

# **Religion, education, and fertility in sub-Saharan Africa**

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## **Abstract**

Sub-Saharan fertility transition is known as the slowest, Caldwell and Caldwell (1987) explained it as an effect of local socio-religious norms. There are several sociodemographic determinants of fecundity. Among them, Education is the most important driver of fertility decline (Bongaarts and Hodgson, 2022). There are several mechanisms that links fertility and Education: union formation (Bongaarts 2010; Tequame and Tirivayi 2015), contraceptive use (Bongaarts 2010), women empowerment (Lutz and KC 2001), substitution cost (Becker 1960) or ‘incarceration effect’ (Black et al. 2008). the impact of education on fertility is strongly dependent on the number of years of schooling attended by women. In most research, below secondary school level, the influence of schooling is thus much smaller.

However, the economic crisis that occur during the eighties in several African countries led to many educational stalls that might be linked to fertility stalls (Goujon, Lutz, and KC, 2015). It also led states to develop private schools, in many countries, religious currents are involved in the structuring of educational offer. This allows religious communities to get more involved in education. McQuillan (2004) identified it as a way for them to reinforce the influence of their norms, often pronatalist.

In this article, we raise the question if and in how far the association between female education and fertility depends on religion. The dependent variable is the number of children ever born reported by women aged 15 to 49. The model controls for age, religion, marital status (out of union, polygamous or monogamous marriage), region of residence, area of residence (urban or rural) and mothers' education. To test this interaction, we used Demographic and Health surveys (latest available, data covering years between 2011 and 2020) for a corpus of 23 Sub-Saharan African countries to produce Poisson models and interaction terms. We retained four religious' identities: Christian, Muslim, no religion and traditional religions. This last modality includes several names used in the DHS, such as 'Voodoo' or 'Animist'. In most

countries, Christians are better educated and have fewer children than Muslims. Members of traditional religions have the lowest education level and the highest CPR.

In Poisson models, religion has a significant impact on fecundity in 11 out of 23 countries. In these 11 countries, Christianity is always associated with lower fertility levels than Islam. However, we get evidence of the limited effects of religious affiliation on links between religion and fecundity. If religion remains statistically correlated with fertility in less than one in two of the 23 countries in our corpus, it should be noted, however, that the values of the religion coefficients of the Poisson model remain relatively low compared to the other socio-demographic characteristics of individuals, especially compared to education. Education is the variable that is most associated with fertility in all countries. In line with hitherto existing empirical findings, we found that the switch from no education to primary education is less important for the fertility decline than the switch from primary to secondary education.

Interaction between women's level of education and religion is found to be not statistically significant in most countries in our sample. In 14 out of 23 sub-Saharan African countries, the negative association between education and fertility is the same for Christian women, for Muslim women and for women belonging to a Traditional religion. In only 4 sub-Saharan African countries, the negative educational gradient of fertility is weaker for Muslim than for Christian women. Our results show that, globally, the fertility level decreases with education for all religious affiliations. Mirrored, we can say that the average number of children for the different religions is relatively similar withing each level of education, despite the significant interaction terms.

From a descriptive point of view, our results show that both education and religion are strongly related to women's fertility. However, the intensity of the association between fertility and religion is situated at a relatively low level compared to other factors, foremost among which is education. We show that the Muslim religion is *not* related to a weaker negative educational gradient of fertility in comparison to the Christian religion in most sub-Saharan African countries. Therewith, we conclude that, overall, in sub-Saharan African countries, religion does not shape the education-fertility association. There is no empirical evidence that the structuring of school provision by religious congregations 'weaken' the teaching and the role of schools on fertility behavior. However, the cross-sectional character of DHS data does, unfortunately, not allow the empirical modelling of causal mechanisms between religion, education, and fertility. DHS also do not provide information about the nature of the school structures attended by the women.