Catholic Missionary Presence and Fertility in India

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Abstract

We examine the long-term consequences of Catholic missionary presence during the colonial era on the current fertility outcomes in India. Our findings reveal a negative impact of the historical presence of Catholic missionaries on current fertility outcomes, particularly in urban areas. We find that the effect is more pronounced for male children than female children, indicating an improvement in the sex composition at birth. This is in contrast to the existing literature, which finds that a fertility decline is accompanied by a deterioration of the female-male sex ratio at birth. Catholic missionaries played a pivotal role in the advancement of tertiary education. To understand the underlying mechanisms, we find the effect of Catholic presence on higher educational attainment. In urban areas, districts with a historical presence of Catholic missionaries demonstrate a higher likelihood of mothers attaining higher education. We observe weaker effects of Catholic presence on lower levels of education. This aligns with the fact that Catholic missionaries were primarily involved in developing tertiary education. Moreover, the historical presence of Catholic missionaries also resulted in an increase in the age of marriage and higher usage of contraceptives, despite the Catholic Church's stance against contraceptive practices.

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1 Introduction

A number of recent papers have analyzed the long-term effects of European missionary activity in various parts of the world. This literature shows the long-lasting impact of missionary activity on literacy, norms, and health behaviors (Calvi et al., 2018; Nunn, 2014; Nunn, 2010; Gallego et al., 2010; Becker et al., 2009). However, the effect of missionaries on demographic outcomes is relatively unexplored. In this paper, we study the long-run effects of Catholic missionary presence on fertility in the Indian context. This is one of the first papers to empirically examine the long-term causal consequences of Catholic missionaries on current fertility behavior.[1]

Catholic missionaries can affect fertility outcomes in several ways. The Roman Catholic church believes that contraception defeats the primary purpose of marriage to reproduce by preventing conception (Schenker, 2000). Thus, the historical presence of Catholic missionaries can lead to an increase in fertility through its direct effect on contraceptive use. Christian missionaries were also involved in the provision of healthcare in India, which can directly affect female health and fecundity (Calvi et al., 2018; Menon et al., 2020; Frykenberg, 2008). In contrast, individuals living in districts with missionary exposure can have lower fertility outcomes due to exposure to European values through Catholic missionaries (Calvi et al., 2020). Finally, Catholic missionaries were instrumental in the development of tertiary education, and recent literature shows that historical exposure to Catholic missionaries has a long-lasting effect on higher educational attainment (Castelló-Climent et al., 2018). Numerous papers in economics have established an inverse relationship between parental educational outcomes, particularly the mother's educational attainment, and fertility (McCrary et al., 2011; Monstad et al., 2008; Breierova et al., 2004; Becker, 1992; Sander, 1992; Cochrane et al., 1990; Easterlin, 1989; Holsinger et al., 1976; Michael, 1973). Thus, the presence of Catholic missionaries can lead to a decrease in fertility through its effect on higher education.

[1]To the best of our knowledge, the only studies analyzing the effect of missionary activity on fertility are two working papers by Guirkinger et al. (2022) and Okoye et al. (2021).

Hence, the direction of Catholic missionaries' effect on fertility is unclear.

India is a particularly relevant context for understanding the determinants of fertility. Significant regional fertility differences exist across India (Arokiasamy et al., 2012; Guilmoto et al., 2001). An important area of analysis is the extent to which the regional variation in fertility can be attributed to differences in historical institutions. There is very little work on the causal effect of historical institutions on current fertility outcomes in India and generally in the context of developing countries.[2]

Catholic missionaries have been present in India for a long time (Fahlbusch et al., 2008; Richter, 1908). They were not particularly active in the pre-independence period. However, they became involved in developing tertiary education post-independence and established several colleges (Castelló-Climent et al., 2018). Notably, these educational expansions were concentrated in areas with a historical Catholic presence.[3]

We first begin by analyzing the impact of the historical presence of Catholic missionaries on fertility outcomes. We exploit district-wise variation in historical exposure to Catholic missionaries.[4] We use two individual-level measures of fertility: the number of births a woman has by the age of 25 years and the self-reported ideal number of children.

We find evidence of a strong negative and robust effect of the historical presence of Catholic missionaries on the ideal number of children and the number of births by the age of 25 in urban areas. The effects are either marginally significant or statistically insignificant in rural areas, as per the most robust specification. The rural-urban difference in our results is consistent with the mechanism we show in the paper, and we discuss this in more detail when we discuss the mechanisms.

We find that the reduction in urban areas is sharper for the number of male children than for the number of female children, both in terms of the ideal number of children and the number of births by the age of twenty-five. This implies an improvement in female-male birth composition. This finding

[2]There are some papers on the effect of colonial rule on fertility outcomes in Africa (Guirkinger et al., 2022; Canning et al., 2022; Likaka, 2006; Hunt, 1988).

[3]Castelló-Climent et al. (2018) find a strong association between the number of Catholic colleges in 2001 and the historical location of Catholic missionaries.

[4]We define historical exposure of a district to Catholic missionaries as a dummy variable, taking on a value of 1 if the district had at least one Catholic missionary present during the colonial period.

is particularly important since existing literature in the Indian context shows that a reduction in fertility is accompanied by a worsening of the sex ratio (Anukriti, 2018; Jayachandran, 2017; Das Gupta et al., 1997).

To explore the mechanisms behind the strong negative effect of Catholic missionary presence on fertility outcomes in urban areas, we analyze the effect of missionaries on educational attainment. We find that historical missionary presence leads to an increased likelihood of attaining higher education[5] for mothers residing in urban areas. We do not see any effect of Catholic missionaries on lower levels of education since Catholic missionaries were primarily instrumental in providing higher education. Consistent with the fertility results, we find no significant effect of Catholic missionary presence on educational attainment in rural areas.

The fact that our fertility findings are observed primarily in the urban sector aligns with the mechanism being increased higher educational attainment. Higher educational attainment is significantly lower in rural areas of India (Azam et al., 2008; Chakrabarty et al., 2012), especially among women (Maertens, 2013). Additionally, the demand for education, particularly female education, has been lower in rural parts of India than its urban counterparts.[6] Thus, Catholic presence might have a limited effect on fertility in rural areas due to its limited effects on higher educational attainment.

If higher education serves as a mechanism for reducing fertility, it is expected that the impact of Catholic missionaries on education would precede their effect on fertility. We find that the effect of Catholic missionaries on education was already present in 1961.[7] However, the decline in the year-specific probability of birth did not commence until 1970.[8] This gives evidence for education being a valid channel.

Existing literature suggests that Catholic missionaries can affect district prosperity through their effect on higher educational attainment (Castelló-Climent et al., 2018). We explore whether the effect of Catholic missionaries

[5]Higher educational attainment is defined as a dummy variable equal to 1 if the individual has completed 15 years of schooling and zero otherwise.

[6]Different explanations, such as religious norms, stronger son preference, a higher opportunity cost of schooling and rainfall shocks to employment opportunities, have been documented in the literature to explain the lower demand (Borooah et al., 2005; Kingdon, 2007; Muralidharan et al., 2017; Zimmermann, 2020).

[7]Our findings align with Castelló-Climent et al. (2018) (refer to Table 7 in the paper).

[8]Due to data constraints, we cannot evaluate the evolution of the effect of Catholic missionaries on the ideal number of children.

comes from an improvement in household income. In the absence of data on income, we do this by controlling for a wealth index reported in the survey data used for this analysis. Controlling for the wealth index, the effect size falls in magnitude but remains statistically significant.

Next, we investigate whether higher education is the only channel through which Catholic missionaries affect fertility. To achieve this, we introduce controls for higher education and assess whether the impact of Catholic missionary presence on fertility becomes statistically insignificant. The influence of Catholic missionaries on fertility through education can be attributed to two potential factors: a rise in individual education levels and a broader societal shift in norms resulting from overall higher educational attainment in districts with historical exposure to Catholic missionaries. To determine if education is the mechanism, we estimate Catholic missionaries' effect on fertility outcomes while controlling for their own higher educational attainment and the proportion of females with higher education in the urban areas of the district. Although the effect size falls considerably, the impact of Catholic missionary presence on the ideal number of children remains statistically significant with these additional controls. Hence, while higher education plays a crucial role, it alone cannot fully account for the effect of Catholic missionaries on the ideal number of children. However, for births by the age of 25, the effect of Catholic missionaries becomes statistically insignificant when we introduce controls for higher education. This suggests that the influence of Catholic missionaries on births by the age of 25 births can be entirely attributed to the increase in higher education at both the individual and overall levels.

We further explore if the influence of Catholic missionaries is driven by the effect of Catholic missionaries on Christians since Christians are likely to have greater exposure to Catholic missionaries. We see no differential effect of Catholic missionaries on the higher education outcomes of Christians and non-Christians. For births by the age of 25, we again see no difference between Christians and non-Christians in terms of the effect of Catholic missionaries. However, for the ideal number of children, the effect of Catholic missionaries is more pronounced for Christians. Since this additional effect on the ideal number of children is not driven by higher educational attainment[9], other factors, such as the adoption of European values through Catholic missionary

[9]This is given the fact that Catholic missionaries have no differential effect on the higher education outcomes of Christians and non-Christians.

exposure, can explain this additional effect.

We also examine the impact of Catholic missionary presence on contraceptive use, women's employment status, and age at first marriage. We find that condom usage is higher in the urban areas of districts with the historical presence of Catholic missionaries. This is in spite of the Catholic opposition to contraceptive use and seems to suggest the importance of the education channel in shaping attitudes toward contraception. Additionally, we find that women tend to marry at a later age in districts with a historical presence of Catholic missionaries. However, we do not observe any significant impact on women's employment status.

The most important challenge in analyzing the effect of the historical location of Catholic missionaries is the endogenous choice of location. The Catholic missionaries could have selected their location based on the existing level of economic development. However, Castelló-Climent et al. (2018) have shown that Catholic presence is uncorrelated with historical economic development. We additionally do the following to test the validity of the identification strategy. Firstly, we show that the historical presence of Catholic missionaries is uncorrelated with individual-level variables like age composition, religious composition, caste composition, and marital status.[10] This gives credence to our results and indicates that our results are not driven by the correlation between unobserved determinants of current fertility and the historical presence of Catholic missionaries. Secondly, we show that our results are robust to restricting the sample to neighboring districts with and without the historical presence of Catholic missionaries. Neighboring districts are more likely to be similar; thus, the potential for selection issues is expected to be less in the sample of neighboring districts. Thirdly, we perform a test of exact randomization where we randomly assign Catholic missionary status to districts and run the regressions. We repeat this exercise 1000 times and verify that the distribution of these estimates is centered around zero and smaller in magnitude compared to our original estimates.

Our paper contributes to the existing literature in several ways. Firstly, it is one of the first papers to analyze the long-run effects of Catholic missionaries on current fertility outcomes. Therefore, our research makes a substantial

[10]The only variable that positively correlates with Catholic missionary presence is the Christian dummy, suggesting a greater concentration of Christians in districts with a historical association with Catholic missionaries.

contribution to the literature on the relationship between historical institutions and current outcomes (Roland, 2020; Cagé et al., 2016; Nunn, 2014; Alesina et al., 2013; Nunn, 2010; Gallego et al., 2010; Acemoglu et al., 2001; North et al., 2000; La Porta et al., 1999). Secondly, we find that the negative impact of Catholic missionary exposure is more pronounced for the number of male children than female children. This indicates an improvement in the female-male sex ratio at birth. This result stands in contrast to the current body of literature, which typically associates a decrease in fertility with a deterioration of the female-male sex ratio at birth (Anukriti, 2018; Jayachandran, 2017; Das Gupta et al., 1997). Thirdly, an important contribution of this paper is the identification of the potential channels. We find that while higher educational attainment of females explains the entire effect of Catholic missionaries on births by the age of 25, it only partially explains the effect on the ideal number of children. Our findings also demonstrate that individuals residing in districts with Catholic missionary exposure report higher contraceptive usage, despite the Catholic Church's opposition to contraception. This aligns with higher education of females being an important channel through which Catholic missionary exposure can affect fertility choices.[11] Finally, our paper contributes to the literature on the relationship between female education and fertility in the Indian context. While there have been some papers on the association between fertility and female education (Murthi, 2002; Bhat, 2002; Drèze et al., 2001), studies on the causal effect of female education on fertility are rare. This paper contributes to the literature by examining the impact of a historical incident that altered access to higher education.

The rest of the paper is organized as follows. In the following section, we discuss the context, encompassing a brief account of Catholic missions in India and a review of the literature relevant to the present study. The data and description of variables used have been provided in Section 3, while the estimation strategy is detailed in Section 4. Section 5 presents our fundamental results, including the identification of potential mechanisms and the robustness tests. Finally, Section 6 concludes.

[11] Previous literature suggests a positive relationship between female education and contraceptive use (Keats, 2018; Rosenzweig et al., 1982).

2 Context

2.1 Catholic Missionaries in India

The history of Catholicism in India is old. It is believed that St. Thomas, one of the disciples of Jesus, reached Cranganore on the coast of the state of Kerala in 52 A.D. (Fahlbusch et al., 2008). He preached the Gospel in the southern parts of India (Richter, 1908). The St. Thomas Christians, followers of his teachings, were predominantly concentrated in the state of Kerala.

The influence of Christianity in the Indian subcontinent remained limited until the arrival of the Portuguese in 1498 (Frykenberg, 2008).[12] Missionaries from various Catholic religious orders visited India in the 16th century. The initial settlements of Catholic missionaries were primarily along the western coast (Frykenberg, 2008). The state of Goa, under Portuguese rule, served as a significant hub for Catholic activities. While some missionaries chose to settle in areas outside the Portuguese-ruled regions, these decisions were not influenced by the existing level of economic development (Castelló-Climent et al., 2018).

By the 17th century, the power of the Portuguese in India had declined, and their rule was confined to Goa and a few coastal regions by the late 18th century (Frykenberg, 2008). Meanwhile, the British East India Company gradually established its dominance, adopting a neutral stance towards religious affairs.[13] Thus, Catholic missionaries lacked the political support they had received from the Portuguese rulers.

During this period, Catholic missionaries in India faced significant resource challenges. The authority of the Pope had diminished following the French Revolution and the occupation of Rome by Napoleon, resulting in a reduction in overseas funding from Europe. Furthermore, the suppression of the Society of Jesus (Jesuits), a prominent Catholic religious order, in the 18th century had a substantial impact on Catholic missionary activities in India.[14] Another Catholic order based in Madras of South India, the Capuchins, could not consolidate their powers following the decline of Jesuits due to internal

[12] Vasco da Gama landed in Calicut in the current Indian state of Kerala in 1498.

[13] Initially, missionaries had to apply for a license to come to India, which was frequently not given. This was repealed in 1813 with the renewal of the Company's charter, which made it easier for the missionaries to obtain a license (Ballhatchet, 2013).

[14] Their power was restored in the 19th century.

disputes (Frykenberg, 2008).

A significant dispute arose between Roman control and Portuguese control over missionary activities in the colonies (Ballhatchet, 2013; Frykenberg, 2008). Under the Padroado Real, Portuguese rulers possessed almost exclusive rights to appoint clergy in overseas colonies, which were granted to them by the Pope in the 15th century. However, tensions escalated in 1622 when Pope Gregory XV established the Sacra Congregatio de Propaganda Fide to organize missionary work, particularly in non-Catholic countries. The objective was to diminish Portuguese and Spanish influence in missionary activities and to establish direct accountability of the missionaries to Rome. The disputes were ultimately resolved in 1885 under the leadership of Pope Leo XIII, who laid the groundwork for establishing the Indian Catholic Church (Castelló-Climent et al., 2018).

Catholic missionaries played a limited role in developing educational institutes in the colonial period (Castelló-Climent et al., 2018). However, they were instrumental in developing tertiary education following Indian independence in 1947. After independence, religious minorities were given a special right to establish and run educational institutions under Article 30(1) of the Constitution. Additionally, Article 30(2) protects against discrimination by the government for minority institutions. This could have contributed to a rise in Catholic educational institutes after Indian independence (Castelló-Climent et al., 2018).

2.2 Related Literature

Our research adds to the large literature on the relationship between historical institutions and present-day outcomes (Roland, 2020; Alesina et al., 2013; Acemoglu et al., 2001; North et al., 2000; La Porta et al., 1999). A number of existing studies have studied the relationship between educational outcomes and historical exposure to religious institutions (Cagé et al., 2016; Nunn, 2014; Nunn, 2010; Gallego et al., 2010).

More specifically, our study relates to the literature examining the long-term impact of historical institutions in the Indian context. Iyer (2010) shows that areas directly under British rule experienced lower public goods provision after independence. In contrast, Chaudhary et al. (2020) find that individuals living in areas historically under direct British-ruled areas display

higher levels of cooperation compared to areas that were historically governed by native princes. Banerjee et al. (2005) show that variations in property rights in British India had significant effects on subsequent economic outcomes. Chaudhary (2010) finds that British investment in education in India during the colonial period led to an increase in literacy, but disproportionately for men. Jha (2013) argues that the medieval trade interactions between Hindus and Muslims have long-term effects on inter-ethnic tolerance. Finally, Dincecco et al. (2022) find the impact of historical exposure to conflict on long-term economic development in India.

In India, recent research has shown that historical exposure to Christian missionaries has a long-lasting effect on literacy and health. Calvi et al. (2018) analyze the impact of the historical presence of Protestant missionaries in India and show a positive relationship between the proximity to a Protestant non-medical mission and present-day health outcomes. Calvi et al. (2020) study the role of Protestant missions in colonial India on present-day education outcomes. The paper shows that districts exposed to Protestant missions have better primary schooling outcomes in the current period, the effect being stronger for females. Menon et al. (2020) use the location and timing of the establishment of Christian missions to analyze the current differences in children's anthropometric outcomes across religions.

The most closely related paper to our work is by Castelló-Climent et al. (2018). The paper uses district-level data from India to analyze the effect of tertiary educational attainment on economic development using the historical presence of Catholic missionaries as an instrument of tertiary education. Their first-stage results show that historical Catholic presence in a district is positively associated with the proportion of individuals with higher education in a district. We find similar effects of Catholic presence on the likelihood of having higher education for females in urban India using individual-level data. Our results show that increased higher educational attainment because of the presence of Catholic missionaries in the colonial period reduces current fertility outcomes in urban India. Thus, the paper contributes to the literature on the long-run effects of missionary activities by analyzing their impact on fertility outcomes using individual-level data.

3 Data and Variables

3.1 Individual Level Data

We use individual-level data from the fourth round of the National Family Health Survey (NFHS 4)[15] for our analysis. NFHS 4 was conducted in 2014-15 and is nationally representative. Our estimation sample consists of more than 2,50,000 women between the ages of 15 and 49 from 500 districts of 20 states in India. The NFHS data contains detailed information on individual level characteristics for interviewed women like her ideal number of children, retrospective birth history (including the year and month of each birth), current age, religion, caste, marital status, educational attainment, partner's education, age at first marriage, and contraception use. The NFHS data also reports the district of residence of women during the time of the survey. While the district of current residence may differ from the district of birth, such instances are rare in the Indian context because migration is low in India (Munshi et al., 2009).

We have defined fertility outcomes in two ways in this analysis. These are the ideal number of children and the number of births by the age of twenty-five. NFHS collects data on the ideal number of children during the survey. The mean ideal number of children in our sample is 2.39 (Table 1).[16] As expected, the ideal number of children is higher in rural areas compared to urban areas. Significant regional variation exists in the ideal number of children across the states. While it is highest for Uttar Pradesh at 2.89, Karnataka has the lowest ideal number of children at 1.76.

For the second measure, we use the information on the birth history of a woman to generate the number of births by the age of twenty-five. The details on birth history are available till the year of the interview. Thus, the fertility histories of older women are available for a longer duration than that of younger women. To address this, we follow Breierova et al. (2004) and define the dependent variable as the number of children born until the age of 25. We restrict our sample to ever-married women for the analysis of births

[15]For robustness tests, we use the remaining three rounds of NFHS data, namely NFHS 1, NFHS 2 and NFHS 5. We could not include NFHS 3 in our analysis due to the absence of district identifiers in the NFHS 3 survey.

[16]Tables A1, A2 and A3 of the appendix report the summary statistics of our control variables for our entire sample, rural sample, and urban sample, respectively.

by the age of 25. The mean number of children born by the age of twenty-five in our sample is 1.71 (Table 1). Again, the average number of births till age 25 is higher in the rural sector than in the urban sector.

As a test of mechanism, we estimate the effect of Catholic presence on higher educational attainment. We construct an indicator variable if the individual has 15 or more years of schooling. Table 1 shows that the proportion of women with higher education is around 16 percent in urban areas and 3 percent in rural areas. As a robustness exercise, we also test Catholic missionaries' impact on lower education levels and construct indicator variables for these education categories. These are literate (if the individual has at least one year of schooling), primary (if the individual has four or more years of schooling), middle (if the individual has eight or more years of schooling), secondary (if the individual has ten or more years of schooling) and higher secondary (if the individual has twelve or more years of schooling).

We consider women of age 30 or more. One of our dependent variables is the number of births until 25 years of age. In addition, increasing higher educational attainment is one of the mechanisms through which Catholic missionaries affect fertility. Considering older women ensures complete exposure to this fertility variable and the completion of higher education.[17]

We also estimate the effect of the historical presence of Catholic missionaries on contraceptive use, age at first marriage, and the probability of working for females. The NFHS data has detailed information on all these variables during the survey. For contraceptives, we create two dummy variables separately for the use of pills and condoms. The woman's employment status is also defined as a dummy variable, equal to 1 if she worked last year and 0 otherwise.

3.2 Historical Location of Catholic Missionaries Data

We use the replication dataset of Castelló-Climent et al. (2018) to create our main independent variable of interest: the historical location of Catholic missionaries. Castelló-Climent et al. (2018) used the first edition of Atlas Hierarchicus to identify places in India with Catholic missions in 1911. Next, Castelló-Climent et al. (2018) superimposed the historical map on the 2001

[17]Appendix Tables A4 and A5 show robustness to the sample of women aged more than 25 and those aged more than 35, respectively.

district map of India to identify the location of the Catholic missionaries in terms of 2001 district boundaries. We have generated a map using their replication dataset in Figure 1. This map shows the areas in which Catholic missionaries were present in 1911.

We use this replication data from Castelló-Climent et al. (2018) and match it with the NFHS 4 (2015-16) data. This gives us an individual-level dataset with fertility, demographic, and birth history information of ever-married women, along with individual-level information on historical exposure to missionary activity. Following Castelló-Climent et al. (2018), a current district is said to have historical catholic missionary exposure if the current area covered by the district had at least one Catholic missionary in 1911.[18] Individual exposure to missionary activity is captured by an indicator variable if the individual resides in such a district. Table 1 presents the summary statistics for the Catholic missionary variable.

3.3 Geographical and Historical Controls

District-level data on the geographical and historical controls are also obtained from the replication dataset of Castelló-Climent et al. (2018). Geographical controls included in the regressions are the latitude, longitude, and altitude of the district, an indicator variable for districts with any coastal border[19], the average length of rivers that flow through the district, and the minimum distance of a big city from the center of the district.[20] Castelló-Climent et al. (2018) used data from the Map of India website to construct the geographical variables.

Following Castelló-Climent et al. (2018), we also include several historical variables to account for the possible selection of location by missionaries based on these factors. These controls are the district-level urban population share in 1931, tribal population share in 1931, the population share of Brahmans in 1931[21], a princely state indicator[22] and an indicator variable if the district had

[18]This does not necessarily mean that we capture the effect of the presence of one Catholic missionary. This is a proxy for the presence of Catholic missionary activities in a district.

[19]Catholic missionaries were more likely to settle in coastal districts (Castelló-Climent et al., 2018).

[20]A big city is defined as one with more than one million population as of Census 2001. These include Ahmedabad, Bangalore, Chennai, Delhi, Hyderabad, Jaipur, Kolkata, Mumbai, Pune, and Surat.

[21]Brahmans typically occupy the top position in the Hindu caste hierarchy.

[22]These were the districts that were ruled by native kings as opposed to districts that

railways in 1909. Castelló-Climent et al. (2018) constructed the population share variables and the princely state dummy from the 1931 Indian population census. The dummy indicating the presence of railways in 1909 has been constructed from Indian Administrative Reports on Railways.

4 Estimation Strategy

We regress fertility outcomes on an indicator variable denoting the historical presence of Catholic missionaries. The estimating equation is given by:

$$y_{ids} = \alpha_s + \beta_1 Catholicmissionary_{ds} + \theta Demo_{ids} + \delta Geo_{ds} + \pi Hist_{ds} + \epsilon_{ids} \tag{1}$$

where, y_{ids} is the fertility outcome of individual i in district d of state s. This dummy variable is equal to 1 if at least one Catholic missionary was present within the area covered by the district in 2001, as of 1911. The fertility outcomes are the ideal number of children and the total number of children born by age 25.

We include state-fixed effects in our regressions, given by α_s, to control for the time-invariant variables that vary at the state level. We could not include district-fixed effects in our model because the main variable of interest, $Catholicmissionary$, varies at the district level. Instead, we use a rich set of controls.

$Demo_{ids}$ includes individual level controls. These are the woman's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, the household head's age, an urban dummy and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories[23]. In the regression for the ideal number of children, we also incorporate a dummy variable to account for ever-married women.[24] Geo_{ds} and $Hist_{ds}$ represent geographic controls and historical controls, respectively. The components of geographical and historical controls are mentioned in Section 3.3. The standard errors are

were under direct British rule. It can be argued that the effect of Catholic missionaries includes the impact of British rule, which this dummy controls for.

[23]The constitution of India has identified historically marginalized castes as Scheduled Castes and indigenous tribes as Scheduled Tribes.

[24]The sample is restricted to ever-married women for births by the age of 25.

clustered at the district level.

Next, we explore the possible channels behind our results. Catholic missionaries can affect fertility through their effect on education. We examine the impact of the historical presence of Catholic missionaries by regressing the education outcomes of males and females on the Catholic missionary dummy using the empirical specification given in Equation 1.

Catholic presence can also affect fertility through their effect on contraceptive use. Thus, we also estimate Equation 1 with the dependent variable being indicator variables for the use of contraceptive pills and condoms separately. We also evaluate the effect of Catholic presence on the age at first marriage and the probability of working for women.

5 Results

We begin by estimating the effect of Catholic missionaries (Equation 1) on the ideal number of children (subsection 5.1) and the number of births by the age of 25 (subsection 5.2). We estimate the effects separately for the ideal number of boys and girls and the number of boys and girls born by the age of 25 years. We present these results for our entire sample as well as for urban and rural regions. In subsection 5.3, we explore the mechanisms. We present our results from the robustness tests in subsection 5.4.

5.1 Ideal Number of Children

Table 2 presents the results corresponding to the baseline specification in Equation 1 for the ideal number of children. Columns 1-3 correspond to the ideal number of children. We analyze the effects separately for the ideal number of male and female children in columns 4-6 (males) and 7-9 (females). Columns 1, 4, and 7 include only individual-level controls. Geographical controls are added in columns 2, 5, and 8. Finally, we add historical controls in columns 3, 6, and 9. Definitions of these controls are presented in Section 3. Panel A corresponds to the overall sample, and panels B and C correspond to rural and urban areas, respectively.

Our results suggest that the presence of Catholic missionaries negatively affects the ideal number of children, the ideal number of sons, and the ideal number of daughters. The effect is stronger for the ideal number of sons than

the ideal number of daughters. Panel A shows that women residing in districts with historical Catholic missionary exposure desire 3.06% fewer children, 4% fewer boys, and 2.16% fewer girls.

We estimate the effects separately for rural and urban areas in panels B and C of Table 2. Panel B shows that the effects are weaker for the rural sample. The most robust specification, including all controls, gives marginally significant or insignificant results for the rural sector.

Panel C presents the results for the urban sector. The magnitudes of the estimates for the urban sample are higher than that of the rural sample. The results for the urban sector are also statistically significant at a 1% significance level, even after including geographical and historical controls. The table shows that women residing in urban areas of districts with historical Catholic missionary presence desire 3.55% fewer children, 6.34% fewer boys, and 4.03% fewer girls.

5.2 Births by the Age of 25

Table 3 presents the estimates of Equation 1 for births before age 25. The results are again presented for all children and separately for male and female children. The structure of the table is similar to Table 2.

Similar to the ideal number of children, we find that the historical presence of Catholic missionaries has a negative impact on the total number of births by the age of 25 in urban areas (panel C). Women living in the urban areas of districts with Catholic missionary exposure have 5% fewer children, 5.45% fewer male children, and 4.5% fewer female children by age 25. The results for the rural areas are statistically insignificant (panel B).

5.3 Mechanisms

5.3.1 Effect on Education

In this section, we explore the mechanisms behind our results. Castelló-Climent et al. (2018) show that Catholic missionaries have a strong positive effect on current-day higher educational attainment. Thus, we explore if the negative effects of Catholic missionary presence on current fertility outcomes are driven by their effect on higher educational attainment. We regress the educational attainment variables on the Catholic missionary dummy using the

regression specification presented in Equation 1. Based on the findings presented in subsections 5.1 and 5.2, which indicate a consistent effect of Catholic missionaries on fertility only for the urban sample, our subsequent analysis primarily focuses on the urban sample.[25]

Panel A of Table 4 presents the results for woman's education, and panel B shows the results for their spouse's education for the urban sample. The dependent variable in columns 1, 2, and 3 is higher education completion. We define this as a dummy equal to 1 if the individual has completed 15 or more years of schooling. Column 1 includes individual-level controls. Geographic and historical controls are sequentially added in columns 2 and 3, respectively. As anticipated, our findings demonstrate that women residing in districts with a historical presence of Catholic missionaries exhibit a higher likelihood of completing higher education. Moreover, we observe that these women tend to have more total years of schooling, as indicated in column 4 of panel A. The results are statistically insignificant for spousal education.[26]

Catholic missionaries are expected to increase the likelihood of higher educational attainment and have no effects on lower levels of education. Thus, the historical presence of Catholic missionaries should not affect the total years of schooling if we restrict our sample to individuals with less than 15 years of education. Column 5 of Table 4 confirms this.

In order to further examine the potential impact of the historical presence of Catholic missionaries on lower levels of education, we regress the Catholic missionary dummy on the likelihood of being literate and completing primary, middle, secondary, and higher secondary levels of schooling. The sample is restricted to individuals with less than 15 years of education.[27] Table 5 presents these results. Panel A displays the outcomes for women's education, while panel B illustrates the results for spousal education. Panel A shows that the results are statistically insignificant for the lower levels of education. The

[25]Appendix Table A6 shows that the effect of Catholic missionaries on educational attainment is statistically insignificant in rural areas.

[26]This difference in results for own and spousal education can be driven by the fact that data for spousal education is not available for a large number of observations. However, Table A7 of the appendix demonstrates that the statistical significance of female higher educational attainment remains intact when we restrict the sample to women with non-missing spousal education. Thus, the findings suggest that the impact is more pronounced for female education compared to male education.

[27]Appendix Table A8 shows the results with individuals with 15 or more years of schooling. The results remain statistically insignificant for lower levels of education.

results are positive and significant only for higher secondary education. For spousal education in panel B, the results are always statistically insignificant. In summary, our analysis indicates that the historical presence of Catholic missionaries has no discernible impact on lower levels of education.

5.3.2 Relationship between Catholic Missionaries, Education and Fertility

Our analysis demonstrates that the historical presence of Catholic missionaries is associated with decreased fertility. We argue that this reduction occurs through increased higher educational attainment due to missionary activities. However, it is possible that Catholic presence first led to a decline in fertility, subsequently leading to an increase in educational attainment. A reduction in fertility can lead to increased educational attainment due to the increased availability of family resources per child. In this case, the fertility decline would occur before the rise in educational attainment. In order to examine whether the reduction in fertility indeed came after the increase in educational attainment, we examine the timeline of the evolution of the effect of Catholic missionaries on fertility and educational attainment.

In order to analyze the evolution of the impact of Catholic missionaries on women's educational attainment over decades, we analyze data obtained from the India census for the years 1961, 1971, 1981, and 1991.[28] We regress the proportion of females with matriculation or higher education[29] on the Catholic missionary indicator variable. The findings of this analysis are summarized in Table 6. Columns 1, 2, 3, and 4 correspond to the proportion of women with matriculation or higher education in 1961, 1971, 1981, and 1991, respectively. The table shows that the coefficient of the Catholic missionary dummy is positive and significant in all the years.[30] Thus, the increase in educational attainment started in 1961 or before.

For fertility, we cannot evaluate the evolution of effects for the ideal num-

[28]Due to the unavailability of separate female education data for rural and urban sectors in the census, we utilize overall data for this analysis.

[29]Since data for the graduate and above category is not available in the 1961 census, we present the results for the matriculation and higher group instead. Using data from the 1971, 1981, and 1991 censuses, we demonstrate in Table A9 of the appendix that the results are robust if we examine the proportion of females with graduate or higher education.

[30]The result presented in Table 6 does not contradict column 4 of Table 5. The sample is restricted to women with less than 15 years of education in Table 5.

ber of children due to data constraints. Instead, we concentrate on actual births. We employ data from the first National Family Health Survey round conducted in 1992-1993. We construct a dataset at the woman-year level by utilizing woman-level birth history data. For each woman, the dataset covers the period from when she turns 12 to the year of the interview (1992 or 1993). For each combination of woman-year, we create a binary variable that takes a value of 1 if the woman gave birth in that particular year. We then estimate a regression model where we regress the birth indicator variable on the interaction between the Catholic missionary variable and decade-specific dummy variables. The regression specification is given by:

$$\begin{aligned} B_{idst} =& \alpha_s + \tau_t + \beta_1 \Sigma_{j=1}^{4} Catholicmissionary_{ds} \times D_{jt} + \theta_1 Demo_{ids} \\ &+ \theta_2 C_{idst} + \delta Geo_{ds} + \pi Hist_{ds} + \epsilon_{ids} \end{aligned} \tag{2}$$

where B_{idst} is a dummy variable equal to 1 if the woman i gave birth in year t and zero otherwise. $D_{jt}, j = 1, 2, 3, 4$, are dummy variables indicating four decades. These four decades are pre-1961, 1961-1970, 1971-1980, and post-1980. We additionally include year-fixed effects and two time-varying controls indicated by C_{idst}. These time-varying controls are the age of the woman i in year t and the existing number of children.

The results of Equation 2 are presented in Table 7. The sample corresponds to urban women. Columns 1 and 3 correspond to the regressions for all births, while columns 2 and 4 correspond to regressions for births to women aged 25 years and below.[31] In columns 1 and 2, we regress the birth dummy on the Catholic missionary dummy. Consistent with the baseline results, the effects are negative and statistically significant for all births and births to women under 25 years. In columns 3 and 4, we regress the probability of birth on the interaction between the Catholic missionary dummy and the different decades. In the immediate post-independence period, that is, in the pre-1961 period, the effect of Catholic missionaries on the probability of birth is positive for all births. The coefficients for the interaction of the Catholic missionary variable with the dummies for the time periods 1971-1980 and post-1980 are negative

[31] Given that we focus on the number of births till the age of 25 in our main analysis, we separately estimate the regressions for all births as well as for births below the age of 25 years.

and statistically significant. This suggests that the negative effect of Catholic missionary presence on fertility commenced after 1970.

Taken together, our findings indicate that a decrease in fertility among women residing in urban areas of districts historically exposed to Catholic missionaries was followed by an increase in their higher educational attainment.

5.3.3 Controlling for Wealth

One way in which Catholic missionaries can influence fertility is through their impact on income. Previous research indicates an inverse relationship between income and fertility (Jones et al., 2010).

Castelló-Climent et al. (2018) find the effect of higher educational attainment on district prosperity by using the historical presence of Catholic missionaries as an instrumental variable for higher educational attainment. Thus Catholic missionaries can affect income through their effect on higher educational attainment.[32]

In this section, we examine whether the decline in fertility is a consequence of improved economic conditions. Since the NFHS survey does not have income data, we address this by controlling for the household's economic status. We use the wealth index variable reported in the NFHS survey. The wealth index is a composite measure of household living standards. This index is derived from various factors such as ownership of items like televisions and bicycles and access to water and sanitation facilities. Based on this index, households are categorized into five wealth categories, and we incorporate dummy variables for these categories in our regressions. The results are presented in Table 8.

Table 8 shows that although the magnitude of the effect of the Catholic missionary dummy falls, it remains statistically significant for both the number of births by the age of 25 and the desired number of children, indicating that economic status can only partially explain the effect of Catholic missionaries on fertility.

[32]Given that Catholic missionary presence is used as an instrumental variable in Castelló-Climent et al. (2018), Catholic missionaries can only affect income through its effect on educational attainment if the instrument is valid.

5.3.4 Controlling for Education

Our findings indicate that female higher educational attainment is a potential mechanism underlying the decline in fertility rates in districts with a historical presence of Catholic missionaries. Two factors can drive this effect. Catholic missionaries affect one's own education, which can have an effect on household income and individual norms regarding fertility. Additionally, Catholic missionaries can lead to increases in overall educational attainment, which can change societal norms regarding fertility. In this case, fertility can change even without an increase in individual educational attainment.

To explore the importance of the higher education channel, we include women's higher educational attainment as a control variable in our analysis. The results are displayed in Table 9, with panel A and panel B corresponding to the number of births by age 25 and the ideal number of children, respectively. The sample corresponds to the urban areas. In both panels, even after accounting for women's higher education, the coefficient of the Catholic missionary dummy remains negative and statistically significant across all specifications. However, the magnitude of the Catholic missionary coefficient decreases compared to the model without higher education control, indicating that increased female higher educational attainment plays an important role in reducing fertility.

Next, we add the district-level proportion of females with higher education in urban areas as an additional control variable alongside the individual higher education dummy. The results are presented in Table 10. We observe that the effect of the Catholic missionary dummy becomes statistically insignificant for births by the age of 25. This suggests that an increase in higher education, whether at the individual or aggregate level, can fully explain the impact of Catholic missionaries on births by the age of 25. However, for the ideal number of children, although the magnitude of the effect is approximately halved compared to the original estimates, the results remain statistically significant. Thus, neither individual nor aggregate education can completely explain the effect of Catholic missionaries on the ideal number of children.[33]

[33]We control for wealth in addition to own and aggregate education in Table A10. The inclusion of wealth dummies, in addition to education controls, does not significantly alter the results. This is in line with our expectations since literature suggests that Catholic missionaries affect income only through its effect on higher education (Castelló-Climent et al., 2018).

5.3.5 Catholic Missionaries and Christians

We have argued that a mechanism through which Catholic missionaries affect fertility is increased higher educational attainment. Higher educational attainment completely explains the negative effect of Catholic missionaries on births by the age of 25. However, for the ideal number of children, higher education only partially explains the effect. In this section, we explore an alternative channel.

There may exist a differential effect of Catholic missionary presence on Christians compared to non-Christians. A more pronounced negative effect on Christians could be attributed to two potential factors. Firstly, it may arise from the differential effect of Catholic missionary presence on the higher educational attainment of Christians. Alternatively, it could result from differential exposure to European values through the Catholic missionaries.

To examine if the effect of Catholic missionaries is more pronounced on Christians, we include the interaction between the Catholic missionary dummy and Christian dummy (denoted as Catholic $\times$ Christian) in our regressions and estimate the results for the urban sample. The estimates are presented in Table 11. Panels A and B correspond to the total number of births by age 25 and the ideal number of children, respectively. We note that the coefficient of the interaction term is statistically insignificant for births till the age of 25 years, implying no additional effects for Christians. However, for the ideal number of children, the interaction effect is negative and statistically significant, implying a higher effect on Christians than non-Christians.

The differential effect of Catholic missionary presence on the ideal number of children is not due to the additional effect of Catholic missionary presence on the higher educational attainment of Christians. Table A11 of the appendix shows no differential effect of Catholic missionary presence on higher educational attainment of Christians, compared to non-Christians. Thus, the additional effect of Catholic missionary presence on the ideal number of children for Christians can only be because of factors other than education, such as greater exposure to Western values through Catholic missionaries. This might imply that factors other than education, such as Westernization, can partially explain the effect of Catholic missionaries on the ideal number of children.

5.3.6 Effects on Contraceptive Use, Age at Marriage and Female Work Status

Catholic missionaries can influence fertility through their impact on contraceptive use. The Roman Catholic Church opposes contraception, emphasizing the primary purpose of marriage as reproduction (Schenker, 2000). However, Catholic missionary activities may improve educational outcomes, leading to increased contraception use (Keats, 2018; Rosenzweig et al., 1982). We estimate the effect of Catholic missionaries on contraceptive use, examining the relative strength of these opposing influences.

In addition, we explore the impact of Catholic missionaries on two other factors commonly associated with educational attainment: age at first marriage and female work status. Previous research indicates a positive relationship between higher educational attainment and age at first marriage (Breierova et al., 2004). Therefore, we anticipate a positive effect of Catholic missionary presence on the age at first marriage.

The relationship between educational attainment and female labor force participation rate varies across countries (Chatterjee et al., 2022). For India, existing literature suggests a U-shaped relationship between educational attainment and female labor force participation rate (Chatterjee et al., 2022; Klasen, 2019; Chatterjee et al., 2018)). Thus, the relationship between Catholic missionaries and female labor force participation is uncertain.

In Table 12, we explore whether the historical presence of Catholic missionaries is associated with differential contraceptive usage, age at marriage, and employment status. Panel A reports the estimates for the use of contraceptives, and panel B corresponds to employment status and age at first marriage. In panel A, columns 1-3 correspond to the use of pills, and columns 4-6 correspond to the use of condoms. In panel B, columns 1-3 correspond to women's employment status, and columns 4-6 correspond to age at first marriage. The results are positive for contraceptive usage but are statistically significant only for the use of condoms. Catholic missionary has no significant effect on women's labor force participation. We see a statistically significant positive impact of catholic missionaries on the age at first marriage. Thus, women marry late in the districts with catholic missionaries, which is consistent with the fact that women are more likely to attain higher education in districts with a historical Catholic missionary presence.

5.4 Robustness Checks

5.4.1 Correlation with Observable Covariates

One threat to the identification strategy is the issue of the possible selection of districts by Catholic missionaries. Castelló-Climent et al. (2018) show that Catholic presence in a district is generally not driven by geographical and historical factors. However, it is not entirely random and districts with Catholic missionary presence are more likely to be coastal districts, districts with railway lines, and a higher share of tribal population. We control for all these factors in our regressions.

In Table 13, we show that individuals in districts with and without Catholic missionaries do not differ in terms of observable individual-level characteristics like current age composition, distribution of religion, Scheduled Caste or Scheduled Tribe status, and age and sex of household head. One of our fertility measures is the total number of births by 25. For this, we consider ever-married women. A possible concern can be that the sample of ever-married women differs across districts with and without Catholic presence, which will bias our results. Column 7 of Table 13 shows that the probability of being ever-married does not vary across these two types of districts. Only the Christian dummy shows a significant positive correlation with the Catholic missionary dummy, implying a higher proportion of Christians in districts with a historical Catholic missionary presence.

5.4.2 Neighboring District Analysis

One could argue that the observed effect arises due to significant differences in unobservable factors between districts with and without historical Catholic missionary exposure. To address this concern, we perform a neighborhood analysis. We select each district with a historical presence of Catholic missionaries and its neighboring districts without historical exposure to Catholic missionaries. By doing so, we increase the likelihood that these districts are similar in terms of unobservable factors. This reduces our sample size from 500 districts to 399 districts. We perform the same regressions as before on this reduced sample, and the results are presented in Table 14. Panels A and B correspond to the total number of births by age 25 and the ideal number of children, respectively. Similar to our original estimates, the coefficient of

Catholic missionaries is negative and significant across all specifications.

5.4.3 Controls for Protestant Missionaries and Caste Fractionalization

It can be argued that the effect is driven by the presence of Protestant missionaries and not Catholic missionaries. Protestant missionaries were primarily involved in providing primary education (Calvi et al., 2020; Castelló-Climent et al., 2018). Consistent with the fact that Catholic missionaries were involved mainly in the provision of higher education, our analysis of mechanisms shows that an increase in higher education drives the results.

In order to further ensure that the presence of Protestant missionaries does not drive our findings, we include an additional control for the presence of Protestant missionaries in our regressions. Results for the same are presented in Table 15. The coefficient of the Catholic missionary variable remains negative and statistically significant across all specifications after controlling for the presence of Protestant missionaries. The coefficients of the Protestant missionary dummy are small and statistically insignificant.

Chadha et al. (2018) show that districts with higher ethnic fragmentation have higher inequality due to lower public goods provision in these districts. In order to ensure that this does not influence our results, we include an additional control for caste fractionalization in our regressions. These results are presented in Table 16.

Even after controlling for caste fractionalization, the coefficient of the Catholic missionary variable remains negative and statistically significant across all specifications. This indicates that our results are not influenced by caste fractionalization in these districts, further strengthening the validity of our findings.

5.4.4 Randomization

We next perform a test for exact randomization or a test for random simulation of treatment status. For this, we randomly assign Catholic missionary and non-Catholic missionary status to districts instead of using the original Catholic missionary districts. We then run our main regression both for the ideal number of children and births by the age of 25. We repeat this exercise 1000 times and record the results. We expect most of the results from these

simulations to yield small and insignificant results.

The distribution of coefficients from our simulation exercise for births by age 25 and the ideal number of children are presented in Figure 2(a) and Figure 2(b), respectively. In both cases, most of the coefficients are centered around zero and are much smaller in magnitude compared to our estimated coefficients represented by red lines in both figures.

5.4.5 Using Data from Other NFHS Rounds

In our baseline analysis, we used data from the fourth round of the NFHS survey. In order to ensure that the results are not specific to NFHS 4, we run the regression using data from all four rounds of NFHS for which district information is available. Thus we use data from NFHS 1, NFHS 2, NFHS 4 and NFHS 5.[34] We regress the fertility outcomes using the Catholic missionary dummy variable and its interactions with the NFHS rounds. These results are presented in Table 17 for births by age 25 and Table 18 for the ideal number of children.

In both Table 17 and Table 18, we find that the coefficient of the interaction term is negative and statistically significant. Thus the effect of Catholic missionaries is not specific to NFHS 4.

6 Discussion and Conclusion

The history of India provides us with an opportunity to analyze the long-run impacts of Catholic missionaries. Catholic missionaries were present in India for a very long time. They were instrumental in developing higher education by establishing several higher educational institutes post-independence. Their work was concentrated in areas where their historical presence was higher. Increased education attainment can have several indirect effects, and in this paper, we analyze the long-term impact of Catholic missionaries on fertility outcomes.

We find a strong inverse relationship between Catholic missionaries' historical presence in a district and individual-level fertility outcomes. The result is consistently seen only in the urban sector. We show that this effect of

[34]District identifiers are not available for NFHS 3 and hence we could not use data from this round.

Catholic missionaries is driven by the positive impact of Catholic missionaries on the higher educational attainment of females. The historical presence of Catholic missionaries does not affect the probability of being literate or the completion of primary education or middle school education. This is expected since Catholic missionaries were involved in developing higher education.

The Catholic church has a mandate against the use of contraception. On the other hand, increased education is likely to increase contraception usage. To analyze whether the indirect effect of Catholic missionaries through their impact on education is stronger than the direct effect on contraception use, we analyze the impact of the historical presence of Catholic missionaries on current contraception usage. We find that the historical presence of Catholic missionaries has a positive effect on condom usage, reinforcing the importance of the education channel. We also find that women in districts with the historical presence of Catholic missionaries are likely to marry at an older age, which can reduce fertility, particularly early-age pregnancies, and childbirths.

The evidence presented in this paper shows the long-run impact of historical factors on individual-level outcomes. The paper shows that regional differences based on historical factors can affect fertility outcomes.

References

Acemoglu, Daron, Simon Johnson, and James A Robinson (2001). "The Colonial Origins of Comparative Development: An Empirical Investigation". *American Economic Review* 91.5, pp. 1369–1401.

Alesina, Alberto, Paola Giuliano, and Nathan Nunn (2013). "On the Origins of Gender Roles: Women and the Plough". *The Quarterly Journal of Economics* 128.2, pp. 469–530.

Anukriti, S (2018). "Financial incentives and the fertility-sex ratio trade-off". *American Economic Journal: Applied Economics* 10.2, pp. 27–57.

Arokiasamy, Perianayagam and Srinivas Goli (2012). "Fertility convergence in the Indian states: an assessment of changes in averages and inequalities in fertility". *Genus* 68, pp. 65–88.

Azam, Mehtabul and Andreas Blom (2008). "Progress in Participation in Tertiary Education in India from 1983 to 2004". *World Bank Policy Research Working Paper* 4793.

Ballhatchet, Kenneth (2013). "Caste, Class and Catholicism in India 1789-1914". Routledge.

Banerjee, Abhijit and Lakshmi Iyer (2005). "History, Institutions, and Economic Performance: The Legacy of Colonial Land Tenure Systems in India". *American Economic Review* 95.4, pp. 1190–1213.

Becker, Gary S (1992). "Fertility and the economy". *Journal of Population Economics* 5.3, pp. 185–201.

Becker, Sascha O and Ludger Woessmann (2009). "Was Weber Wrong? A Human Capital Theory of Protestant Economic History". *The Quarterly Journal of Economics* 124.2, pp. 531–596.

Bhat, PN Mari (2002). "Returning a Favor: Reciprocity Between Female Education and Fertility in India". *World Development* 30.10, pp. 1791–1803.

Borooah, Vani K and Sriya Iyer (2005). "Vidya, Veda, and Varna: The influence of religion and caste on education in rural India". *The Journal of Development Studies* 41.8, pp. 1369–1404.

Breierova, Lucia and Esther Duflo (2004). "The Impact of Education on Fertility and Child Mortality: Do Fathers Really Matter Less Than Mothers?" Tech. rep. National Bureau of Economic Research.

Cagé, Julia and Valeria Rueda (2016). "The Long-Term Effects of the Printing Press in Sub-Saharan Africa". *American Economic Journal: Applied Economics* 8.3, pp. 69–99.

Calvi, Rossella, Lauren Hoehn-Velasco, and Federico G Mantovanelli (2020). "The Protestant Legacy: Missions, Gender, and Human Capital in India". *The Journal of Human Resources*, 0919–10437R2.

Calvi, Rossella and Federico G Mantovanelli (2018). "Long-term effects of access to health care: Medical missions in colonial India". *Journal of Development Economics* 135, pp. 285–303.

Canning, David, Marie Christelle Mabeu, and Roland Pongou (2022). "Colonial Origins and Fertility: Can the Market Overcome History?" *Available at SSRN 4070963*.

Castelló-Climent, Amparo, Latika Chaudhary, and Abhiroop Mukhopadhyay (2018). "Higher education and Prosperity: From Catholic Missionaries to Luminosity in India". *The Economic Journal* 128.616, pp. 3039–3075.

Chadha, Nishant and Bharti Nandwani (2018). "Ethnic fragmentation, public good provision and inequality in India, 1988–2012". *Oxford Development Studies* 46.3, pp. 363–377.

Chakrabarty, Manisha and Sumon Kumar Bhaumik (2012). "Whither human capital? The woeful tale of transition to tertiary education in India". *Applied Economics Letters* 19.9, pp. 835–838.

Chatterjee, Esha, Sonalde Desai, and Reeve Vanneman (2018). "INDIAN PARADOX: RISING EDUCATION, DECLINING WOMENS'EMPLOYMENT". *Demographic research* 38, p. 855.

Chatterjee, Esha and Reeve D Vanneman (2022). "Women's Low Employment Rates in India: Cultural and Structural Explanations". *Population and Development Review* 48.2, pp. 445–474.

Chaudhary, Latika (2010). "Taxation and educational development: Evidence from British India". *Explorations in Economic History* 47.3, pp. 279–293.

Chaudhary, Latika, Jared Rubin, Sriya Iyer, and Anand Shrivastava (2020). "Culture and colonial legacy: Evidence from public goods games". *Journal of Economic Behavior & Organization* 173, pp. 107–129.

Cochrane, Susan Hill, M Ali Khan, and Ibrahim Khodair T Osheba (1990). "Education, Income, and Desired Fertility in Egypt: A Revised Perspective". *Economic Development and Cultural Change* 38.2, pp. 313–339.

Das Gupta, Monica and PN Mari Bhat (1997). "Fertility decline and increased manifestation of sex bias in India". *Population studies* 51.3, pp. 307–315.

Dincecco, Mark, James Fenske, Anil Menon, and Shivaji Mukherjee (2022). "Pre-colonial warfare and long-run development in india". *The Economic Journal* 132.643, pp. 981–1010.

Drèze, Jean and Mamta Murthi (2001). "Fertility, Education, and Development: Evidence from India". *Population and Development Review* 27.1, pp. 33–63.

Easterlin, Richard A (1989). "Fertility". In: *Social Economics*. Springer, pp. 77–89.

Fahlbusch, Erwin, Jan Milic Lochman, Geoffrey William Bromiley, John Mbiti, and Jaroslav Pelikan (2008). "The Encyclodedia of Christianity, Vol. 5". Vol. 5. Wm. B. Eerdmans Publishing.

Frykenberg, Robert Eric (2008). "Christianity in India: From Beginnings to the Present". Oxford University Press.

Gallego, Francisco A and Robert Woodberry (2010). "Christian Missionaries and Education in Former African Colonies: How Competition Mattered". *Journal of African Economies* 19.3, pp. 294–329.

Guilmoto, Christophe Z and S Irudaya Rajan (2001). "Spatial Patterns of Fertility Transition in Indian Districts". *Population and Development Review* 27.4, pp. 713–738.

Guirkinger, Catherine, Paola Villar, et al. (2022). "Pro-birth policies, missions and fertility: historical evidence from Congo". Tech. rep. University of Namur, Development Finance and Public Policies.

Holsinger, Donald B and John D Kasarda (1976). "Education and human fertility: Sociological perspectives". *Population and Development: The Search for Selective Interventions*, pp. 154–181.

Hunt, Nancy Rose (1988). ""' Le Bébé en Brousse": European Women, African Birth Spacing and Colonial Intervention in Breast Feeding in the Belgian Congo". *The International Journal of African Historical Studies* 21.3, pp. 401–432.

Iyer, Lakshmi (2010). "Direct versus Indirect Colonial Rule in India: Long-Term Consequences". *The Review of Economics and Statistics* 92.4, pp. 693–713.

Jayachandran, Seema (2017). "Fertility decline and missing women". *American Economic Journal: Applied Economics* 9.1, pp. 118–39.

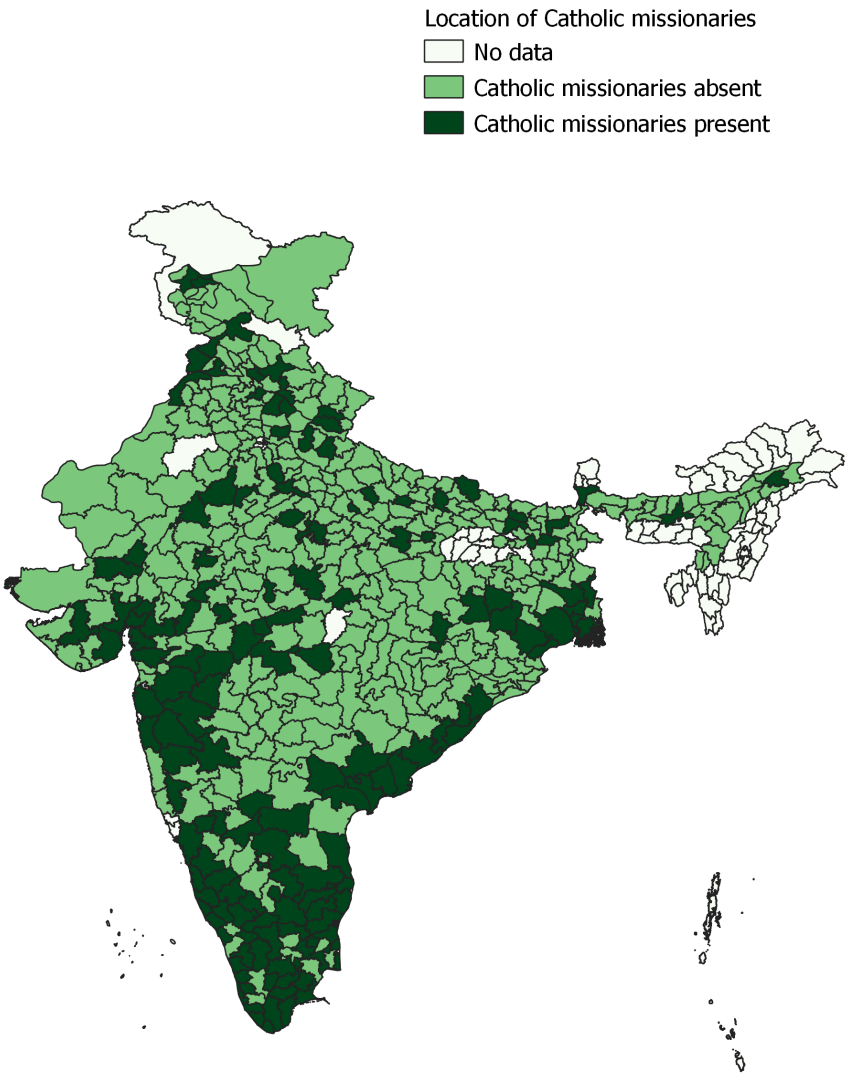
Jha, Saumitra (2013). "Trade, Institutions, and Ethnic Tolerance: Evidence from South Asia". *American Political Science Review*, pp. 806–832.

Jones, Larry E, Alice Schoonbroodt, and Michèle Tertilt (2010). "Fertility Theories: Can They Explain the Negative Fertility-Income Relationship?" In: *Demography and the Economy*. University of Chicago Press, pp. 43–100.

Keats, Anthony (2018). "Women's schooling, fertility, and child health outcomes: Evidence from Uganda's free primary education program". *Journal of Development Economics* 135, pp. 142–159.

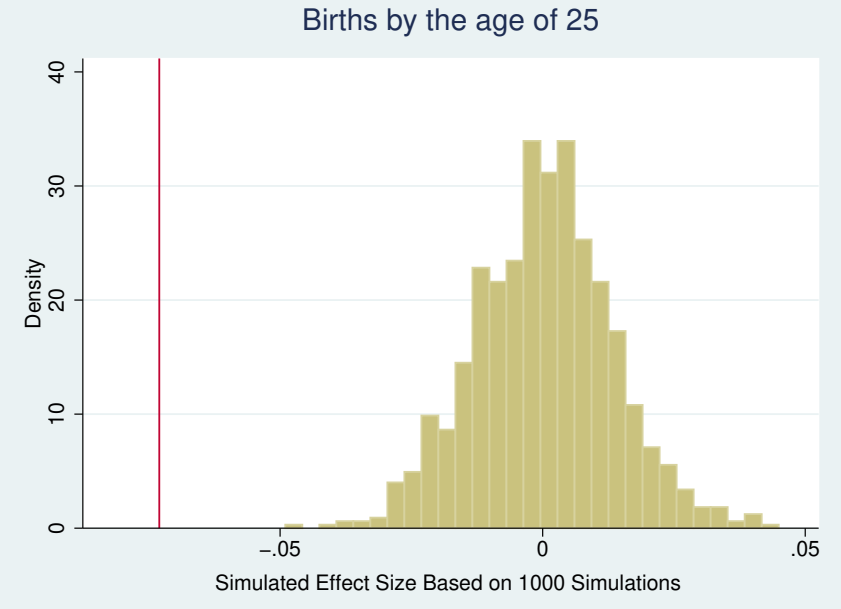
Kingdon, Geeta Gandhi (2007). "The progress of school education in India". *Oxford Review of Economic Policy* 23.2, pp. 168–195.
Klasen, Stephan (2019). "What explains uneven female labor force participation levels and trends in developing countries?" *The World Bank Research Observer* 34.2, pp. 161–197.
La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny (1999). "The Quality of Government". *The Journal of Law, Economics, and Organization* 15.1, pp. 222–279.
Likaka, Osumaka (2006). "Colonial Response to Population Depletion in Early Congo, ca. 1890-1936". *Anthropos*, pp. 403–412.
Maertens, Annemie (2013). "Social Norms and Aspirations: Age of Marriage and Education in Rural India". *World Development* 47, pp. 1–15.
McCrary, Justin and Heather Royer (2011). "The Effect of Female Education on Fertility and Infant Health: Evidence from School Entry Policies Using Exact Date of Birth". *American Economic Review* 101.1, pp. 158–95.
Menon, Nidhiya and Kathleen McQueeney (2020). "Christianity and girl child health in India". *World Development* 136, p. 105109.
Michael, Robert T (1973). "Education and the Derived Demand for Children". *Journal of Political Economy* 81.2, Part 2, S128–S164.
Monstad, Karin, Carol Propper, and Kjell G Salvanes (2008). "Education and Fertility: Evidence from a Natural Experiment". *The Scandinavian Journal of Economics* 110.4, pp. 827–852.
Munshi, Kaivan and Mark Rosenzweig (2009). "Why is mobility in India so low? Social insurance, inequality". Tech. rep. and growth. Working papers, Brown University, Department of Economics.
Muralidharan, Karthik and Nishith Prakash (2017). "Cycling to School: Increasing Secondary School Enrollment for Girls in India". *American Economic Journal: Applied Economics* 9.3, pp. 321–50.
Murthi, Mamta (2002). "Fertility change in Asia and Africa". *World Development* 30.10, pp. 1769–1778.
North, Douglass C, William Summerhill, and Barry Weingast (2000). "Order, Disorder and Economic Change: Latin America vs. North America". *Governing for Prosperity* 19.
Nunn, Nathan (2010). "Religious Conversion in Colonial Africa". *American Economic Review* 100.2, pp. 147–52.
— (2014). "Historical development". In: *Handbook of economic growth*. Vol. 2. Elsevier, pp. 347–402.
Okoye, Dozie and Roland Pongou (2021). "Missions and heterogeneous social change: Evidence from border discontinuities in the emirates of nigeria". *Available at SSRN 3946708*.
Richter, Julius (1908). "A History of Missions in India". Oliphant.
Roland, Gerard (2020). "The deep historical roots of modern culture: A comparative perspective". *Journal of Comparative Economics* 48.3, pp. 483–508.
Rosenzweig, Mark R and Daniel A Seiver (1982). "Education and contraceptive choice: A conditional demand framework". *International Economic Review*, pp. 171–198.
Sander, William (1992). "The effect of women's schooling on fertility". *Economics Letters* 40.2, pp. 229–233.
Schenker, Joseph G (2000). "Women's reproductive health: monotheistic religious perspectives". *International Journal of Gynecology & Obstetrics* 70.1, pp. 77–86.
Zimmermann, Laura (2020). "Remember when it rained–Schooling responses to shocks in India". *World Development* 126, p. 104705.

Figure 1: Distribution of Catholic Missionaries in 1911

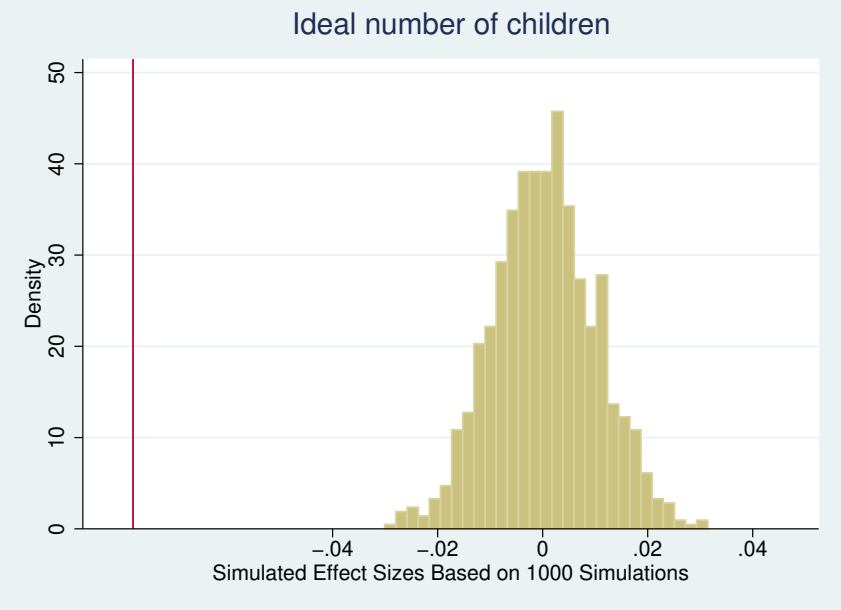


Notes: The map shows the location of Catholic missionaries in 1911. The boundaries correspond to the 2001 district boundaries.

Figure 2: Randomization of Catholic Missionary Presence



(a) Births by the Age of 25



(b) Ideal Number of Children

Notes: The figures depict the results from a randomization exercise for births by the age of 25 (top panel) and the ideal number of children (bottom panel). In this exercise, the Catholic missionary status is randomly assigned to districts, followed by a regression analysis using this newly assigned Catholic missionary status. The exercise is repeated 1000 times. The figures present the distributions of the resulting estimates. The red lines represent the original estimates. The sample consists of women aged 30 and above from 20 major states of India.

Table 1: Summary Statistics

	Mean	Standard Deviation	Observations
Panel A: Whole Sample			
Ideal number of children	2.389	1.057	274769
Ideal number of sons	1.225	0.757	274452
Ideal number of daughters	0.970	0.602	274452
Births by the age of 25	1.712	1.266	272068
Male births by the age of 25	0.906	0.903	272068
Female births by the age of 25	0.806	0.907	272068
Catholic missionary	0.315	0.465	276218
15 or more years of schooling	0.066	0.248	276218
Panel B: Rural Sample			
Ideal number of children	2.465	1.091	196002
Ideal number of sons	1.286	0.776	195782
Ideal number of daughters	1.0	0.612	195782
Births by the age of 25	1.788	1.270	194633
Male births by the age of 25	0.946	0.913	194633
Female births by the age of 25	0.843	0.921	194633
Catholic missionary	0.265	0.441	197126
15 or more years of schooling	0.029	0.167	197126
Panel C: Urban Sample			
Ideal number of children	2.199	0.939	78767
Ideal number of sons	1.072	0.686	78670
Ideal number of daughters	0.894	0.569	78670
Births by the age of 25	1.520	1.235	77435
Male births by the age of 25	0.808	0.868	77435
Female births by the age of 25	0.712	0.862	77435
Catholic missionary	0.441	0.497	79092
15 or more years of schooling	0.158	0.364	79092

Notes: The table reports the means and standard deviations of our key dependent and independent variables. The sample consists of women aged 30 and above from 20 major states of India.

Table 2: Ideal Number of Children and Catholic Missionary Presence

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Ideal Number of Children			Ideal Number of Sons			Ideal Number of Daughters		
Panel A: Overall Sample									
Catholic Missionary	-0.093***	-0.075***	-0.074***	-0.067***	-0.056***	-0.049***	-0.034***	-0.025**	-0.021*
	(0.023)	(0.024)	(0.026)	(0.014)	(0.014)	(0.014)	(0.010)	(0.011)	(0.011)
Observations	273,495	273,495	273,495	273,182	273,182	273,182	273,182	273,182	273,182
R-squared	0.177	0.179	0.179	0.175	0.176	0.176	0.077	0.078	0.079
Panel B: Rural Sample									
Catholic Missionary	-0.079***	-0.059**	-0.051*	-0.048***	-0.032**	-0.021	-0.022*	-0.012	-0.004
	(0.026)	(0.026)	(0.028)	(0.015)	(0.015)	(0.016)	(0.011)	(0.011)	(0.012)
Observations	195,038	195,038	195,038	194,822	194,822	194,822	194,822	194,822	194,822
R-squared	0.175	0.177	0.177	0.180	0.181	0.181	0.077	0.078	0.079
Panel C: Urban Sample									
Catholic Missionary	-0.091***	-0.071***	-0.078***	-0.079***	-0.073***	-0.068***	-0.044***	-0.037***	-0.036***
	(0.025)	(0.025)	(0.026)	(0.014)	(0.014)	(0.014)	(0.012)	(0.012)	(0.012)
Observations	78,457	78,457	78,457	78,360	78,360	78,360	78,360	78,360	78,360
R-squared	0.144	0.147	0.148	0.115	0.116	0.117	0.060	0.061	0.061
Individual Level Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Historical Controls	No	No	Yes	No	No	Yes	No	No	Yes

Notes: Each cell represents a separate regression. The dependent variables are mentioned at the top of the respective columns. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, an ever-married dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. We also add an urban dummy in panel A. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women aged 30 and above from 20 major states of India. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table 3: Births by the Age of 25 and Catholic Missionary Presence

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Total Births			Male Births			Female Births		
Panel A: Overall Sample									
Catholic Missionary	-0.030	-0.022	-0.024	-0.018*	-0.012	-0.015	-0.012	-0.010	-0.009
	(0.020)	(0.020)	(0.020)	(0.010)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Observations	270,794	270,794	270,794	270,794	270,794	270,794	270,794	270,794	270,794
R-squared	0.070	0.071	0.071	0.038	0.039	0.039	0.031	0.031	0.031
Panel B: Rural Sample									
Catholic Missionary	0.007	0.012	0.006	0.001	0.006	0.001	0.006	0.005	0.006
	(0.020)	(0.022)	(0.022)	(0.012)	(0.012)	(0.012)	(0.011)	(0.012)	(0.012)
Observations	193,669	193,669	193,669	193,669	193,669	193,669	193,669	193,669	193,669
R-squared	0.048	0.049	0.049	0.026	0.027	0.027	0.020	0.021	0.021
Panel C: Urban Sample									
Catholic Missionary	-0.089***	-0.074***	-0.073***	-0.051***	-0.042***	-0.042***	-0.038***	-0.032**	-0.031**
	(0.025)	(0.025)	(0.024)	(0.015)	(0.015)	(0.016)	(0.014)	(0.013)	(0.012)
Observations	77,125	77,125	77,125	77,125	77,125	77,125	77,125	77,125	77,125
R-squared	0.082	0.083	0.084	0.047	0.048	0.048	0.038	0.038	0.039
Individual Level Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Historical Controls	No	No	Yes	No	No	Yes	No	No	Yes

Notes: Each cell represents a separate regression. The dependent variables are mentioned at the top of the respective columns. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. We also add an urban dummy in panel A. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of ever-married women aged 30 and above from 20 major states of India. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table 4: Higher Education and Catholic Missionary Presence

	(1)	(2)	(3)	(4)	(5)
	Higher Education Completion			Years of Schooling	
	All Sample			All Sample	<15 Years of Schooling
Panel A: Own Education					
Catholic Missionary	0.029***	0.025***	0.027***	0.287**	0.095
	(0.008)	(0.007)	(0.007)	(0.123)	(0.099)
Observations	78,776	78,776	78,776	78,776	66,324
R-squared	0.080	0.081	0.083	0.181	0.161
Panel B: Spousal Education					
Catholic Missionary	0.007	0.006	0.008	-0.037	-0.075
	(0.012)	(0.013)	(0.012)	(0.162)	(0.121)
Observations	14,260	14,260	14,260	14,260	11,390
R-squared	0.062	0.064	0.066	0.128	0.116
Individual Level Controls	Yes	Yes	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes	Yes	Yes
Historical Controls	No	No	Yes	Yes	Yes

Notes: Each cell represents a separate regression. The dependent variables are mentioned at the top of the respective columns. All regressions include state-fixed effects. Individual level controls include the age of the woman, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. Panel A additionally includes an ever-married dummy. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women aged at least 30 from the urban areas of 20 major states of India. The sample in Panel B is restricted to ever-married women. The last column only includes individuals with less than 15 years of schooling. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table 5: Lower Levels of Education and Catholic Missionary Presence

	(1)	(2)	(3)	(4)	(5)
	Literate	Primary	Middle	Secondary	Higher Secondary
Panel A: Own Education					
Catholic Missionary	0.008	0.008	0.007	0.009	0.011**
	(0.010)	(0.010)	(0.010)	(0.008)	(0.005)
Observations	66,324	66,324	66,324	66,324	66,324
R-squared	0.129	0.128	0.122	0.090	0.048
Panel B: Spousal Education					
Catholic Missionary	-0.005	-0.003	0.007	-0.015	-0.018*
	(0.012)	(0.011)	(0.015)	(0.016)	(0.011)
Observations	11,390	11,390	11,390	11,390	11,390
R-squared	0.097	0.093	0.088	0.078	0.041
Individual Level Controls	Yes	Yes	Yes	Yes	Yes
Geographic Controls	Yes	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes	Yes

Notes: Each cell represents a separate regression. The dependent variables are mentioned at the top of the respective columns. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. Panel A additionally includes an ever-married dummy. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women aged at least 30 from the urban areas of 20 major states of India. The sample is restricted to women with less than 15 years of schooling. The sample in panel B consists of only ever-married women. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table 6: Evolution of the Effect of Catholic Missionary Presence on Education

	(1)	(2)	(3)	(4)
	Matriculate or Higher			
	1961	1971	1981	1991
Catholic Missionary	0.003***	0.008***	0.015***	0.021***
	(0.001)	(0.002)	(0.003)	(0.006)
Observations	309	309	301	276
R-squared	0.606	0.619	0.645	0.683
Demographic Controls	Yes	Yes	Yes	Yes
Geographic Controls	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes

Notes: Each cell represents a separate regression. The dependent variable is the proportion of women with matriculation or higher education. All regressions include state-fixed effects. Demographic controls include the proportion of Scheduled Caste (SC) and Scheduled Tribe (ST) categories. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women from 20 major states of India. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table 7: Evolution of the Effect of Catholic Missionary Presence on Fertility

	(1) All Births	(2) Age $\leq$ 25	(3) All Births	(4) Age $\leq$ 25
Catholic Missionary	-0.0089***	-0.0103***		
	(0.0025)	(0.0031)		
Catholic Missionary × Pre 1961			0.0115**	0.0074
			(0.0051)	(0.0050)
Catholic Missionary × 1961-70			-0.0008	-0.0050
			(0.0059)	(0.0050)
Catholic Missionary × 1971-80			-0.0115***	-0.0139***
			(0.0038)	(0.0038)
Catholic Missionary × Post 1980			-0.0100***	-0.0111***
			(0.0029)	(0.0038)
Observations	389851	238438	389851	238438
R-Squared	0.0165	0.0859	0.0165	0.0859
Individual Level Controls	Yes	Yes	Yes	Yes
Geographic Controls	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes

Notes: Each column represents a separate equation. The dependent variable is a dummy equal to 1 if the index woman gave birth in the year and is zero otherwise. All regressions include state and year fixed effects. Individual level controls are year specific age of the woman, the existing number of children, dummies for the age and sex of the household head, dummies for religion (a Muslim and a Christian dummy), and dummies for Scheduled Caste and Scheduled Tribe households. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample comprises ever-married women from urban areas in 20 major states of India, covering the period from the year they turn 12 until the year of the interview (1992 or 1993). Columns 2 and 4 include years for which the mother is less than 25 years of age. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table 8: Fertility and Catholic Missionary Presence: Including Wealth Control

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Births by the Age of 25									
	Total Births			Male Births			Female Births		
Catholic Missionary	-0.058***	-0.046**	-0.048**	-0.036***	-0.029**	-0.030**	-0.021*	-0.017	-0.018
	(0.022)	(0.022)	(0.023)	(0.014)	(0.015)	(0.015)	(0.012)	(0.012)	(0.012)
Observations	77,125	77,125	77,125	77,125	77,125	77,125	77,125	77,125	77,125
R-squared	0.110	0.112	0.112	0.059	0.060	0.060	0.054	0.055	0.055
Panel B: Ideal Number of Children									
	Ideal Number of Children			Ideal Number of Sons			Ideal Number of Daughters		
Catholic Missionary	-0.073***	-0.054**	-0.063**	-0.065***	-0.060***	-0.056***	-0.036***	-0.030**	-0.030**
	(0.024)	(0.024)	(0.026)	(0.013)	(0.013)	(0.013)	(0.012)	(0.012)	(0.012)
Observations	78,457	78,457	78,457	78,360	78,360	78,360	78,360	78,360	78,360
R-squared	0.160	0.163	0.164	0.131	0.133	0.134	0.067	0.068	0.068
Individual Level Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Historical Controls	No	No	Yes	No	No	Yes	No	No	Yes

Notes: Each cell represents a separate regression. The dependent variables are mentioned at the top of the respective columns. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. Panel B additionally includes a dummy for ever-married women. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women aged 30 and above from urban areas of 20 major states of India. The sample is restricted to ever-married women in panel A. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table 9: Fertility and Catholic Missionary Presence: Controlling for Individual Higher Educational Attainment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Births by the Age of 25									
	Total Births			Male Births			Female Births		
Catholic Missionary	-0.060***	-0.049**	-0.047**	-0.036***	-0.029**	-0.028**	-0.024**	-0.020*	-0.019*
	(0.020)	(0.021)	(0.021)	(0.013)	(0.013)	(0.014)	(0.011)	(0.011)	(0.011)
15 or More Years of Schooling	-0.943***	-0.943***	-0.941***	-0.489***	-0.489***	-0.488***	-0.454***	-0.454***	-0.453***
	(0.020)	(0.020)	(0.020)	(0.013)	(0.013)	(0.013)	(0.012)	(0.012)	(0.012)
Observations	78,776	78,776	78,776	78,776	78,776	78,776	78,776	78,776	78,776
R-squared	0.182	0.183	0.184	0.103	0.103	0.104	0.085	0.086	0.086
Panel B: Ideal Number of Children									
	Ideal Number of Children			Ideal Number of Sons			Ideal Number of Daughters		
Catholic Missionary	-0.083***	-0.064***	-0.071***	-0.073***	-0.067***	-0.062***	-0.040***	-0.034***	-0.033***
	(0.024)	(0.025)	(0.026)	(0.013)	(0.014)	(0.013)	(0.012)	(0.012)	(0.012)
15 or More Years of Schooling	-0.263***	-0.263***	-0.260***	-0.212***	-0.213***	-0.212***	-0.129***	-0.129***	-0.128***
	(0.013)	(0.013)	(0.013)	(0.012)	(0.012)	(0.012)	(0.010)	(0.010)	(0.010)
Observations	78,457	78,457	78,457	78,360	78,360	78,360	78,360	78,360	78,360
R-squared	0.155	0.157	0.158	0.127	0.128	0.129	0.066	0.067	0.068
Individual Level Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Historical Controls	No	No	Yes	No	No	Yes	No	No	Yes

Notes: Each column of each panel represents a separate regression. The dependent variables are mentioned at the top of the respective columns. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, an urban dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. Panel B additionally includes a dummy for ever-married women. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women aged 30 and above from the urban areas of 20 major states of India. The sample is restricted to ever-married women in panel A. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table 10: Fertility and Catholic Missionary Presence: Controlling for Individual and Aggregate Higher Educational Attainment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Births by the Age of 25									
	Total Births			Male Births			Female Births		
Catholic Missionary	-0.035**	-0.027	-0.023	-0.023**	-0.018	-0.016	-0.012	-0.009	-0.007
	(0.018)	(0.018)	(0.018)	(0.012)	(0.012)	(0.013)	(0.011)	(0.010)	(0.010)
15 or More Years of Schooling	-0.924***	-0.925***	-0.925***	-0.479***	-0.480***	-0.479***	-0.445***	-0.445***	-0.445***
	(0.021)	(0.021)	(0.021)	(0.013)	(0.013)	(0.013)	(0.012)	(0.012)	(0.012)
Prop. of Urban Women with Higher Educ	-0.910***	-0.955***	-0.972***	-0.469***	-0.488***	-0.507***	-0.441***	-0.468***	-0.465***
	(0.131)	(0.123)	(0.140)	(0.099)	(0.089)	(0.097)	(0.072)	(0.074)	(0.075)
Observations	78,776	78,776	78,776	78,776	78,776	78,776	78,776	78,776	78,776
R-squared	0.184	0.185	0.186	0.104	0.104	0.105	0.086	0.087	0.087
Panel B: Ideal Number of Children									
	Ideal Number of Children			Ideal Number of Sons			Ideal Number of Daughters		
Catholic Missionary	-0.055***	-0.041**	-0.046**	-0.057***	-0.053***	-0.047***	-0.029**	-0.024**	-0.022*
	(0.020)	(0.021)	(0.022)	(0.013)	(0.013)	(0.013)	(0.012)	(0.012)	(0.012)
15 or More Years of Schooling	-0.242***	-0.243***	-0.243***	-0.200***	-0.201***	-0.201***	-0.120***	-0.120***	-0.121***
	(0.013)	(0.013)	(0.013)	(0.012)	(0.012)	(0.012)	(0.010)	(0.010)	(0.010)
Prop. of Urban Women with Higher Educ	-1.059***	-1.052***	-1.015***	-0.584***	-0.622***	-0.625***	-0.427***	-0.432***	-0.447***
	(0.176)	(0.161)	(0.168)	(0.113)	(0.098)	(0.104)	(0.090)	(0.083)	(0.085)
Observations	78,457	78,457	78,457	78,360	78,360	78,360	78,360	78,360	78,360
R-squared	0.159	0.161	0.162	0.130	0.131	0.132	0.068	0.069	0.069
Individual Level Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Historical Controls	No	No	Yes	No	No	Yes	No	No	Yes

Notes: Each column of each panel represents a separate regression. The dependent variables are mentioned at the top of the respective columns. We additionally control for women's higher educational attainment (15 or more years of education) and the proportion of urban women in a district with higher education. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, an urban dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. Panel B additionally includes a dummy for ever-married women. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women aged 30 and above from the urban areas of 20 major states of India. The sample is restricted to ever-married women in panel A. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table 11: Effect of Catholic Missionaries on Christians and Non-Christians

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Births by the Age of 25									
	Total Births			Male Births			Female Births		
Catholic × Christian	-0.042	-0.019	-0.032	-0.041	-0.024	-0.030	-0.001	0.005	-0.003
	(0.113)	(0.112)	(0.114)	(0.068)	(0.067)	(0.067)	(0.072)	(0.072)	(0.074)
Catholic Missionary	-0.087***	-0.072***	-0.072***	-0.049***	-0.041***	-0.041***	-0.038***	-0.031**	-0.031**
	(0.024)	(0.025)	(0.024)	(0.014)	(0.015)	(0.015)	(0.013)	(0.013)	(0.012)
Observations	78,776	78,776	78,776	78,776	78,776	78,776	78,776	78,776	78,776
R-squared	0.106	0.107	0.108	0.061	0.062	0.062	0.049	0.049	0.050
Panel B: Ideal Number of Children									
	Ideal Number of Children			Ideal Number of Sons			Ideal Number of Daughters		
Catholic × Christian	-0.223**	-0.209**	-0.214**	-0.024	-0.020	-0.030	-0.084	-0.080	-0.084
	(0.096)	(0.092)	(0.095)	(0.077)	(0.074)	(0.075)	(0.062)	(0.059)	(0.060)
Catholic Missionary	-0.088***	-0.068***	-0.075***	-0.079***	-0.072***	-0.068***	-0.043***	-0.036***	-0.035***
	(0.025)	(0.025)	(0.026)	(0.014)	(0.015)	(0.014)	(0.012)	(0.012)	(0.012)
Observations	78,457	78,457	78,457	78,360	78,360	78,360	78,360	78,360	78,360
R-squared	0.145	0.147	0.148	0.115	0.116	0.117	0.060	0.061	0.061
Individual Level Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Historical Controls	No	No	Yes	No	No	Yes	No	No	Yes

Notes: Each cell represents a separate regression. The dependent variables are mentioned at the top of the respective columns. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. Panel B additionally includes a dummy for ever-married women. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women aged 30 and above from the urban areas of 20 major states of India. The sample is restricted to ever-married women in panel A. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table 12: Effects on Contraceptive Use, Work Status and Age at First Marriage

	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Contraceptives						
	Usage of Pills			Usage of Condoms		
Catholic Missionary	0.000	-0.002	-0.001	0.007*	0.009**	0.010**
	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)
Observations	77,125	77,125	77,125	77,125	77,125	77,125
R-squared	0.057	0.058	0.058	0.073	0.075	0.076
Panel B: Work Status and Age at First Marriage						
	Currently Working			Age at First Marriage		
Catholic Missionary	0.020	0.008	0.010	0.343***	0.304***	0.339***
	(0.014)	(0.013)	(0.013)	(0.104)	(0.113)	(0.117)
Observations	14,601	14,601	14,601	71,367	71,367	71,367
R-squared	0.058	0.062	0.063	0.072	0.073	0.075
Individual Level Controls	Yes	Yes	Yes	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes	No	Yes	Yes
Historical Controls	No	No	Yes	No	No	Yes

Notes: Each cell represents a separate regression. The dependent variables are mentioned at the top of the respective columns. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. Currently working regressions include an additional ever-married dummy as a part of individual-level control. The sample consists of ever-married women aged at least 30 from the urban areas of 20 major states of India. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table 13: Correlation with Individual Characteristics

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Age	Muslim	Christian	Scheduled Caste	Scheduled Tribe	Male Headed Household	Household Head's age	Ever-Married
Catholic Missionary	0.088	-0.024	0.011**	0.005	0.006	0.002	-0.032	0.001
	(0.077)	(0.022)	(0.005)	(0.008)	(0.004)	(0.005)	(0.194)	(0.002)
Observations	79,092	79,092	79,092	78,781	78,781	79,092	79,087	79,092
R-squared	0.003	0.082	0.069	0.016	0.039	0.006	0.019	0.005
Geographic Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Each column represents a separate regression. The dependent variables are mentioned at the top of the respective columns. All regressions include state-fixed effects. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women aged 30 and above from the urban areas of 20 major states of India. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table 14: Fertility and Catholic Missionary Presence: Neighborhood District Sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Births by the Age of 25									
	Total Births			Male Births			Female Births		
Catholic Missionary	-0.073***	-0.061**	-0.068***	-0.043***	-0.036**	-0.041***	-0.030**	-0.025*	-0.027**
	(0.025)	(0.026)	(0.024)	(0.015)	(0.016)	(0.016)	(0.014)	(0.014)	(0.013)
Observations	65,534	65,534	65,534	65,534	65,534	65,534	65,534	65,534	65,534
R-squared	0.081	0.082	0.084	0.046	0.047	0.048	0.038	0.038	0.039
Panel B: Ideal Number of Children									
	Ideal Number of Children			Ideal Number of Sons			Ideal Number of Daughters		
Catholic Missionary	-0.084***	-0.063**	-0.072***	-0.076***	-0.069***	-0.069***	-0.039***	-0.032**	-0.032**
	(0.027)	(0.027)	(0.027)	(0.014)	(0.015)	(0.014)	(0.013)	(0.013)	(0.013)
Observations	66,656	66,656	66,656	66,567	66,567	66,567	66,567	66,567	66,567
R-squared	0.143	0.146	0.148	0.113	0.114	0.116	0.058	0.059	0.060
Individual Level Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Historical Controls	No	No	Yes	No	No	Yes	No	No	Yes

Notes: Each cell represents a separate regression. The dependent variables are mentioned at the top of the respective columns. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. Panel B additionally includes a dummy for ever-married women. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women aged 30 and above from urban areas of 20 major states of India. The sample is restricted to neighboring districts with and without historical Catholic missionary presence. The sample in panel A consists only of ever-married women. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table 15: Controlling for Protestant Missionary Presence

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Births by the Age of 25									
	Total Births			Male Births			Female Births		
Catholic Missionary	-0.088***	-0.077***	-0.073***	-0.048***	-0.043**	-0.041**	-0.040***	-0.034**	-0.032**
	(0.028)	(0.028)	(0.028)	(0.017)	(0.018)	(0.018)	(0.014)	(0.014)	(0.014)
Protestant Missionary	-0.002	0.007	-0.001	-0.006	0.001	-0.002	0.004	0.006	0.002
	(0.027)	(0.026)	(0.024)	(0.015)	(0.015)	(0.015)	(0.016)	(0.016)	(0.014)
Observations	77,125	77,125	77,125	77,125	77,125	77,125	77,125	77,125	77,125
R-squared	0.082	0.083	0.084	0.047	0.048	0.048	0.038	0.038	0.039
Panel B: Ideal Number of Children									
	Ideal Number of Children			Ideal Number of Sons			Ideal Number of Daughters		
Catholic Missionary	-0.096***	-0.079***	-0.078***	-0.076***	-0.072***	-0.065***	-0.040***	-0.035**	-0.032**
	(0.028)	(0.029)	(0.029)	(0.015)	(0.016)	(0.015)	(0.013)	(0.013)	(0.013)
Protestant Missionary	0.011	0.019	-0.000	-0.006	-0.003	-0.006	-0.009	-0.006	-0.011
	(0.029)	(0.028)	(0.027)	(0.017)	(0.017)	(0.017)	(0.014)	(0.014)	(0.014)
Observations	78,457	78,457	78,457	78,360	78,360	78,360	78,360	78,360	78,360
R-squared	0.144	0.147	0.148	0.115	0.116	0.117	0.060	0.061	0.061
Individual Level Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Historical Controls	No	No	Yes	No	No	Yes	No	No	Yes

Notes: Each cell represents a separate regression. The dependent variables are mentioned at the top of the respective columns. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. Panel B additionally includes a dummy for ever-married women. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women aged 30 and above from the urban areas of 20 major states of India. The sample is restricted to ever-married women in panel A. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table 16: Controlling for Caste Fractionalization

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Births by the Age of 25									
	Total Births			Male Births			Female Births		
Catholic Missionary	-0.085***	-0.074***	-0.074***	-0.049***	-0.043***	-0.043***	-0.036***	-0.032**	-0.031***
	(0.025)	(0.025)	(0.024)	(0.015)	(0.016)	(0.015)	(0.014)	(0.013)	(0.012)
Caste Fractionalization	-0.193	-0.021	0.096	-0.125	0.010	0.076	-0.068	-0.031	0.020
	(0.274)	(0.246)	(0.247)	(0.156)	(0.144)	(0.143)	(0.144)	(0.130)	(0.135)
Observations	75,042	75,042	75,042	75,042	75,042	75,042	75,042	75,042	75,042
R-squared	0.081	0.082	0.084	0.047	0.048	0.048	0.037	0.038	0.038
Panel B: Ideal Number of Children									
	Ideal Number of Children			Ideal Number of Sons			Ideal Number of Daughters		
Catholic Missionary	-0.091***	-0.066***	-0.074***	-0.080***	-0.071***	-0.067***	-0.044***	-0.035***	-0.033***
	(0.025)	(0.025)	(0.026)	(0.014)	(0.014)	(0.014)	(0.012)	(0.012)	(0.013)
Caste Fractionalization	0.266	0.374*	0.323	0.161	0.227	0.276	0.140	0.191	0.199
	(0.206)	(0.213)	(0.230)	(0.152)	(0.180)	(0.176)	(0.118)	(0.134)	(0.131)
Observations	76,265	76,265	76,265	76,168	76,168	76,168	76,168	76,168	76,168
R-squared	0.144	0.147	0.148	0.115	0.117	0.118	0.060	0.061	0.061
Individual Level Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Historical Controls	No	No	Yes	No	No	Yes	No	No	Yes

Notes: Each cell represents a separate regression. The dependent variables are mentioned at the top of the respective columns. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. Panel B additionally includes a dummy for ever-married women. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women aged 30 and above from urban areas of 20 major states of India. The sample is restricted to ever-married women in panel A. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table 17: Births by the Age of 25 and Catholic Missionary Presence: All NFHS Rounds

	(1)	(2)	(3)
Catholic Missionary × Round 1	-0.126**	-0.115**	-0.111**
	(0.057)	(0.057)	(0.056)
Catholic Missionary × Round 2	-0.138*	-0.122*	-0.123*
	(0.074)	(0.073)	(0.067)
Catholic Missionary × Round 4	-0.077***	-0.061**	-0.064**
	(0.029)	(0.028)	(0.027)
Catholic Missionary × Round 5	-0.103***	-0.087***	-0.086***
	(0.030)	(0.029)	(0.027)
Observations	145,602	145,602	145,602
R-squared	0.082	0.083	0.085
Demographic Controls	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes
Historical Controls	No	No	Yes

Notes: Each cell represents a separate regression. The dependent variable is births by the age of 25. Round 2, Round 4, and Round 5 are the NFHS round dummies for rounds 2, 4, and 5, respectively. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of ever-married women aged 30 and above from urban areas of 20 major states of India. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table 18: Ideal Number of Children and Catholic Missionary Presence: All NFHS Rounds

	(1)	(2)	(3)
Catholic Missionary × Round 1	-0.230***	-0.229***	-0.235***
	(0.057)	(0.056)	(0.055)
Catholic Missionary × Round 2	-0.276***	-0.271***	-0.277***
	(0.049)	(0.048)	(0.047)
Catholic Missionary × Round 4	-0.142***	-0.137***	-0.141***
	(0.030)	(0.030)	(0.030)
Catholic Missionary × Round 5	-0.091***	-0.086***	-0.087***
	(0.029)	(0.030)	(0.031)
Observations	146,310	146,310	146,310
R-squared	0.135	0.136	0.138
Demographic Controls	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes
Historical Controls	No	No	Yes

Notes: Each cell represents a separate regression. The dependent variable is the ideal number of children. Round 2, Round 4, and Round 5 are the NFHS round dummies for rounds 2, 4, and 5, respectively. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, an ever-married dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women aged 30 and above from urban areas of 20 major states of India. Standard errors are clustered at the district level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Appendix

Table A1: Summary Statistics: Whole Sample

	Mean	Standard Deviation	Observations
Individual Level Controls			
Age	38.584	5.739	276218
Male headed household	0.867	0.34	276218
Muslim	0.132	0.339	276218
Christian	0.019	0.136	276218
Scheduled Caste	0.187	0.39	274963
Scheduled Tribe	0.121	0.326	274963
Household head age	47.497	11.469	276176
Ever married	0.985	0.122	276218
District Level Geographical Controls			
Coastal	0.085	0.279	276218
Longitude	79.882	5.042	276218
Latitude	23.548	5.762	276218
Average river length	12.196	3.701	276218
Minimum distance to a big city	3.415	1.845	276218
Altitude	4.199	6.321	276218
District Level Historical Controls			
Share urban 1931	0.108	0.075	276218
Share Brahman 1931	0.057	0.043	276218
Share tribal 1931	0.039	0.098	276218
Princely state	0.34	0.474	276218
Railway line 1909	0.793	0.405	276218
Mechanisms (Individual Level)			
Uses pills	0.032	0.175	272068
Uses condom	0.048	0.214	272068
Currently working	0.295	0.456	48579
Age at first marriage	18.391	4.282	252849

Notes: The table reports the means and standard deviations for the variables used in our analysis. The sample consists of women aged 30 and above from 20 major states of India.

Table A2: Summary Statistics: Rural Sample

	Mean	Standard Deviation	Observations
Individual Level Controls			
Age	38.558	5.745	197126
Male headed household	0.866	0.34	197126
Muslim	0.113	0.317	197126
Christian	0.018	0.134	197126
Scheduled Caste	0.198	0.399	196182
Scheduled Tribe	0.149	0.357	196182
Household head age	47.21	11.5	197089
Ever married	0.987	0.112	197126
District Level Geographical Controls			
Coastal	0.073	0.259	197126
Longitude	80.298	5.187	197126
Latitude	23.84	5.543	197126
Average river length	12.263	3.678	197126
Minimum distance to a big city	3.565	1.859	197126
Altitude	4.361	6.682	197126
District Level Historical Controls			
Share urban 1931	0.099	0.07	197126
Share Brahman 1931	0.058	0.044	197126
Share tribal 1931	0.042	0.104	197126
Princely state	0.344	0.475	197126
Railway line 1909	0.762	0.426	197126
Mechanisms (Individual Level)			
Uses pills	0.033	0.177	194633
Uses condom	0.033	0.179	194633
Currently working	0.316	0.465	33932
Age at first marriage	18.051	4.174	181209

Notes: The table reports the means and standard deviations for the variables used in our analysis. The sample consists of women aged 30 and above from the rural areas of 20 major states of India.

Table A3: Summary Statistics: Urban Sample

	Mean	Standard Deviation	Observations
Individual Level Controls			
Age	38.649	5.724	79092
Male headed household	0.868	0.338	79092
Muslim	0.181	0.385	79092
Christian	0.02	0.14	79092
Scheduled Caste	0.159	0.366	78781
Scheduled Tribe	0.05	0.218	78781
Household head age	48.21	11.359	79087
Ever married	0.979	0.143	79092
District Level Geographical Controls			
Coastal	0.116	0.32	79092
Longitude	78.844	4.498	79092
Latitude	22.817	6.214	79092
Average river length	12.028	3.75	79092
Minimum distance to a big city	3.043	1.755	79092
Altitude	3.798	5.293	79092
District Level Historical Controls			
Share urban 1931	0.131	0.081	79092
Share Brahman 1931	0.054	0.039	79092
Share tribal 1931	0.032	0.081	79092
Princely state	0.331	0.47	79092
Railway line 1909	0.87	0.336	79092
Mechanisms (Individual Level)			
Uses pills	0.029	0.169	77435
Uses condom	0.086	0.28	77435
Currently working	0.246	0.431	14647
Age at first marriage	19.252	4.428	71640

Notes: The table reports the means and standard deviations for the variables used in our analysis. The sample consists of women aged 30 and above from the urban areas of 20 major states of India.

Table A4: Fertility and Catholic Missionary Presence: Women Aged 25 and Above

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Births by the Age of 25									
	Total Births			Male Births			Female Births		
Catholic Missionary	-0.095***	-0.079***	-0.080***	-0.053***	-0.043***	-0.043***	-0.042***	-0.036***	-0.037***
	(0.024)	(0.024)	(0.022)	(0.014)	(0.015)	(0.014)	(0.013)	(0.012)	(0.011)
Observations	98,743	98,743	98,743	98,743	98,743	98,743	98,743	98,743	98,743
R-squared	0.089	0.089	0.091	0.051	0.052	0.053	0.039	0.039	0.040
Panel B: Ideal Number of Children									
	Ideal Number of Children			Ideal Number of Sons			Ideal Number of Daughters		
Catholic Missionary	-0.085***	-0.067***	-0.074***	-0.072***	-0.067***	-0.062***	-0.042***	-0.036***	-0.035***
	(0.023)	(0.024)	(0.025)	(0.013)	(0.014)	(0.013)	(0.011)	(0.011)	(0.011)
Observations	103,734	103,734	103,734	103,591	103,591	103,591	103,591	103,591	103,591
R-squared	0.138	0.141	0.142	0.112	0.113	0.114	0.056	0.057	0.057
Individual Level Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Historical Controls	No	No	Yes	No	No	Yes	No	No	Yes

Notes: Each cell represents a separate regression. The dependent variables are mentioned at the top of the respective columns. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. Panel B additionally includes a dummy for ever-married women. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women aged 25 and above from urban areas of 20 major states of India. The sample in panel A consists only of ever-married women. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table A5: Fertility and Catholic Missionary Presence: Women Aged 35 and Above

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Births by the Age of 25									
	Total Births			Male Births			Female Births		
Catholic Missionary	-0.080***	-0.070***	-0.068***	-0.049***	-0.043***	-0.043**	-0.032**	-0.027*	-0.025*
	(0.026)	(0.027)	(0.026)	(0.015)	(0.016)	(0.017)	(0.016)	(0.016)	(0.015)
Observations	55,701	55,701	55,701	55,701	55,701	55,701	55,701	55,701	55,701
R-squared	0.072	0.073	0.074	0.041	0.042	0.042	0.035	0.035	0.036
Panel B: Ideal Number of Children									
	Ideal Number of Children			Ideal Number of Sons			Ideal Number of Daughters		
Catholic Missionary	-0.093***	-0.072**	-0.079***	-0.086***	-0.079***	-0.073***	-0.042***	-0.035***	-0.032**
	(0.027)	(0.028)	(0.029)	(0.015)	(0.016)	(0.015)	(0.013)	(0.013)	(0.013)
Observations	56,242	56,242	56,242	56,176	56,176	56,176	56,176	56,176	56,176
R-squared	0.148	0.151	0.152	0.121	0.122	0.123	0.063	0.064	0.064
Individual Level Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Historical Controls	No	No	Yes	No	No	Yes	No	No	Yes

Notes: Each cell represents a separate regression. The dependent variables are mentioned at the top of the respective columns. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. Panel B additionally includes a dummy for ever-married women. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women aged 35 and above from urban areas of 20 major states of India. The sample in panel A consists only of ever-married women. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table A6: Higher Education and Catholic Missionary Presence: Rural Sample

	(1)	(2)	(3)	(4)	(5)
	Higher Education Completion			Years of Schooling	
	All Sample			All Sample	<15 Years of Schooling
Panel A: Own Education					
Catholic Missionary	0.003	0.002	0.002	0.007	-0.006
	(0.002)	(0.002)	(0.002)	(0.098)	(0.089)
Observations	196,146	196,146	196,146	196,146	190,502
R-squared	0.043	0.043	0.043	0.234	0.223
Panel B: Spousal Education					
Catholic Missionary	0.007	0.006	0.007	-0.047	-0.104
	(0.005)	(0.005)	(0.005)	(0.116)	(0.105)
Observations	33,243	33,243	33,243	33,243	31,148
R-squared	0.020	0.020	0.021	0.135	0.137
Individual Level Controls	Yes	Yes	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes	Yes	Yes
Historical Controls	No	No	Yes	Yes	Yes

Notes: Each cell represents a separate regression. The dependent variable in the first three columns is a dummy variable indicating the completion of at least 15 years of schooling. Years of schooling is the dependent variable in the last two columns. The main independent variable is the Catholic missionary dummy. This dummy variable is equal to 1 if at least one Catholic missionary was present within the area covered by the district in 2001, as of 1911. Panels A and B correspond to own and spousal education, respectively. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. Panel A additionally includes an ever-married dummy. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women aged at least 30 from the rural areas of 20 major states of India. The last column only includes individuals with less than 15 years of schooling. Standard errors are clustered at the district level. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table A7: Higher Education and Catholic Missionary Presence: Non-missing Spousal Education Sample

	(1)	(2)	(3)	(4)	(5)
	Higher Education Completion			Years of Schooling	
	All Sample			All Sample	<15 Years of Schooling
Catholic Missionary	0.029***	0.024**	0.027***	0.240	0.043
	(0.011)	(0.011)	(0.010)	(0.182)	(0.151)
Observations	14,260	14,260	14,260	14,260	12,076
R-squared	0.076	0.077	0.079	0.178	0.162
Individual level Controls	Yes	Yes	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes	Yes	Yes
Historical Controls	No	No	Yes	Yes	Yes

Notes: Each column represents a separate regression. The dependent variable in the first three columns is a dummy variable indicating the completion of at least 15 years of schooling. Years of schooling is the dependent variable in the last two columns. The main independent variable is the Catholic missionary dummy. This dummy variable is equal to 1 if at least one Catholic missionary was present within the area covered by the district in 2001, as of 1911. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of ever-married women aged at least 30 with non-missing spousal education from 20 major states of India. Only individuals with less than 15 years of schooling are included in the last column. Panel B's sample exclusively comprises ever-married women. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table A8: Education and Catholic Missionary Presence (Including ≥ 15 Years of Schooling Sample)

	(1)	(2)	(3)	(4)	(5)	(6)
	Literate	Primary	Middle	Secondary	Higher Secondary	≥15 Years of Schooling
Panel A: Own Education						
Catholic Missionary	0.010	0.011	0.014	0.022**	0.031***	0.027***
	(0.010)	(0.010)	(0.011)	(0.010)	(0.008)	(0.007)
Observations	78,776	78,776	78,776	78,776	78,776	78,776
R-squared	0.130	0.132	0.144	0.129	0.108	0.083
Panel B: Spousal Education						
Catholic Missionary	-0.004	-0.003	0.005	-0.010	-0.008	0.008
	(0.010)	(0.010)	(0.014)	(0.016)	(0.014)	(0.012)
Observations	14,260	14,260	14,260	14,260	14,260	14,260
R-squared	0.091	0.090	0.098	0.099	0.084	0.066
Individual Level Controls	Yes	Yes	Yes	Yes	Yes	Yes
Geographic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Each cell represents a separate regression. The dependent variables are dummies for various education categories- literate, primary, middle, secondary, higher secondary, and at least 15 years of education. The main independent variable is the Catholic missionary dummy. This dummy variable is equal to 1 if at least one Catholic missionary was present within the area covered by the district in 2001, as of 1911. Panels A and B correspond to own and spousal education, respectively. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. Panel A additionally includes a dummy for ever-married women. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women aged at least 30 from the urban areas of 20 major states of India. The sample in panel B consists only of ever-married women. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table A9: Evolution of the Effect of Catholic Missionary Presence on Education

	(1) Graduate (1971)	(2) Graduate (1981)	(3) Graduate (1991)
Catholic Missionary	0.002***	0.004***	0.007***
	(0.000)	(0.001)	(0.002)
Observations	309	301	276
R-squared	0.472	0.496	0.487
Demographic Controls	Yes	Yes	Yes
Geographic Controls	Yes	Yes	Yes
Historical Controls	Yes	Yes	Yes

Notes: Each cell represents a separate regression. Columns 1-3 correspond to the proportion of women with graduate or higher education in 1971, 1981, and 1991 respectively. The main independent variable is the Catholic missionary dummy. This dummy variable is equal to 1 if at least one Catholic missionary was present within the area covered by the district in 2001, as of 1911. All regressions include state-fixed effects. Demographic controls include the proportion of Scheduled Caste (SC) and Scheduled Tribe (ST) categories. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women from 20 major states of India. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table A10: Fertility and Catholic Missionary Presence: Controlling for Individual and Aggregate Higher Educational Attainment and Wealth

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Panel A: Births by the Age of 25									
	Total Births			Male Births			Female Births		
Catholic Missionary	-0.028	-0.021	-0.018	-0.020*	-0.015	-0.014	-0.008	-0.005	-0.004
	(0.018)	(0.018)	(0.019)	(0.012)	(0.012)	(0.013)	(0.010)	(0.010)	(0.010)
15 or More Years of Schooling	-0.846***	-0.844***	-0.843***	-0.449***	-0.448***	-0.447***	-0.397***	-0.396***	-0.396***
	(0.021)	(0.021)	(0.021)	(0.015)	(0.015)	(0.015)	(0.012)	(0.012)	(0.011)
Prop. of Urban Women with Higher Educ	-0.690***	-0.727***	-0.762***	-0.386***	-0.399***	-0.426***	-0.304***	-0.328***	-0.337***
	(0.141)	(0.126)	(0.145)	(0.105)	(0.092)	(0.099)	(0.073)	(0.074)	(0.077)
Observations	78,776	78,776	78,776	78,776	78,776	78,776	78,776	78,776	78,776
R-squared	0.190	0.192	0.192	0.105	0.106	0.107	0.091	0.092	0.092
Panel B: Ideal Number of Children									
	Ideal Number of Children			Ideal Number of Sons			Ideal Number of Daughters		
Catholic Missionary	-0.048**	-0.034*	-0.041*	-0.052***	-0.048***	-0.043***	-0.026**	-0.021*	-0.020
	(0.020)	(0.021)	(0.022)	(0.013)	(0.013)	(0.013)	(0.012)	(0.012)	(0.012)
15 or More Years of Schooling	-0.185***	-0.184***	-0.183***	-0.154***	-0.153***	-0.153***	-0.095***	-0.094***	-0.095***
	(0.012)	(0.012)	(0.012)	(0.010)	(0.010)	(0.010)	(0.011)	(0.011)	(0.011)
Prop. of Urban Women with Higher Educ	-0.868***	-0.848***	-0.829***	-0.436***	-0.465***	-0.482***	-0.347***	-0.349***	-0.371***
	(0.187)	(0.168)	(0.172)	(0.117)	(0.099)	(0.105)	(0.093)	(0.086)	(0.086)
Observations	78,457	78,457	78,457	78,360	78,360	78,360	78,360	78,360	78,360
R-squared	0.168	0.171	0.171	0.139	0.141	0.141	0.071	0.073	0.073
Individual Level Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Historical Controls	No	No	Yes	No	No	Yes	No	No	Yes

Notes: Each cell represents a separate regression. The dependent variables are mentioned at the top of the respective columns. All regressions include state-fixed effects. Individual level controls include the woman's age, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, an urban dummy and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. Panel B additionally consists of an ever-married dummy. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. The sample consists of women aged 30 and above from the urban areas of 20 major states of India. The sample in panel A is restricted to ever-married women. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

Table A11: Heterogeneity of Effects: Christians and Non-Christians: Education

	(1) Above High School	(2) Above High School	(3) Above High School	(4) Years of Education	(5) Years of Education
Catholic × Christian	-0.036	-0.040	-0.037	-0.565	-0.158
	(0.030)	(0.030)	(0.030)	(0.650)	(0.589)
Catholic Missionary	0.030***	0.025***	0.028***	0.295**	0.097
	(0.008)	(0.007)	(0.007)	(0.124)	(0.100)
Observations	78,776	78,776	78,776	78,776	66,324
R-squared	0.080	0.081	0.083	0.181	0.161
Demographic Controls	Yes	Yes	Yes	Yes	Yes
Geographic Controls	No	Yes	Yes	Yes	Yes
Historical Controls	No	No	Yes	Yes	Yes

Notes: Each column represents a separate regression. The dependent variables are mentioned at the top of the respective columns. All regressions include state-fixed effects. Individual level controls include the age of the woman, the household head's age, a dummy for the household head's sex, a Muslim dummy, a Christian dummy, an ever-married dummy, and dummies for membership in Scheduled Caste (SC) and Scheduled Tribe (ST) categories. District-level geographic controls include longitude, latitude, altitude, a coastal dummy, average length of rivers, and minimum distance to a big city. District-level historical controls include urban population share in 1931, the population share of Brahmans in 1931, tribal population share in 1931, an indicator for princely states, and an indicator for the presence of railways in 1909. Spousal regressions do not include an ever-married dummy as a part of individual-level controls. The sample consists of women aged at least 30 from the urban areas of 20 major states of India. The last column only includes individuals with less than 15 years of schooling. Standard errors are clustered at the district level. *** p<0.01, ** p<0.05, * p<0.1

*** p<0.01, ** p<0.05, * p<0.1