results of our study, including a descriptive analysis of religion and fertility in Egypt, and a multidimensional analysis of age at first marriage determinants in Bangladesh.

1. Fertility and religion in Egypt : descriptive analysis

Egypt is a predominantly Muslim country. Coptic Christians, represent nowadays about 5.6% of the population, according with the last population census.

To describe the evolution of the Muslim and Coptic communities in Egypt we showed the proportion of Egyptian Christians according to the population census of the 20th century (Table 1).

We notice a slow decline over the period observed : Christians were 8% of the whole population at the beginning of the century (1907) and they become 5% in 1996 (Courbage and Fargues, 1997).

During the second half of the 20th century, Egyptian Muslims birth rate has been constantly over 30% of the Christians birth rate (Courbage and Fargues, 1997 : 293) (Table 2).

Egyptian Demographic and Health Surveys data for the years 1988, 1992 and 1995, confirms census data. We consider first the number of children per woman according to woman age and religion, then the number of children ever born per woman according to woman age and religion.

Results are show in figure 1 and 2 : birth rate of Muslim women is bigger than the one of Christian women, and the trend is constant over time.

Table 1.– Egypt, proportion of the Christian population, 1907-1996.

Year	Christian Population	% of the Total Population
1907	913 592	8.14
1917	1 026 107	8.07
1927	1 181 910	8.34
1937	1 304 000	8.19
1947	1 501 635	7.92
1960	1 905 182	7.33
1966	2 018 562	6.74
1976	2 285 620	6.24
1986	2 829 349	5.87
1996	3 321 523	5.6

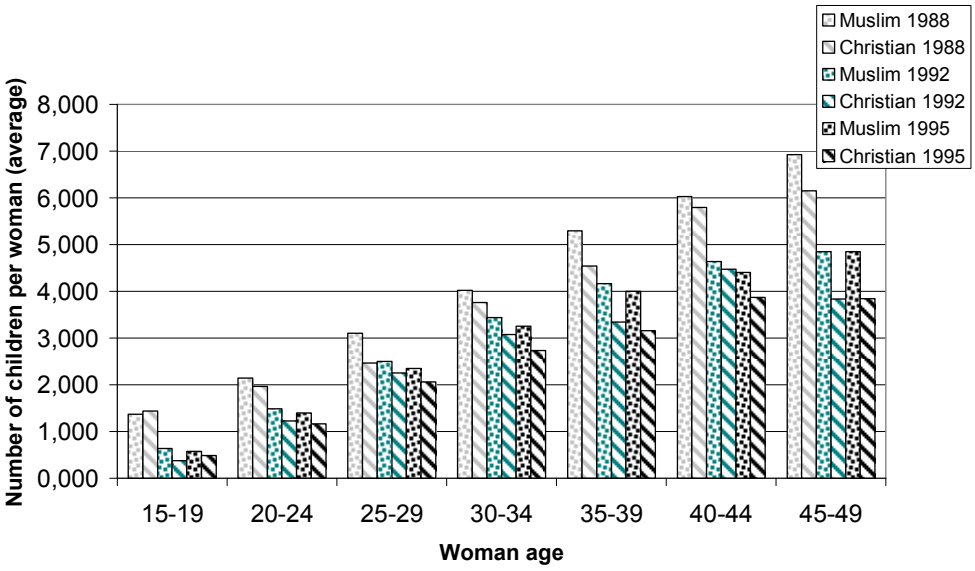
Source : Courbage and Fargues, 1997.

Table 2.- Egypt, crude birth rate by religion, 1944-1980

Period	Muslims	Christians
1944-1948	43.7	33.8
1949-1953	44.8	33.3
1954-1958	42.5	24.6
1959-1960	43.8	31.4
1974	37.9	29.0
1980	38.9	30.8

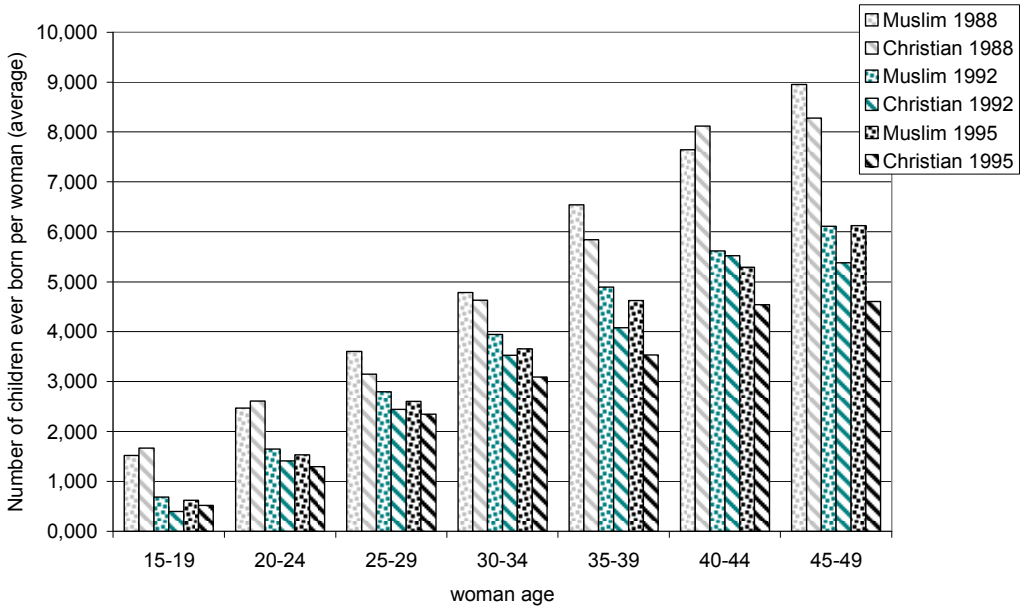
Source : Courbage and Fargues, 1997.

Figure 1.- Egypt, Number of children per woman (average), by woman age and religion, 1988-1995



Sources : EDHS, 1988-1995.

Figure 2.- Egypt, Number of children ever born per woman (average), by woman age and religion, 1988-1995



Sources : EDHS, 1988-1995.

Muslim women Total fertility rate is also a little bigger than the one of Christian women (table 3).

Table 3.- Egypt, TFR by religion, 1988-1995

Year	Muslims	Christians
1988	5.68	5.02
1992	3.94	3.86
1995	3.66	3.21

Sources : EDHS, 1988-1995.

We will then proceed testing the characteristic hypothesis to verify if fertility differences by religion persist once we add to our analysis control variables concerning socio-economic situation of women (Chamie, 1977).

2. Determinants of age at first marriage in Bangladesh: multidimensional analysis

In Table 4, models were run for the two age groups separately, in this case, for those aged 30 and over, versus younger women at the time of the respective surveys, in order to account for the different circumstances under which different cohorts of women get married. Indeed the constant for the two age groups are different in each of the two Bangladeshi surveys. As expected, the constant is higher for younger women. Also, it had increased for both the age groups in 1999-2000 in relation to 1993-94. According to these results, being Muslim reduced the age at first marriage of the older age group by 0 .4 years in 1993 and by 1.3 years in 1999. In other words, the Hindu/Muslim fertility differentials in Bangladesh had increased over time.

Table 4: Correlates of the Mean age at Marriage in Bangladesh, 1993-94 and 1999-2000 DHS

	Bang (1993-4)		Bang (1993-4)		Bang (1999-2000)		Bang (1999-2000)	
	Women aged 13-29		Women aged 30+		Women aged 13-29		Women aged 30+	
R squared	**.108**		**.072**		**.171**		**.160**	
	B	Sig.	B	Sig.	B	Sig.	B	Sig.
(Constant)	18.208	.000	17.597	.000	19.727	.000	20.112	.000
educD1	-1.378	.000	-1.781	.000	-1.334	.000	-2.464	.000
educ D2	-1.323	.000	-1.547	.000	-1.295	.000	-2.029	.000
HuseduD1	-.359	.001	-.179	.209	-.730	.000	-.330	.009
HuseduD2	-.391	.000	-.172	.229	-.576	.000	-.235	.076
HusoccD1	-.110	.520	-.371	.068	-.072	.449	.173	.165
HusoccD2	-.081	.621	-.255	.180	-.174	.110	-.177	.223
HusoccD3	-.335	.050	-.487	.014	-.292	.004	-.205	.094
NscoreD1	-.1.154	.000	-.357	.100	-.908	.000	-.104	.555
NscoreD2	-.917	.000	-.411	.038	-.889	.000	-.308	.036
Residence	.044	.682	-.350	.012	-.406	.000	-.392	.000
Religion	-.683	.000	-.430	.001	-.888	.000	-1.312	.000

Note: The reference categories for education and husband's occupation are highest (i.e. secondary plus education, professional), and for socio-economic status, the most well-off. The reference categories for residence and religion are urban and non-Muslim, respectively.

The linear multiple regression equation takes the form $y = b1x1 + b2x2 + \ldots + bnxn + c$. The b's are the regression coefficients, representing the amount the dependent variable y, in this case, the age at first marriage, changes when the corresponding independent variable (x's) changes one unit. The c is the constant, where the regression line crosses the y axis, representing the value the dependent y will take when all the independent variables are zero.

Using this equation, a disadvantaged Muslim girl (one who is rural, with no education and belonging to the lowest socio-economic class) aged between 13 and 29 could be expected to get married at the age of 14.9 years in 1999-2000 compared with an age of 15.8 years for her Hindu counterpart.

Results of multinomial regressions to study the effect of religion on the use of contraception suggest a different trend than that observed for marriage. The Hindu/Muslim differentials in family planning use was minimal and the religion effect decreased over time. The paper seeks to explain this phenomenon and compare the results with those found for Egypt.