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ABSTRACT

Religion and Abortion: The Role of Politician Identity*

Leveraging close elections to generate quasi-random variation in the religious identity of state legislators in India, we find lower rates of female foeticide in districts with Muslim legislators, which we argue reflects a greater (religious) aversion to abortion among Muslims. These districts exhibit increases in fertility that offset the decrease in girl abortion. We find no evidence of greater postnatal neglect of girls once more girls are born. Our findings show that politician preferences over abortion influence abortion-related outcomes, most likely through greater enforcement of laws against sex determination.

JEL Classification: I15, J13, O15, P16

Keywords: religion, politician identity, abortion, sex selection, fertility, infant mortality, India, Muslims

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1. Introduction

Debates surrounding abortion often invoke both religion and politics. Abortion is a highly politicized issue, with governments often seeking to amend abortion legislation in line with the preferences of elected leaders or the sentiments of the electorate. Yet, there is little research that establishes a causal link between leader preferences and abortion outcomes. In this paper, we examine whether the religious identity of legislators influences abortion rates in the districts in which they are elected, conditional upon their party affiliation.

We examine sex-selective abortion in India, a phenomenon that has increased sharply over the past two decades, and that policy interventions have largely failed to address.[1] A natural candidate explanation for this is insufficient political commitment. We investigate the role of preferences of state legislators. In particular, since Muslims express greater opposition to abortion than Hindus, we ask whether Muslim legislators are more effective at reducing sex-selective abortion.[2]

Since electoral data in India do not identify candidate religion, we created a new data base on the religious identity of candidates for state assembly elections, coding religion from name. There are no time-series data on abortion and, in any case, abortion is likely to be under-reported, especially sex-selective abortion in the post-prohibition era. We therefore follow a tradition in the literature of using the sex ratio at birth (i.e. the probability that a birth is female) as a marker of sex-selective abortion (Almond & Edlund, 2008; Almond, Li, & Zhang,

[1] Bhalotra and Cochrane (2010) estimate that 0.48 million girl foetuses were aborted each year during 1995-2005, a number larger than the total number of girls born in the U.K. each year. Abortion was legalized in India in 1971, although only under fairly stringent conditions.

[2] Previous studies have shown that Muslim families exhibit less male-biased sex ratios at birth. Bhalotra and Cochrane (2010) demonstrate this using data from India; Almond, Edlund and Milligan (2013) replicate this finding using data on Hindu and Muslim immigrants in the Canadian census.

forthcoming; Bhalotra & Cochrane, 2010).[3] Since families that are not willing to commit abortion but that have an unmet desire for sons tend to continue fertility until the desired number of sons is achieved (Bhalotra & van Soest, 2008; Clark, 2000; Jensen, 2012; Rosenblum, 2013), we examine fertility as an additional outcome. To test whether any marginal effects of legislator identity on prenatal sex selection are offset by changes in postnatal investments in girls relative to boys, we also examine the infant mortality rate of girls and boys, a widely used indicator of postnatal investments (Anukriti, Bhalotra, & Tam, 2016; Bozzoli, Deaton, & Quintana-Domeque, 2009; Oster, 2009).

Comparisons of fertility and birth outcomes across constituencies with and without Muslim legislators will not capture the impact of legislator preferences if the presence of Muslim legislators is correlated with voter preferences or other geographic, political or demographic characteristics. To address this challenge, we exploit the outcomes of close elections between Muslims and non-Muslims to generate quasi-random variation in the religious identity of the legislator. Since aggregation issues preclude us from using a standard regression discontinuity design, we instrument the fraction of Muslim legislators in a district with the fraction of Muslim legislators who win in close elections against non-Muslims.

Our estimates indicate that the election of one additional Muslim legislator in a district leads to a statistically significant increase of 1.79 percentage points in the probability of a girl birth. Our main specification controls for district and cohort fixed effects, and the result is robust to the inclusion of household demographics, district-specific time trends and mother fixed effects. It also stands up to a placebo test examining future Muslim legislators, and to a consistency check that tests for manipulation of sex ratio at birth among births occurring before

[3] Sex ratios at birth have been shown in the cited studies to be male-biased in regions or communities with a preference for sons. The sex ratio at birth varies for biological and environmental reasons but these variations are small relative to the behavioral variation documented in these studies.

prenatal sex detection facilities became available. We find that the impact of legislator religion on sex ratios at birth is largest where previous research has shown that the underlying tendency to commit female foeticide is greatest: at higher birth orders (three and higher), in religious groups that practice more sex selections (Hindus and Sikhs, particularly those with a first-born daughter) and in states with more entrenched gender bias.

Results for fertility corroborate the findings on sex-selective abortion. We find that fertility is higher under Muslim legislators, consistent with continued fertility being an alternative means of obtaining the desired number of sons. The presence of an additional Muslim legislator leads to an increase of 2.02 percentage points in the probability of having a third or higher order birth. Thus the increase in fertility is almost completely matched in size by the increased probability that a girl child is born i.e. the estimates suggest that the increase in fertility reflects the reduction in girl abortion. There is no evidence that reduced prenatal sex-selection is substituted by postnatal neglect. Indeed, infant mortality rates of higher-birth-order girls relative to boys are lower under Muslim legislators.

Overall, our findings are consistent with Muslim legislators curbing sex-selective abortion because of a religious aversion to abortion. We investigate alternative explanations, namely that our results are driven not by religious aversion to abortion but by Muslims having weaker son preference or Muslim legislators being more pro-female in their policies, and do not find empirical support for them. On the other hand, we find suggestive evidence that better enforcement of the prenatal sex determination ban may be a mechanism by which Muslim legislators enact their preferences over abortion.[4]

[4] We also report our attempt to investigate whether Muslims are more likely to enact legislative changes related to foeticide but data on legislative actions is sparse, and the existing data do not support a legislative channel.

Our paper brings together two major strands of research in development economics and political economy. The first is the literature on the determinants of population sex ratios. Previous research has emphasized demographic and economic determinants but has not considered the role of politician identity.[5] The second is the literature on the substantive impacts of politician identity. In the classical Downsian model, the preferences of politicians do not matter, and policy is determined by the preferences of the median voter (Downs, 1957). More recent models have modified and extended this framework to allow for the role of politician preferences (e.g. Besley and Coate, 1997). There is little empirical research examining the substantive impacts of religious identity; most papers have focused on the gender or ethnic identity of leaders.[6] Meyersson (2014) is an exception, examining girls' education under the Islamist party in Turkey, but he focuses upon party whereas we focus upon the personal religious identity of politicians after controlling for party identity. In a previous paper, we found that the presence of Muslim legislators in India significantly improves health and education outcomes, and that these benefits are population-wide rather than restricted to Muslim households (Bhalotra, Cassan, Clots-Figueras, & Iyer, 2014). In this paper, we present the first evidence that

[5] For instance, Jayachandran (2017) finds that the desired sex ratio increases sharply as fertility falls, suggesting that fertility decline is a driver of India's recent sex ratio increase. Similarly, Bhalotra and Cochrane (2010) show that sex-selective abortion is systematically greater among women who report lower desired fertility, and Anukriti (forthcoming) shows that financial incentives for having girls cannot prevent worsening sex ratios if they also reward lower fertility. Economic determinants of male-biased sex ratios include (male-biased) land reform and legislation of gender equality in inheritance rights (Bhalotra, Brulé, & Roy, 2017; Bhalotra, Chakravarty, Mookherjee, & Pino, 2016) and gold prices that determine dowry (Bhalotra, Chakravarty, & Gulesci, 2016). A literature on developed countries has linked abortion with politics and religion but has mostly focused on describing the preferences of different religious groups towards abortion (see, among others, Harris and Mill, 1985; Cook, Jelen, & Wilcox, 1992; Clements, 2015).

[6] Many empirical papers have shown that women leaders prioritize pro-woman and pro-child policies (Bhalotra & Clots-Figueras, 2014; Brollo & Troiano, 2016; Chattopadhyay & Duflo, 2004; Clots-Figueras, 2011, 2012; Iyer, Mani, Mishra, & Topalova, 2012). Kalsi (2017) finds that exposure to female politicians in local governments increases female survival, but that the effect is not likely to be due to differences in policy-making. The evidence on politicians' ethnic identity is more mixed, with some studies finding that leaders preferentially transfer state resources to their co-ethnics (Besley, Pande, & Rao, 2012; Burgess, Jedwab, Miguel, Morjaria, & Padró i Miquel, 2015; Kramon & Posner, 2016; Pande, 2003), but others finding no evidence of this (Dunning & Nilekani, 2013; Kudamatsu, 2009).

religious preferences, embodied in political leaders, influence abortion-related outcomes. Evidence that religious preferences of a leader can influence fertility even in a relatively short time frame is contained in Bassi & Rasul (2017), who show how persuasive messages in the Pope's speeches during a visit to Brazil led to an immediate reduction in contraceptive use of more than 40% , leading to a 1.6% increase in fertility nine months later.

The rest of the paper is organized as follows: Section 2 describes gender outcomes and the political environment in India, Section 3 describes our data and Section 4 outlines the empirical strategy. Section 5 presents and discusses the results, Section 6 discusses possible mechanisms and Section 7 concludes.

2. **Gender Outcomes, Religion and Politics in India**

2.1. Gender and Abortion in India

For centuries, son preference in India has been expressed in female infanticide (Dickemann, 1979) and excess mortality amongst girls and women associated with their endemic neglect (Klasen, 1994; Sen, 1992; Anderson & Ray, 2010). Male-biased sex ratios were noted as early as the first census in 1871 (Visaria, 1967). Decades of economic development have not rectified this imbalance, indeed the all-age ratio of males to females has drifted upwards through the twentieth century (Bhaskar & Gupta, 2007). A more recent phenomenon, which motivates this work, is that the sex ratio *at birth* has risen sharply since the 1981 census, even as the all-age sex ratio has stabilised. This has been associated with the introduction of affordable pre-natal sex detection technology that has facilitated sex-selective abortion. The decline in the female share of births is particularly pronounced at higher birth orders, and among families that do not already have a son (see Appendix Figure A1), and there is no discernible tendency to sex-select at first

birth (Almond & Edlund, 2008; Bhalotra & Cochrane, 2010).[7] The increasing male bias in the sex ratio at birth has occurred despite rapid economic growth and no official restrictions on fertility.[8] Female foeticide is generating an unprecedented demographic squeeze with likely consequences for the prevalence of prostitution and sexually transmitted infections, crime and violence, labor markets and old-age care (Angrist, 2002; Ebenstein & Sharygin, 2009; Edlund, Li, Yi, & Zhang, 2013; Samuelson, 1985).

Abortion was legalized in India with the passage of the Medical Termination of Pregnancy (MTP) Act in 1971, effective in most states in 1972. The Act provides for legal abortion under specified conditions in the first twenty weeks of pregnancy, but illegal abortion is easily accessed in India and outweighs legal abortion by a factor of 8 to 11 (Jesani & Iyer, 1993). In response to civil society protests against widespread female foeticide, the Government of India passed the Pre-Conception and Pre-Natal Diagnostic Techniques (PC&PNDT) Act in 1994. This legislation made it an offence to conduct prenatal sex detection, and imposed penalties on both citizens and medical providers for violating the guidelines. While there is some evidence that the Act had an impact on gender ratios (Nandi & Deolalikar, 2013), this has not been large enough to reverse the overall decline in sex ratios at birth.

2.2. Muslims in India

India is a country of considerable religious diversity and the constitution enshrines secularism by conferring the fundamental right to freely "profess, practice and propagate religion." Muslims form the single largest religious minority in India, constituting 14.2% of the population in the 2011 census. Hindus are the religious majority, constituting 79.8% of the

[7] There is a biological tendency for the sex ratio at birth to be biased in favor of boys, with more boys being born and more dying before reproductive age, with most of this adjustment being in the first five years of life (Fisher, 1930). However, the sex ratio at birth in India is unnaturally skewed in favor of boys.

[8] Fertility control and declining fertility has been argued to intensify son preference (Das Gupta & Mari Bhat, 1997; Ebenstein, 2010; Jayachandran, 2017).

population. With 172 million Muslims in 2011, India had the third largest Muslim population in the world. Muslims in India are more likely to live in urban areas (36% compared to 28%), and their population share varies substantially across states and across districts within states. They are, on average, poorer than Hindus: 31% of Muslims were below the poverty line in 2004-05, much higher than the figure of 21% for upper-caste Hindus and comparable to the figure of 35% for lower castes (Government of India, 2006).

Islam places a high priority on the sanctity of life, and this principle leads all schools of Islam to oppose abortion after the first 120 days of pregnancy. Views differ across different schools and scholars on the acceptability of abortion before this stage, with many scholars holding the view that life begins at conception. Infanticide is also severely discouraged. Previous research has shown that infant mortality is lower for Muslim children compared to Hindus, despite Muslims being poorer and less educated (Bhalotra, Valente, & van Soest, 2010), and Muslim families exhibit less male-biased sex ratios than Hindu and Sikh families (Almond, Edlund, & Milligan, 2013; Bhalotra & Cochrane, 2010). Using the World Values Survey data for India, we find that even after controlling for age, gender, education and wealth, Muslim respondents are significantly less likely to agree that abortion is acceptable under a range of scenarios. For instance, while 69% of Hindus agree that abortion is acceptable if the child is handicapped, the fraction is 12.5 percentage points lower for Muslim respondents (Appendix Table A1).

India is a federal country in which the constitution grants substantial policy autonomy to the 29 states. Indian states largely determine their own health and education budgets, although they receive supplementary funds from federal programs, and the federal government can also pass health-related legislation. Elections to state legislatures are held every five years on a first-

past-the-post basis in single-member constituencies. There is no explicitly Islamist party but some parties appeal more to Hindus than to Muslims. While India has political quotas for low castes in state assemblies and local governments, there are no quotas for Muslims.[9]

3. Data

3.1. Data on Politician Religious Identity

We constructed a unique dataset that identifies all candidates for state legislative assembly elections by their religion. We used data on state legislative elections provided by the Election Commission of India that list the name, constituency, political party, and votes obtained by every candidate for all elections from 1960-2010. We inferred religious identity from candidate names and classified candidates as Muslim or not. To minimize errors, we used two independent teams to conduct this classification of legislator names (see Bhalotra, Cassan, Clots-Figueras, & Iyer, 2014, for further details); disagreements between the two teams' classification were resolved by the authors on a case-by-case basis. After this procedure, we remained doubtful of the religious identity of less than 0.5% of candidate names (out of more than 250,000 names), and assigned them as "non-Muslim" as a tie-breaking rule. While Muslim names are often readily identifiable, it is difficult to distinguish Hindu names from those of other religious minorities such as Sikhs, Jains, Buddhists or Christians who constitute approximately 6% of the total population. Thus, we effectively compare Muslim legislators to those of all other religions, with Hindus being the most numerous among them.[10] We find that Muslims comprised only

[9] Jensenius (2013) discusses the historical reasons underlying the absence of electoral quotas for Muslims.
[10] Observed gender ratios among Sikhs are worse than among Hindus. Christians are similar to Muslims in being opposed to abortion; therefore, pooling Christian legislators with Hindus will lead to the under-estimation of the impact of Muslim relative to Hindu legislators.

7.3% of the members of state assemblies over the period 1980-1999, substantially lower than their population share.

3.2. Data on Fertility and Birth Outcomes

We use data from the National Family Health Survey of India (NFHS), a nationally representative survey that is one of the multi-country Demographic and Health Surveys. We use the 1998-1999 wave, since it has district identifiers that make it possible to match fertility and birth outcomes to the religious identity of local legislators.[11] Mothers aged 15-49 years at the time of the survey are asked to record their complete fertility histories and any child deaths. Births in the data go back in time to the 1960s, providing time variation in all of the outcomes. Availability of the full history for each mother allows us to identify birth order, to identify the sex of the oldest biological sibling of every child (i.e. the mother's first born), and to use mother fixed effects in the estimation.

While legislator religion is available at the level of the electoral constituency, the lowest geographic level at which we have information on birth outcomes is the administrative district of residence of the respondent mother. Almost all state electoral constituencies are contained within district boundaries and the average number of constituencies per district is 9.5. In order to match the electoral data to the outcome data, we aggregate the electoral data to the district level using the administrative district boundaries in the 1991 census.

In our main specification, we restrict the analysis to the 16 largest states in India that contain more than 95% of India's population. The key exclusion here is the one Muslim-majority

[11] The third wave, conducted in 2005-6, does not have district identifiers.

state of Jammu & Kashmir, though we verify that our results are robust to its inclusion.[12] The main specification is restricted to the period 1980-1999. We focus on years 1980 and later because electoral constituencies did not change between 1980 and 2007, so that we do not need to take into account potential effects of redistricting that might differ by politician's religion. The end point is determined by the date of the birth outcomes survey.

3.3. Main Outcomes of Interest

We conceptualize a family as making the following sequence of choices: whether to conceive; conditional upon conception, whether to engage in prenatal sex detection; conditional upon knowing foetal sex, whether to abort; and conditional upon not aborting, how much to invest in children and in particular whether to invest differently in sons and daughters.

The main outcome of interest is an indicator variable for whether a birth is a girl, a widely used marker of sex-selective abortion (see sections 1 and 2). Official data are likely to under-report abortions, since most abortions do not take place in health facilities (Singh et al., 2018), and survey data are subject to potentially endogenous under-reporting.

So as to check whether any change in live girl (relative to boy) births is offset or reinforced by changes in girl relative to boy mortality after birth, we also examine neonatal and infant mortality, defined as dummies for whether the child died in the first month and the first year of life respectively. Child mortality rates are often used as indicators of post-birth investments in children in developing countries where mortality rates are high and sensitive to parental investments. Since sex at birth and mortality after birth are both conditional on the occurrence of a birth, we also model fertility using a dummy for whether the individual mother has a birth in a given year. We expand the data to create a mother-year panel, the length of which

[12] Jammu &Kashmir is also exceptional in being the scene of a long-running dispute between India and Pakistan. This state had its elected assembly suspended for several years, and many special laws apply solely to this state, while some national laws do not apply to it.

is the duration of her reproductive years (which we assume starts at marriage) and conditioning on time since last birth. Since fertility decisions are typically made in the year before the child is born, we match all individual outcomes to the share of Muslim politicians in the year before birth in the district of birth.[13]

4. Empirical Strategy

4.1. Identification Using Close Elections

We want to estimate the impact of the share of Muslim legislators in an electoral district on the birth outcomes of households living in that district in a given year. In general, the election of Muslims rather than non-Muslims is likely to be correlated with constituency (or district) characteristics, including demographics (share of Muslims), political circumstances and voter preferences. To address this, we leverage the fact that, in first-past-the-post elections, there is a sharp discontinuity in the chances of winning when the vote share difference between the top two vote-winners is arbitrarily small, i.e. at the zero vote margin. In these circumstances, the identity of the winner can be considered quasi-random and a regression discontinuity design (RDD) provides unbiased estimates of the impact of winner identity (Lee, 2008). We therefore use the sample of elections in which Muslim and non-Muslim candidates contest, and compare districts in which Muslims won by a narrow margin to those in which Muslims lost by a narrow margin. So as to match the electoral data to the birth outcomes data which identify the district of residence of mothers, we effectively aggregate over all constituency-specific discontinuities in

[13] Since the data record district of residence rather than district of birth, we restrict the sample to children who were conceived in their current location. Approximately 16% of the survey respondents moved to their current area of residence after the child was conceived.

treatment assignment within a district, in the spirit of a "fuzzy" RDD.[14] This is implemented using two stage least squares.

In the first stage, we instrument the fraction of Muslim legislators in a district with the fraction of seats in the district won by Muslim politicians in a close election against a non-Muslim politician. We define close elections as elections in which the winner won by a margin of less than 3% of votes; approximately 9% of Muslim winners are elected with a margin of 3% or less (see summary statistics in Appendix Table A2). We investigate robustness to alternative margins. As in a standard RDD, our regressions control for a polynomial in the vote margin of every inter-religious election within the district.

Although the use of close elections ensures the internal validity of our estimates, the *existence* of close elections between Muslims and non-Muslims in a given district and year is unlikely to be exogenous, and is likely to depend upon factors such as the share of Muslims in the population, their relative status and the extent to which religion is politicized in the region. To account for this, we control for the fraction of constituencies in the district that were contested in close elections between Muslim and non-Muslim candidates (as, for example, in Bhalotra, Cassan, Clots-Figueras, & Iyer, 2014). This also controls for any direct effects of having close elections, such as greater political mobilization by parties or greater salience generated by the "excitement" of a close contest.

[14] Regression discontinuity has been previously used in the context of close elections by, among others, Lee (2008) who studies incumbency advantage, Pettersson-Lidbom (2008)who looks at the effect of party control on fiscal policies, Lee, Moretti and Butler (2004) who estimate the effect of the degree of electoral strength on legislators' voting behaviour and Bhalotra, Clots-Figueras, & Iyer (2017) who examine the impact of women's electoral victories on the subsequent political participation of women. Our approach of using an IV strategy to approximate a fuzzy RDD has antecedents in the work of Angrist and Lavy (1999) who estimated the effect of class size on educational achievements and the work of Rehavi (2007), Clots-Figueras (2011, 2012) and Bhalotra and Clots-Figueras (2014), who estimate related specifications to investigate the policy impact of the gender of elected politicians.

The instrumental variables regression equation is as follows, where equation (1) is the second stage and equation (2) is the first stage:

(1) $$Y_{idst} = \theta_{ds} + \psi_t + \beta\, ML_{ds,t-1} + \lambda TC_{ds,t-1} + \Sigma^{Nd}_{j=1}\, \alpha_{1j}\, I_{jds,t-1} * G(m_{jds,t-1}) + \Sigma^{Nd}_{j=1}\, \alpha_{2j}\, I_{jds,t-1} + X_{idst}\, \eta + \varepsilon_{idst}$$

(2) $$ML_{ds,t-1} = \theta_{ds} + \psi_t + \kappa MC_{ds,t-1} + \mu TC_{ds,t-1} + \Sigma^{Nd}_{j=1} \vartheta_{1j}\, I_{jds,t-1} * G(m_{jds,t-1}) + \Sigma^{Nd}_{j=1}\, \vartheta_{2j}\, I_{jds,t-1} + X_{idst}\, \sigma + u_{ds,t-1}$$

where Y_{idst} is the dependent variable for mother i in district d of state s and year t (dummy for a girl birth, dummy for whether any child is born and dummies for child death in the first month or year of life). The explanatory variable of interest is $ML_{ds,t-1}$, the fraction of constituencies in the district in which a Muslim legislator was elected in district d in the previous year $t-1$, the lag allowing for conception, prenatal sex detection, and abortion decisions being made a year before the birth outcome is realized. The coefficient of interest is β, which identifies the impact of a Muslim legislator relative to a non-Muslim legislator.

The share of Muslim legislators $ML_{ds,t-1}$ is instrumented with the fraction of constituencies in the district won by Muslims in close elections against non-Muslims in the same year, $MC_{ds,t-1}$. The fraction of constituencies in the district in which there were close elections between Muslims and non-Muslims, $TC_{ds,t-1}$, is controlled for in the second stage (equation 1) and partialled out of the instrument in the first stage (equation 2). The margin of victory for an inter-religious contest in constituency j of district d is denoted $m_{jds,t-1}$,defined as the vote share of the Muslim candidate minus the vote share of the non-Muslim candidate, so that by construction, a Muslim wins when the margin is positive. We control for third order polynomials in these margins, denoted G($m_{jds,t-1}$). The polynomials are interacted with $I_{jds,t-1}$, which is an indicator for whether there was an inter-religious contest in constituency j of district d. We also include indicator variables for whether there are inter-religious races; Nd is the total number of constituencies in district d.

θ_{ds} represents district fixed effects, which control for time-invariant district characteristics (including the history of Muslim presence in the district), sluggish demographic characteristics (including the share of the district population that is Muslim), the slowly moving component of public goods infrastructure and time-invariant voter preferences. Cohort (year-of-birth) fixed effects ψ_t afford a flexible representation of aggregate shocks or nationwide policies that may have influenced both birth outcomes and the religion mix of politicians. X_{idst} is a vector of household-level control variables including dummies for religion, education levels of the mother and the father, rural vs urban residence, year of marriage of the mother and whether the individual belongs to a scheduled caste or tribe (which we loosely refer to as "low caste") or to the "Other Backward Castes."[15] To allow standard errors in a district to be correlated across families in the district and across time, the standard errors are clustered at the district level.

4.2. First Stage Relationship

Figure 1 plots the overall fraction of Muslim legislators against the victory margin, defined as the difference in vote share between the Muslim and the non-Muslim candidates, so that margin > 0 denotes a Muslim electoral victory and margin < 0 denotes a Muslim loss. We see that when a Muslim narrowly wins against a non-Muslim (i.e. when the vote margin is just larger than zero), there is a dramatic jump in the district share of Muslim legislators. In other words, if a Muslim wins a close election in any electoral constituency within a district, then the overall fraction of Muslim legislators in the (larger) administrative district rises significantly. The first stage regression results, estimates of equation (2) above, are shown in Appendix Table A3, and they confirm that the instrument is a strong predictor of the fraction of Muslim legislators in a district.

[15] The Scheduled Castes are communities that have historically been at the bottom of the Hindu caste hierarchy. Scheduled Tribes include communities traditionally outside the Hindu caste system. Other Backward Castes refer to castes that are in the middle of the caste hierarchy.

4.3. Validity of the Instrumental Variables Strategy

In this section we present tests of the validity of the RDD that underlies the IV identification strategy we use (Imbens & Lemieux, 2008). First, we test for vote manipulation around the zero vote margin, and find that the vote margin is continuous in the neighborhood of zero, the threshold which separates the Muslim victory from the non-Muslim victory (Figure 2A). A formal test estimating the difference in the densities on either side of the zero point (McCrary, 2008) confirms this, the estimated difference being a statistically insignificant −0.0391 (Figure 2B).

Second, we examine whether constituency demographics vary discontinuously at the zero vote margin, in the spirit of a test of balance between treated constituencies (in which a Muslim narrowly won against a non-Muslim) and control constituencies (in which a non-Muslim narrowly won against a Muslim). Using demographic characteristics from the 2001 census (which provides these variables at the constituency level), we show RDD plots for the fraction of the population that is urban, the fraction of population belonging to the Scheduled Caste and Scheduled Tribe categories, the female population share and the average literacy rate (Figures 3A-3D). These characteristics are graphed against the victory margin on the x-axis (similar to Figure 1), with the lines representing a non-parametric (lowess) fit on either side of the discontinuity. None of these characteristics exhibits a discontinuity at the zero vote margin. The share of Muslims in the population is not available at the constituency level but we have repeated the exercise with the share at the district level and this is continuous across the zero margin threshold (Figure 3E).

Third, we examine political characteristics of the constituency, and find that electoral races with Muslim winners are not significantly different from those with non-Muslim winners

in terms of total votes cast, number of candidates and the participation of Muslims and women as candidates (Figures 4A-4D). However, Figures 4E-4G show that Muslim winners, even in close elections, are significantly more likely to belong to the Indian National Congress (INC) party or the Bahujan Samaj Party (BSP), and significantly less likely to belong to the Bharatiya Janata Party (BJP). This is not surprising, given that the BJP often espouses a vision of India as a Hindu nation, while the other parties do not. In all regressions, we therefore include controls for the fraction of seats in the district won by the INC, the BJP and the BSP so that our estimates identify the effect of the personal religious identity of the legislator rather than his or her party affiliation.[16] We further verify that Muslim winners are not more likely to be incumbents compared to non-Muslims, which rules out incumbency effects explaining our results (Figure 4H).

Although the close election strategy does not require balance on personal characteristics, it is useful for interpretation of the estimates to consider how the characteristics of Muslim vs non-Muslim legislators who win in close races against the other religion compare. Data on candidate characteristics are only available from 2004 to 2007,[17] using which we find no significant differences in education levels, net worth (assets minus liabilities) or the likelihood of having serious criminal charges pending against them (Appendix Figure A2). While we cannot rule out that Muslim winners are positively or negatively selected on unobservables compared to non-Muslims, this would only bias our estimates if such unobservables were correlated with preferences for abortion (or, preferences for fertility or investments in boy vs girl children).

[16] There is no difference in the probability of Muslim winners belonging to Communist parties (results not shown).

[17] A Supreme Court decision mandated that, beginning in 2004, all candidates for political office were required to disclose information on their education, assets, liabilities and any criminal charges filed against them. We limit the data range to 2007 to avoid potential confounding effects of the 2008 electoral redistricting.

5. Muslim Political Representation and Gender Outcomes

5.1. Sex Ratio at Birth

We first discuss estimates of equation (1) when the dependent variable is the probability that a birth is a girl. On average, we find no significant impact of legislator religion on this variable (Table 1, column 1). However, when we break out the effects by birth order, we see that there is a significantly higher probability of girl births at birth orders 2 and above in districts with a higher fraction of Muslim legislators (column 2). In fact, this is driven by birth orders 3 and above, where the impact of Muslim legislators is significant at the 5% level of significance (column 3). The effect is sizeable. Since districts on average have 9.5 electoral constituencies, one additional Muslim legislator in the district increases the fraction of Muslim legislators by approximately 10% and therefore the probability of a girl birth increases by 1.79 percentage points at birth order 3 or higher. In 1995, arbitrarily selected as being in the middle of our sample, there were 26.3 million births in India and 45.4% of these were third order or higher. Our estimates therefore imply that an additional Muslim legislator in every district would increase girl births by 0.214 million. This is a large impact considering that Bhalotra and Cochrane (2010) estimate a total of 0.48 million sex-selective abortions per year in 1995-2005.

While our results already control for characteristics such as rural residence, education of the woman and her partner, her religion and caste, and her age at marriage, we verify that the results are robust to including a quadratic polynomial in the mother's age at birth, as well as her height which is often used as a proxy for early life nutritional status (column 4). So as to allow for compositional effects, for instance, women with different preferences giving birth under Muslim vs non-Muslim legislators, we ran an additional specification with mother fixed

effects.[18] The coefficient of interest is now slightly larger, indicating that an additional Muslim politician results in a 2.11 percentage point increase in the probability of a girl birth at orders 3 and above (column 5).[19]

5.2. Robustness Checks

We subjected the main results on the relative chances of a girl birth to a further barrage of robustness checks, using the specification in Table 1, Column 3. We tested robustness to controlling for state*cohort fixed effects, district-specific linear trends and household wealth, and to the inclusion of the Muslim-majority state of Jammu & Kashmir in the sample (Table 2, columns 1-4).[20] The coefficient of interest, for birth order 3 and above, remains statistically significant and is slightly larger than in our base specification. Restricting the sample to only district-years with at least one close election between non-Muslim and Muslim candidates also raises the coefficient slightly (to 0.189), but we lose statistical significance because of the large decrease in the number of observations (column 5).

We checked sensitivity to the definition of close elections, replacing the 3% with a 2.5% vote margin. This makes treatment and control areas more comparable, but at the cost of a potential loss of power. The coefficient declines to 0.128 (which is not significantly different

[18] The sample for this regression is limited to women with multiple births in our sample. The coefficient on Muslim legislators * birth order 3 and above for this sample (without mother fixed effects) is 0.169, very close to our estimate of 0.179 in column 4.

[19] Table 1 also displays the main effect of Muslim legislators which, in columns 2 onward, is the coefficient for the firstborn child. As discussed in section 2, previous research suggests that the sex of first births is not manipulated. The first birth attracts a negative, but not significant coefficient, which is consistent with previous evidence that Muslim legislators are better at delivering maternal and child health services (Bhalotra et al., 2014). In view of the greater innate vulnerability of the male foetus (Low, 2001; Waldron, 1983), this will favor survival of male births. This is also evident in our results for childhood mortality, which show that first-order male births suffer lower infant mortality (see Table 6, discussed later). The coefficients for higher order births, which are of opposite sign, pick up the impact of sex-selective abortion (girl foeticide) net of any overall improvements in foetal health affected by Muslim legislators.

[20] The baseline specification does not control for household wealth because this is recorded only for the year of the survey, but may have varied across the reproductive years of the mother in ways that are correlated with household fertility decisions.

from the baseline coefficient), and remains significant at the 10% level of significance (Table 2, column 6). Finally, we conducted a placebo test that examines whether the religion identity of legislators elected in the next term, five years after the birth year, influence birth outcomes. The coefficient of interest is much smaller and not statistically significant (Table 2, column 7).

5.3. Inferring Sex-Selection

The degree of variation that we identify in birth sex ratios is larger than what would be consistent with biological variation. Since we have quasi-experimental variation in legislator religion in the close election sample we use, and we have subjected that specification to tests for omitted trends, it is hard to think of an explanation of our findings other than that families are less likely to abort girls when Muslim legislators are in power. We nevertheless consider here whether the influence of legislator religion follows previously documented patterns of sex-selective abortion. Our result that Muslim legislators have a significant impact only on higher birth orders is consistent with a large literature showing that sex selection and other types of gender-biased investments are more prevalent at higher order births (Bhalotra & van Soest, 2008; Jayachandran & Kuziemko, 2011; Jayachandran & Pande, 2017). The reason there is no sex-selection among first births is that most Indian parents want one girl and want at least two children. Since the median parent wants three, the tension between desired fertility and the desired sex composition of births is likely to become particularly strong at order three.

We investigate other known patterns. For instance, sex-selective abortion in India is concentrated among Hindus and particularly in those with a first-born daughter (Bhalotra & Cochrane, 2010). Sikhs are also known to conduct sex-selective abortions (Almond et al., 2013). In line with this, we find a slightly larger impact of Muslim legislators on the birth sex ratio in Hindu and Sikh than among Muslim families (Table 3, columns 1 and 2). Columns 3 and 4 show

that among Hindus and Sikhs there is a larger reduction in foeticide in families with a girl child at first birth than in those with a first son, consistent with the former having a stronger underlying tendency to sex-select (the coefficients are 0.320, significant at 10% level vs 0.0870 which is insignificant).[21] Also, in line with results in Bhalotra & Cochrane (2010) and Jha et al. (2011) showing that sex-selective abortion is more common among urban, upper-caste and more educated women, we find that the influence of Muslim vs non-Muslim legislators on sex-selective abortion is larger in these groups (Appendix Table A4, columns 4-9). It is also highest for families in the middle of the wealth distribution consistent with the poor being liquidity constrained in terms of affording ultrasound scans and abortions, and the rich having the resources to raise an additional child (columns 1-3).[22]

We also find that legislator religion has a larger impact in curbing female foeticide in states that historically have had greater gender bias. We proxy entrenched gender bias using the population share of women, computed at the state level using data from the 1981 census, before the start of our analysis period. This proxy is justified by a long literature documenting that the phenomenon of "missing women" in India arises from the pervasive neglect of girls and women (Anderson & Ray, 2010; Sen, 1992, 2003). Consistent with this, the coefficient of interest is twice as large for states with below-average population gender ratios and there is no statistically significant impact of Muslim legislators in states with above average gender ratios (Table 3, columns 7 and 8). We find a similar pattern of results using the gender literacy gap as a proxy for state-level gender bias (results available upon request).

[21] Results are similar if we restrict the sample to Hindu families only or examine all non-Muslim families relative to Muslims.

[22] Wealth categories are constructed as terciles of an asset index based on ownership of a suite of assets for each household.

Finally, since ultrasound technology was only widely available in India after 1985, and without ultrasound, it was much more difficult and expensive to determine the gender of a foetus, we expect less sex-selective abortion and hence less of an influence of policy on this outcome pre-1985.[23] This is indeed what we find (Table 3, columns 5 and 6).

5.4. Fertility

Gender at birth is, of course, conditional on birth. We examined the probability of any birth as a fertility outcome, keeping in mind that this reflects a combination of the decision to conceive and the decision not to terminate the pregnancy (for sex selection or other reasons). We find a significantly higher probability of a birth at birth orders 2 and greater, in places with a higher fraction of Muslim legislators (Table 4, column 2); this higher probability arises primarily from birth orders 3 and above (column 3). We estimate that one additional Muslim legislator (instead of a non-Muslim legislator) leads to a 2.02 percentage point increase in the probability of a birth at order 3, which is close to the 1.79 percentage point increase in the probability of a *girl* birth at order 3 that we reported earlier (Table 1, column 3). Thus, increased fertility under Muslim leaders is almost completely explained by the higher probability of girl births.

While this is likely to be a mechanical effect, we may additionally expect that families that do not conduct sex selection of births at order three but that nevertheless desire more sons, will continue fertility to birth orders 4 and higher. Thus an intervention such as the (notional) replacement of a non-Muslim by a Muslim legislator that lowers sex selection at orders three and higher should lead to higher fertility at orders four and higher. We find that Muslim legislator presence is indeed associated with an increased probability of 4th and higher order births (Table

[23] The first imports of ultrasound machines that enable prenatal sex detection are recorded in the mid-1980s; see Bhalotra & Cochrane (2010) who document that the sex ratio at birth only began to depart significantly from the normal ratio after the introduction of ultrasound.

4, column 4). The results for fertility at third and fourth or higher order are robust to controlling for mother fixed effects, in fact the coefficients are larger (columns 5 and 6). This is important as it adjusts for (time-invariant) fertility preferences.

We subjected the fertility results to the same robustness checks as for the sex ratio at birth, including state*year fixed effects, district-specific linear time trends, controlling for household wealth, including the Muslim-majority state of Jammu & Kashmir and changing the margin used to define close elections to 2.5%. Results are robust to all of these changes (Appendix Table A5, columns 1-6). We also conducted a placebo exercise where current fertility outcomes were regressed on Muslim representation five years in the future, and found no significant effects. This verifies that our results are not driven by unobserved characteristics of the districts that elect more Muslim legislators.

As with the gender of birth, the pattern of coefficients in different subsamples is consistent with the additional fertility being driven by reduced sex-selective abortion. The fertility effects of Muslim legislators are larger for Hindu and Sikh than for Muslim families (Table 5, columns 1 and 2), although only slightly larger when the first child is a girl rather than a boy (columns 3 and 4). We also see a higher fertility response to Muslim legislators in the period after 1985, when ultrasound scanners became available in India (columns 5 and 6) and in states with below-average female population share (columns 7 and 8). In other words, we see the increases in fertility precisely among the households that display lower sex selection in response to the presence of Muslim legislators.

5.5. Infant Mortality of Girls vs Boys

As explained earlier, we investigate whether declines in girl abortion are offset by increases in postnatal girl deaths. We find a statistically significant impact of legislator religion

on infant mortality in favor of girls at birth orders three and higher (Table 6, column 2). Since this is exactly where we see increases in girl births, we can reject the concern that what we observe is simply a substitution of postnatal for prenatal girl death. We also see a tendency for girl neonatal mortality to decline although this is imprecisely determined. Neonatal and infant mortality among boys at orders 2 and above is not influenced by legislator gender (column 3). However, we see a significant decline in infant mortality among first births, primarily for boys. This is consistent with previous research showing that Muslim legislators are more effective at producing public health outcomes (Bhalotra et al., 2014).

6. Mechanisms

Our working hypothesis is that the suite of results we have discussed arise from stronger anti-abortion preferences among Muslims that are embodied in Muslim legislators who find ways to translate them into policy. It is difficult to identify specific activities of state legislators in their constituencies as there are no consistent data for this, but below we report exploratory work designed to illuminate the mechanisms at play.

6.1. Gender Preferences or Abortion Preferences?

Since we observe lower female foeticide and lower infant mortality, a natural alternative hypothesis is that Muslim legislators have more pro-woman preferences or lower son preference than Hindus. To investigate this, first, we provide direct evidence on abortion preferences, then we provide evidence on (stated) son preference and, finally, we investigate whether Muslim legislators exhibit a pro-female bias in other outcomes, using data on crimes against women.

Abortion Preferences. As discussed earlier, Muslims express significantly greater opposition to abortion (Appendix Table A1). Our premise is that Muslim legislators share the

preferences of the Muslim population, and we have investigated this by studying how policy outcomes vary with legislator religion.

Son Preference in Fertility. We compared stated preferences using the NFHS. Muslims report that they desire a larger number of boy *and* girl children (i.e. higher desired fertility) but the desired share of boys among all children is not significantly different across Hindu and Muslim families (Appendix Table A6, columns 5-7).

Pro-Woman Preferences. We do not find any evidence that Muslims espouse greater pro-woman preferences in general. Using data from the World Values Surveys for India, we find that Muslims are significantly less likely to agree with the statement "both the husband and wife should contribute to household income," but no more likely than Hindus to say that "A university education is more important for a boy than a girl" (Appendix Table A6, columns 1 and 2). There is also no significant difference between Muslims and Hindus on whether they agree with the statements "Men make better political leaders than women do" and "Men make better executives than women do."

A different way to assess the importance of pro-women preferences is to compare our estimates with the impact of women legislators, since women legislators are likely to embody pro-woman preferences. Using a similar identification strategy based on close elections between men and women, we find that the presence of women legislators also leads to a higher probability of girl births at higher birth orders, though the coefficient is not statistically significant (Appendix Table A8, column 1). There is no impact of women legislators on fertility, in fact the estimated effect on third-order births is negative (column 2). Consistent with the results in Bhalotra & Clots-Figueras (2014), we see that infant mortality and neonatal mortality rates are lower under women legislators (columns 3-6). Taking together the fact that the

estimated coefficient for women legislators is similar in size to the coefficient linking Muslim leaders and sex selection, but that fertility shows a compensating rise under Muslim leaders but not under women leaders, it seems that women leaders may be more effective at mitigating the exercise of son preference while Muslim leaders, concerned primarily with averting the act of abortion, engender a substitution from sex-selective abortion to fertility continuation.

Pro-Female Policies. We investigated whether domestic violence and crimes against women varied with legislator religion. Domestic violence questions were asked in the NFHS-2, but only at the time of the survey, so we are not able to implement the original regression specification that includes both district and time fixed effects. We therefore run a regression that includes state*year of interview fixed effects (the survey was conducted over 1998 and 1999), and instrument the fraction of Muslim legislators in the district with the fraction of Muslim legislators who won in close elections with margin less than 3%. We find no significant impact of legislator religion on the fraction of women who report not being beaten over the past 12 months, or being beaten many times over the past 12 months (Appendix Table A7, columns 1 and 2). We also find no change in attitudes towards domestic violence, measured as the fraction of female respondents who agree that it is acceptable for a husband to beat his wife for any or all of six specified reasons (Appendix Table A7, panel A, columns 3 and 4).[24]

We obtained data on reported crimes against women over the period 1980-1999 from the National Crime Records Bureau, and ran an instrumental variables regression along the lines of equation (1), controlling for district and year fixed effects. The dependent variable is the logarithm of the reported number of crimes per 100,000 women in the following categories: rape, kidnapping of women and girls, molestation (sexual assault), sexual harassment, cruelty by

[24] The reasons enumerated in the survey are: if he suspects her of being unfaithful; if her natal family does not give expected money, jewellery, or other items; if she shows disrespect for her in-laws; if she goes out without telling him; if she neglects the house or children; or if she does not cook food properly.

husband or relatives (domestic violence) and dowry deaths. We do not find any significant effect of Muslim relative to non-Muslim legislators on any category of crime against women (Appendix Table A7, panel B).[25]

In sum, we do not find any evidence that Muslim legislators change attitudes or societal behaviour towards women in general, suggesting that their impact on girl abortion arises from religious preferences against abortion rather than religious preferences that are more favourable to girls or women in general.

6.2. Legislative versus Executive Action

Muslim legislators' anti-abortion preferences may translate into fertility and gender outcomes via the legislative process, for instance, by Muslim legislators lobbying for more restrictive access either to abortion or to sex-determination. India does not collect data on individual legislators' voting records. As a partial proxy for legislative action, we examined the records of parliamentary debates over 2001-2015 to see whether Muslim legislators spoke more often on issues of abortion or sex determination.[26] We do not find any evidence of this, for instance, Muslim legislators made 0.21 remarks regarding foeticide on average, compared to 0.27 for Hindu legislators; Muslim legislators made no comments related to abortion, while 2% of Hindu legislators contributed to debates on abortion.

A different mechanism for legislators to implement their preferences is to ensure better enforcement of existing legislation. The Pre-Conception and Pre-Natal Diagnostic Techniques (PC&PNDT) Act, enacted in 1994 and in effect from 1996, made pre-natal sex determination a

[25] The last four categories are reported only in years 1995 and later; kidnapping of women and girls is reported for years 1985 and later. We see no impact of Muslim legislators on crimes against women even in the longer sample period of 1980-2008 for which we have crime data.

[26] These data were obtained using the search engine on debates in the national parliament http://164.100.47.194/Loksabha/Debates/DebateAdvSearch16.aspx. Unfortunately, similar debate proceedings are not easily available at the state level.

legal offence. We examined whether the impact of Muslim legislator on gender of births is higher in periods after the PC&PNDT Act was enforced. We code the post-PC&PNDT period as the years 1996 and later for all states, except for Maharashtra which unilaterally enacted the law in 1988. The estimates in Table 7 indicate larger impacts of Muslim legislators on the probability of a girl at third or higher order birth in the post-reform years (0.296), compared to the pre-reform years (0.171), although the difference is not statistically significant.

7. **Conclusions**

We examined whether the religious preferences of elected representatives can shape the birth outcomes of the population, using large-scale representative household survey data and a unique data base identifying the religion of all candidates for election to India's state legislative assemblies. We focused on sex-selective abortion as an outcome, because different religions have different preferences towards abortion, and because sex-selective abortion is a phenomenon of growing proportions. Moreover, it is a phenomenon that appears not to have responded to policy-led prohibitions. Our results suggest that one reason for this is that India has predominantly Hindu legislators whose preferences are likely to be aligned with those of the majority Hindu population, which appears to condone or at least accept sex-selective abortion. Using a quasi-experimental approach which mimics the thought experiment of replacing a non-Muslim with a Muslim legislator, we show that Muslim legislators are more effective at controlling the selective abortion of girls. This is in line with Muslims reporting stronger preferences against abortion and with their being much less likely than Hindus to conduct it. Our paper thus highlights the personal identity of legislators as a key component of policy effectiveness.

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Table 1
Legislator Religion and Sex-Selective Abortion

Dependent Variable: Dummy for the birth of a girl child

	(1)	(2)	(3)	(4)	(5)
	Pooled birth order	Order 2+	Order 2, 3+	Mother characteristics	Mother FE
Fraction Muslim legislators (ML)	-0.0650	-0.141	-0.141	-0.141	-0.121
	(0.0812)	(0.0906)	(0.0912)	(0.0910)	(0.117)
ML*birth order>=2		0.115*			
		(0.0678)			
ML*birth order 2			0.00507	0.00524	0.0157
			(0.0890)	(0.0891)	(0.0941)
ML*birth order>=3			0.179**	0.179**	0.211**
			(0.0716)	(0.0715)	(0.0830)
Fraction of close inter-religious elections	-0.00603	-0.00639	-0.00939	-0.00964	-0.0136
	(0.0330)	(0.0326)	(0.0328)	(0.0328)	(0.0407)
Birth order>=2		-0.00920			
		(0.00575)			
Birth order 2	-0.00150		-0.00182	-0.00183	0.00249
	(0.00397)		(0.00691)	(0.00692)	(0.00772)
Birth order>=3	-0.00259		-0.0139**	-0.0139**	-0.0409***
	(0.00448)		(0.00651)	(0.00650)	(0.00918)
Observations	119,237	119,237	119,237	119,237	111,121
Number of mothers					32,731

*** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses, clustered at district level. Coefficients are from 2SLS regressions, controlling for district and year-of-birth fixed effects, 3rd degree polynomials in the vote margins, demographics of the household (dummies for rural residence, Scheduled Caste, Scheduled Tribe, Muslim, Other Backward Caste, education levels of father and mother, year of marriage of mother), and party identity of politicians. Regressions exclude the state of Jammu & Kashmir.

Table 2
Legislator Religion and Sex-Selective Abortion: Robustness Tests

Dependent variable: dummy for the birth of a girl

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	State*year FE	District-specific trends	Control for household wealth	Include Jammu & Kashmir	District-years with at least one close inter-religious election	Close elections with 2.5% vote margins	Muslim representation 5 years after birth
Fraction Muslim legislators (ML)	-0.149	-0.136	-0.142	-0.151	0.00490	-0.111	-0.129
	(0.0928)	(0.0945)	(0.0905)	(0.0977)	(0.145)	(0.0969)	(0.0826)
ML*birth order 2	0.0118	0.0113	0.00526	0.00609	-0.0198	-0.0236	0.0453
	(0.0895)	(0.0897)	(0.0890)	(0.0989)	(0.128)	(0.104)	(0.0721)
ML*birth order>=3	0.183**	0.192***	0.179**	0.201**	0.189	0.128*	0.0747
	(0.0726)	(0.0732)	(0.0715)	(0.0808)	(0.123)	(0.0744)	(0.0614)
Fraction of close	0.00293	-0.0190	-0.00911	-0.0102			0.0247
inter-religious elections	(0.0333)	(0.0379)	(0.0327)	(0.0325)			(0.0343)
Birth order 2	-0.00195	-0.00233	-0.00173	-0.00155	0.00246	1.82e-05	-0.00727
	(0.00693)	(0.00694)	(0.00691)	(0.00914)	(0.0213)	(0.00777)	(0.00601)
Birth order>=3	-0.0142**	-0.0151**	-0.0140**	-0.0185**	-0.0181	-0.0107	-0.00907
	(0.0066)	(0.00665)	(0.00650)	(0.00858)	(0.0277)	(0.00683)	(0.00556)
Observations	119,237	119,237	119,208	123,404	15,953	119,237	150,707

*** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses, clustered at district level. Coefficients are from 2SLS regressions, controlling for district and year-of-birth fixed effects, 3rd degree polynomials in the vote margins, demographics of the household (dummies for rural residence, Scheduled Caste, Scheduled Tribe, Muslim, Other Backward Caste, education levels of father and mother, year of marriage of mother), and party identity of politicians. Regressions exclude the state of Jammu & Kashmir except when specified.

Table 3
Legislator Religion and Sex-Selective Abortion: Heterogeneity

Dependent Variable: Dummy for the birth of a girl child

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sample	Hindus & Sikhs	Muslims	Hindus & Sikhs, First child is a girl	Hindus & Sikhs, First child is a	After 1985	Until 1985	States with worse gender ratio 1981	States with better gender ratio 1981
Fraction Muslim	-0.152	-0.0255	-0.311	-0.216	-0.219	0.0348	-0.199*	-0.0663
legislators (ML)	(0.125)	(0.197)	(0.217)	(0.222)	(0.141)	(0.433)	(0.115)	(0.162)
ML*birth order 2	-0.0747	0.111			-0.0121	-0.272	0.0114	-0.0198
	(0.130)	(0.148)			(0.137)	(0.238)	(0.106)	(0.174)
ML*birth order>=3	0.157	0.150	0.320*	0.0870	0.227**	0.166	0.221***	0.104
	(0.118)	(0.117)	(0.169)	(0.173)	(0.111)	(0.366)	(0.0828)	(0.171)
Fraction of close	0.0282	-0.129**	-0.0151	0.0485	0.0220	0.334	-0.00703	0.0246
inter-religious elections	(0.0449)	(0.0654)	(0.0876)	(0.0787)	(0.0525)	(0.208)	(0.0405)	(0.0836)
Birth order 2	0.00129	-0.0193			-0.00386	0.0198	-0.000809	-0.00263
	(0.00777)	(0.0282)			(0.00827)	(0.0161)	(0.00917)	(0.0112)
Birth order>=3	-0.0109	-0.0269	-0.0232**	0.00426	-0.0161**	-0.00995	-0.0208**	-0.00415
	(0.00734)	(0.0247)	(0.0104)	(0.0103)	(0.00730)	(0.0232)	(0.00875)	(0.0110)
Observations	101054	15,133	33845	32182	82080	22024	69958	49279

*** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses, clustered at district level. Coefficients are from 2SLS regressions, controlling for district and year-of-birth fixed effects, 3rd degree polynomials in the vote margins, demographics of the household (dummies for rural residence, Scheduled Caste, Scheduled Tribe, Muslim, Other Backward Caste, education levels of father and mother, year of marriage of mother), and party identity of politicians. Regressions exclude the state of Jammu & Kashmir.

Table 4
Legislator Religion and Fertility

Dependent Variable: Indicator for a birth

	(1)	(2)	(3)	(4)	(5)	(6)
	Pooled birth order	Order 2+	Order 2, 3+	Order 2, 3, 4+	mother FE	mother FE
Fraction Muslim	0.0465	-0.0594	-0.0499	-0.0517	-0.0987	-0.115
legislators (ML)	(0.0445)	(0.0650)	(0.0637)	(0.0634)	(0.0965)	(0.0940)
ML*birth order>=2		0.150**			0.00739	0.00369
		(0.0745)			(0.0794)	(0.0724)
ML*birth order 2			0.0167	0.0158		
			(0.0633)	(0.0628)		
ML*birth order>=3			0.202**		0.226*	
			(0.0818)		(0.117)	
ML*birth order 3				0.168**		0.172
				(0.0826)		(0.105)
ML*birth order>=4				0.224***		0.274**
				(0.0847)		(0.129)
Fraction of close	-0.0144	-0.0132	-0.0152	-0.0149	-0.0163	-0.0179
inter-religious elections	(0.0216)	(0.0216)	(0.0215)	(0.0216)	(0.0301)	(0.0306)
Observations	573879	573879	573879	573879	571888	571888
Number of mothers					49563	49563

*** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses, clustered at district level. Coefficients are from 2SLS regressions, controlling for district and year-of-birth fixed effects, 3rd degree polynomials in the vote margins, demographics of the household (dummies for rural residence, Scheduled Caste, Scheduled Tribe, Muslim, Other Backward Caste, education levels of father and mother, year of marriage of mother), and party identity of politicians. All regressions control for the time since the last birth and main effects of birth order dummies (not shown). Regressions exclude the state of Jammu & Kashmir.

Table 5
Legislator Religion and Fertility: Heterogeneity

Dependent Variable: Whether there is any birth in that year

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Hindus & Sikhs	Muslims	Hindus & Sikhs, First child is a girl	Hindus & Sikhs, First child is a boy	After 1985	Until 1985	States with worse gender ratio	States with better gender ratio
Fraction Muslim	-0.0833	0.00882	-0.113	-0.0594	-0.103	0.158	-0.0971	0.0867
legislators (ML)	(0.0685)	(0.114)	(0.0870)	(0.0960)	(0.0642)	(0.222)	(0.0796)	(0.0924)
ML*birth order 2	0.0451	-0.0373			0.0522	-0.0968	-0.0234	0.0325
	(0.0826)	(0.0917)			(0.0647)	(0.136)	(0.0738)	(0.0898)
ML*birth order>=3	0.228***	0.141	0.194**	0.185**	0.236***	0.193	0.206**	0.0845
	(0.0836)	(0.132)	(0.0894)	(0.0745)	(0.0849)	(0.163)	(0.102)	(0.131)
Fraction of close	-0.0130	-0.0254	0.0584**	-0.0247	-0.0232	-0.0884	-0.00130	0.000939
inter-religious elections	(0.0247)	(0.0346)	(0.0291)	(0.0303)	(0.0204)	(0.0871)	(0.0252)	(0.0407)
Birth order 2	0.0185***	0.0276			0.00463	0.0330***	0.0380***	-0.00244
	(0.00593)	(0.0168)			(0.00581)	(0.0107)	(0.00798)	(0.00733)
Birth order>=3	-0.0864***	-0.0534**	-0.0885***	-0.105***	-0.0974***	-0.0645***	-0.0638***	-0.102***
	(0.00734)	(0.0237)	(0.00599)	(0.00498)	(0.00759)	(0.0130)	(0.0102)	(0.0102)
Observations	511039	62840	145723	199805	487812	86067	321786	252093

*** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses, clustered at district level. Coefficients are from 2SLS regressions, controlling for district and year-of-birth fixed effects, 3rd degree polynomials in the vote margins, demographics of the household (dummies for rural residence, Scheduled Caste, Scheduled Tribe, Muslim, Other Backward Caste, education levels of father and mother, year of marriage of mother), and party identity of politicians. All regressions control for the time since the last birth. Regressions exclude the state of Jammu & Kashmir.

Table 6
Legislator Identity and Childhood Mortality by Gender

Dependent variable -->	(1)	(2)	(3)	(4)	(5)	(6)
	Infant mortality			Neonatal mortality		
	All	Girls	Boys	All	Girls	Boys
Fraction Muslim	-0.133*	0.0135	-0.279***	-0.0549	0.0218	-0.126
legislators (ML)	(0.0688)	(0.0912)	(0.0893)	(0.0654)	(0.0759)	(0.0847)
ML*birth order 2	0.00217	-0.0566	0.0606	-0.0241	-0.0164	-0.0257
	(0.0541)	(0.0838)	(0.0588)	(0.0482)	(0.0635)	(0.0584)
ML*birth order>=3	-0.0250	-0.120*	0.0511	-0.0127	-0.0485	0.0153
	(0.0433)	(0.0622)	(0.0637)	(0.0424)	(0.0513)	(0.0559)
Fraction of close	0.00719	0.00427	0.0136	0.0234	0.0180	0.0313
inter-religious elections	(0.0297)	(0.0360)	(0.0360)	(0.0218)	(0.0273)	(0.0299)
Birth order 2	-0.000413	0.00993*	-0.0100**	-0.00461	-0.00230	-0.00727
	(0.00395)	(0.00582)	(0.00489)	(0.00344)	(0.00450)	(0.00457)
Birth order>=3	0.0142***	0.0340***	-0.00275	-0.000716	0.00746	-0.00771
	(0.00413)	(0.00595)	(0.00572)	(0.00373)	(0.00483)	(0.00485)
Sample	all	girls	boys	all	girls	boys
Observations	111,637	53,604	58,033	118,377	56,841	61,536

*** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses, clustered at district level. Coefficients are from 2SLS regressions, controlling for district and year-of-birth fixed effects, 3rd degree polynomials in the vote margins, demographics of the household (dummies for rural residence, Scheduled Caste, Scheduled Tribe, Muslim, Other Backward Caste, education levels of father and mother, year of marriage of mother), and party identity of politicians. Regressions exclude the state of Jammu & Kashmir.

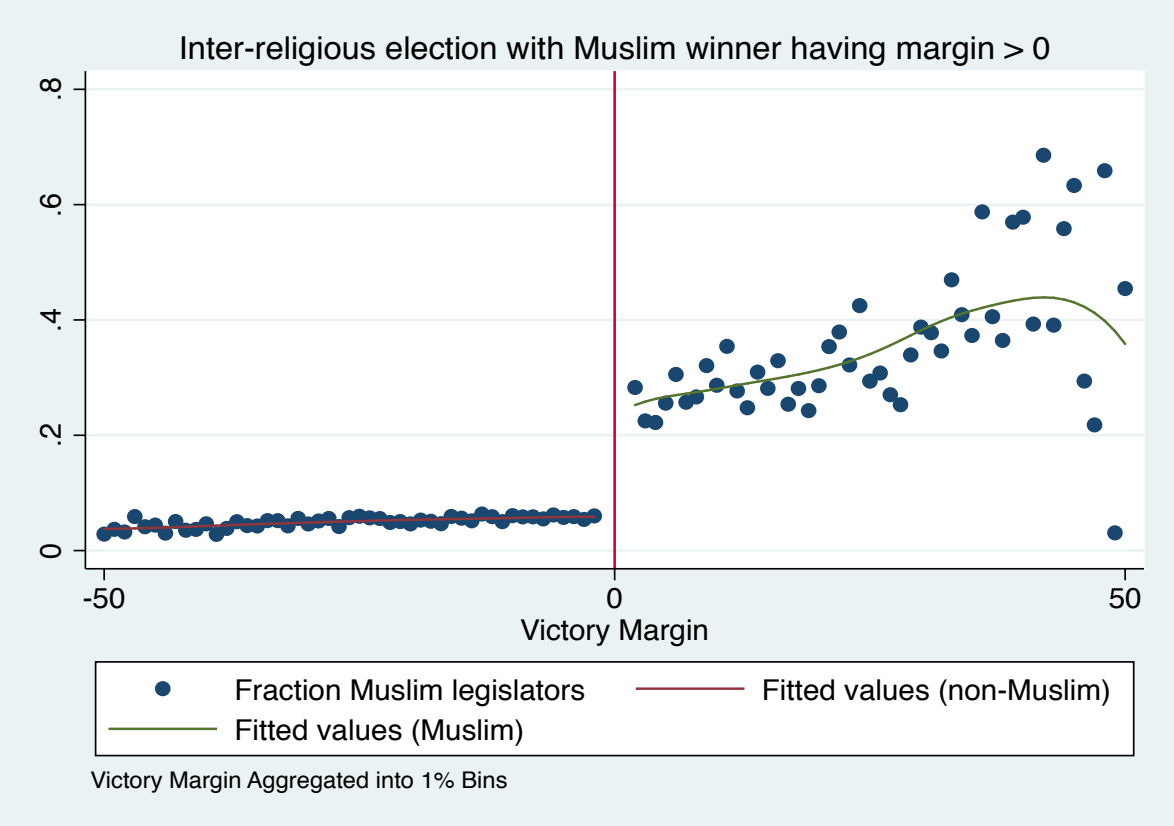
Table 7
Legislator Identity and Effectiveness of Prohibition on Pre-Natal Sex Determination

Dependent Variable: Dummy for the birth of a girl child

	(1)	(2)
	PC&PNDT Act in Force	PC&PNDT Act Not in Force
Fraction Muslim	-0.321	-0.142
legislators (ML)	(0.275)	(0.103)
ML*birth order 2	0.338*	-0.0359
	(0.192)	(0.0954)
ML*birth order>=3	0.296*	0.171**
	(0.180)	(0.0846)
Fraction of close	-0.248**	0.00559
inter-religious elections	(0.126)	(0.0392)
Birth order 2	-0.0251*	0.00118
	(0.0146)	(0.00756)
Birth order>=3	-0.0221	-0.0142*
	(0.0162)	(0.00755)
Observations	25447	93790

*** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses, clustered at district level. Coefficients are from 2SLS regressions, controlling for district and year-of-birth fixed effects, 3rd degree polynomials in the vote margins, demographics of the household (dummies for rural residence, Scheduled Caste, Scheduled Tribe, Muslim, Other Backward Caste, education levels of father and mother, year of marriage of mother), and party identity of politicians. Regressions exclude the state of Jammu & Kashmir. PC&PNDT Act refers to the Pre-Conception and Pre-Natal Diagnostic Techniques Act, that came into force nationwide in 1996, and in Maharashtra state in 1988.

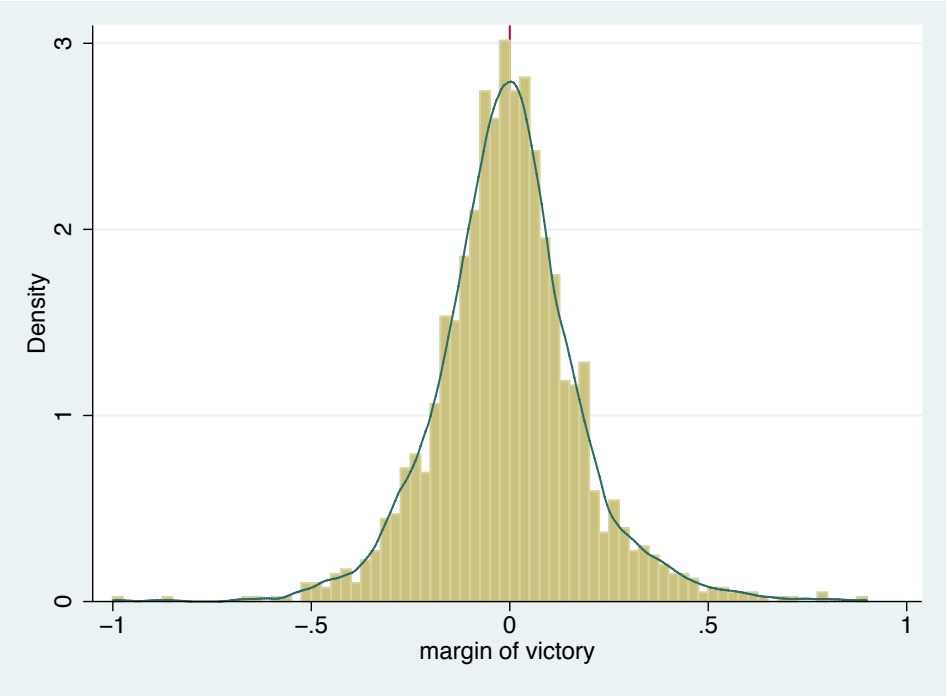
Figure 1
First Stage: Discontinuity in Winning Chances at Victory Margin of Zero



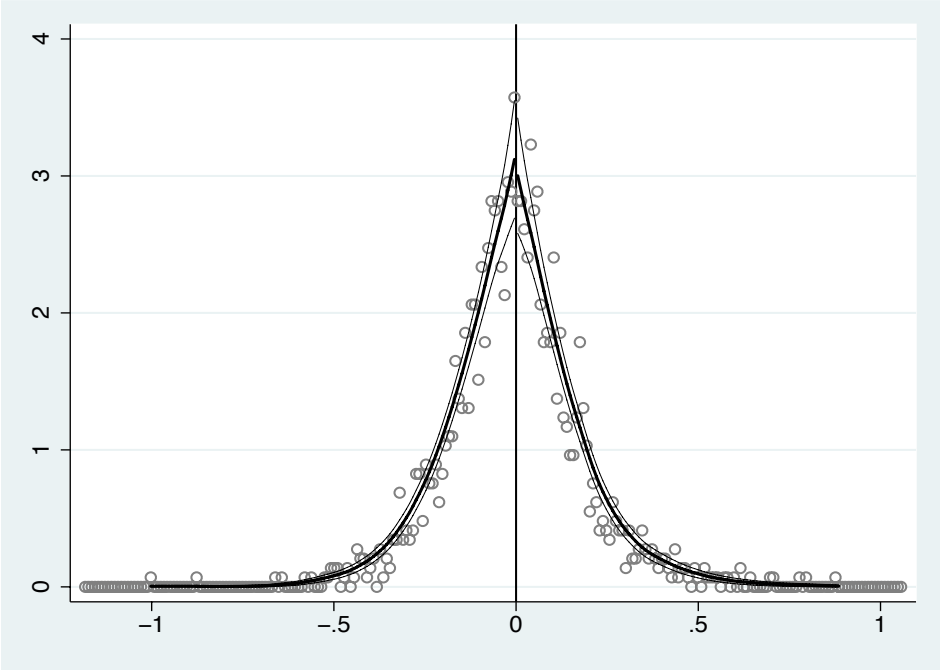
Notes: Victory margin defined as vote share of Muslim candidate minus vote share of non-Muslim candidate so that a positive margin is associated with a Muslim winning a legislative assembly seat.

Figure 2
Continuity of the vote margin between Muslims and non-Muslims

A. Density of the victory margin



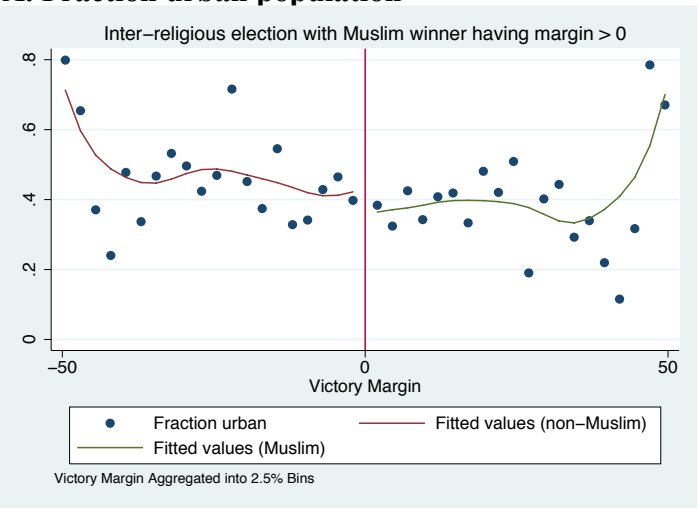
B. Testing for density discontinuities at zero (McCrary test)



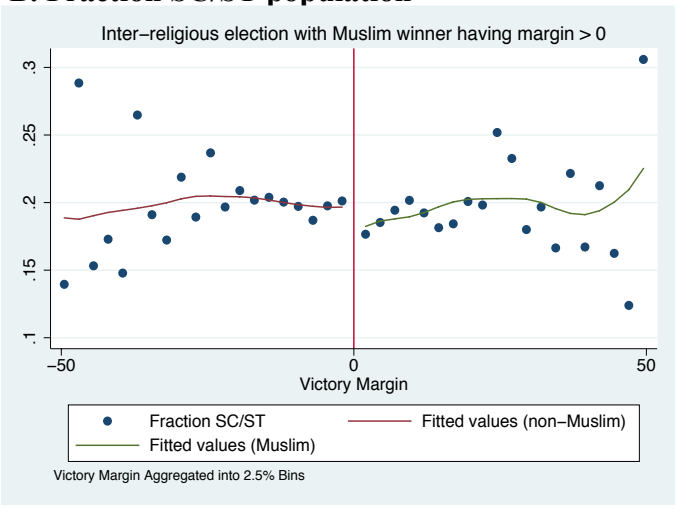
Sample restricted to elections where a Muslim and a non-Muslim were the top two vote-getters.
Discontinuity estimate in Figure B (log difference in height): -0.0391 (standard error = 0.1054)

Figure 3: Continuity in Demographic Characteristics

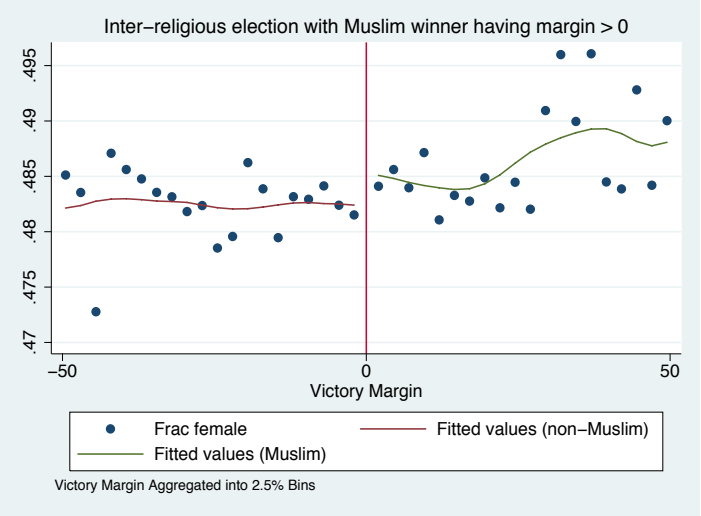
A. Fraction urban population



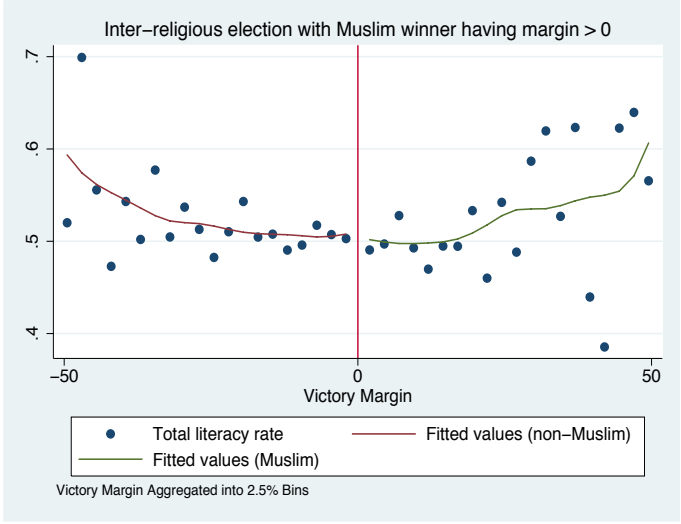
B. Fraction SC/ST population



C. Fraction female



D. Fraction literate



E. Fraction Muslims

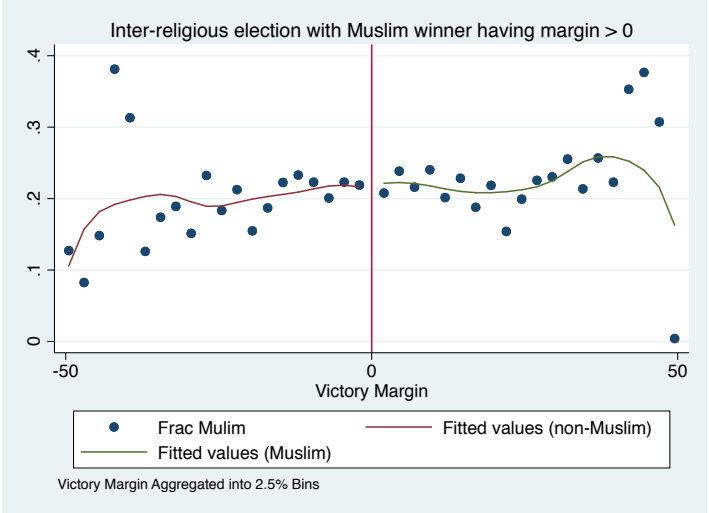
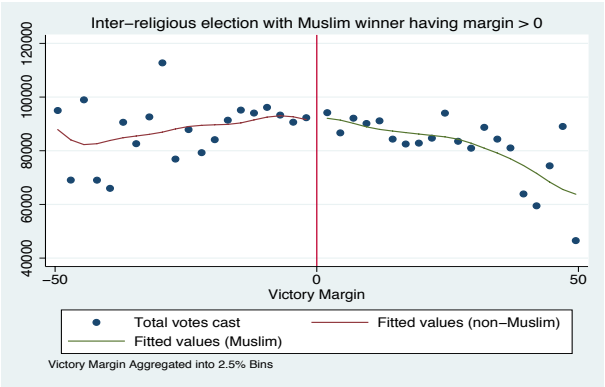
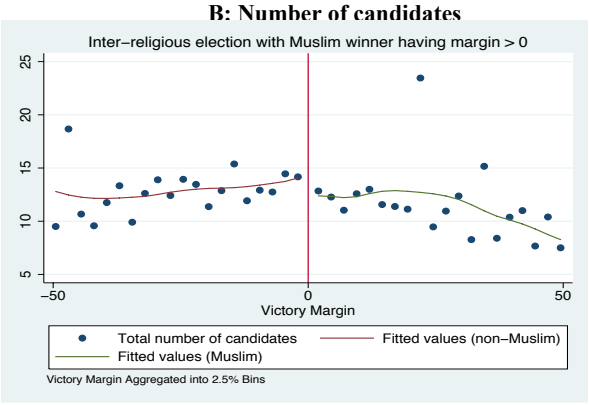


Figure 4: Continuity in Political Characteristics

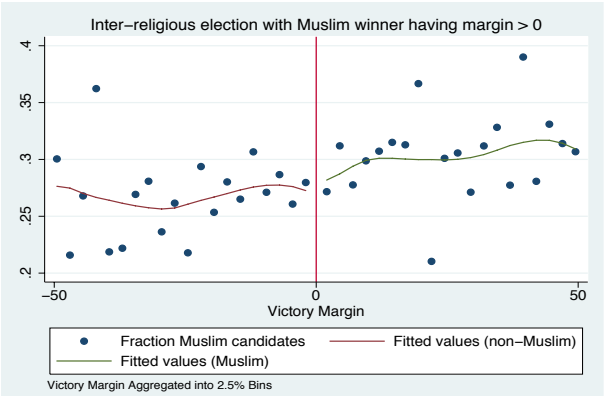
A: Total votes cast



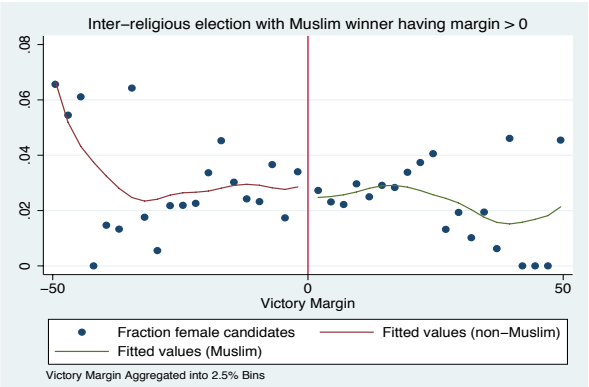
B: Number of candidates



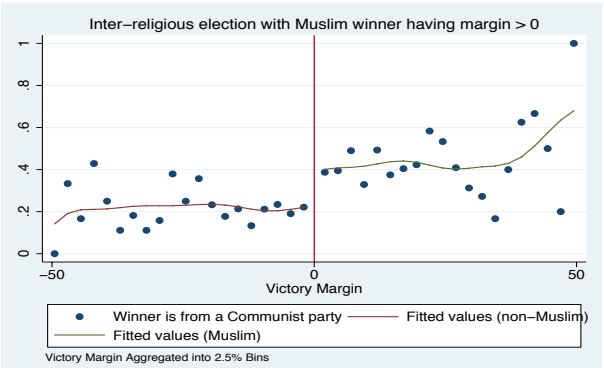
C: Fraction of Muslim candidates



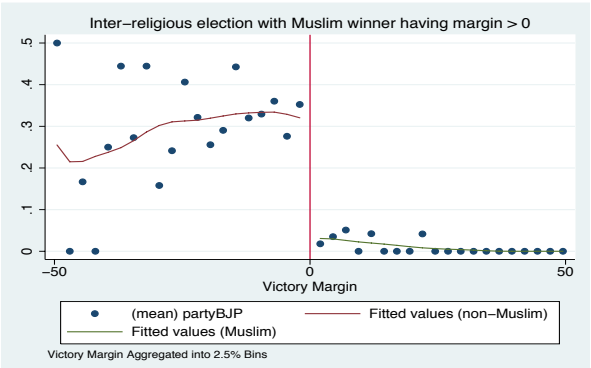
D: Fraction female candidates



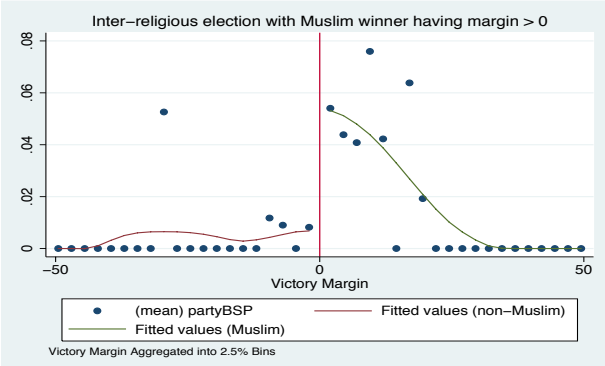
E: Winner is from Congress



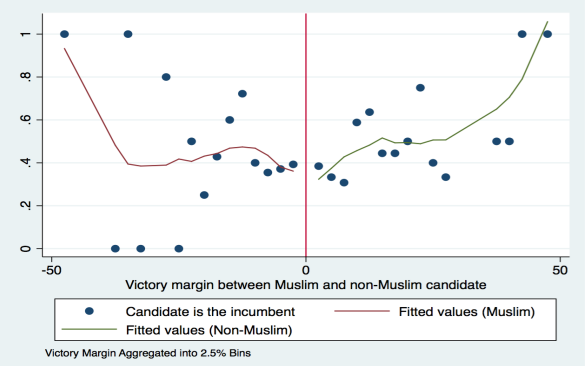
F: Winner is from BJP



G: Winner is from BSP



H: Winner is an incumbent



Online Appendix

Table A1
Stated Preferences by Religion: Abortion and Ideal Family Size

	(1)	(2)	(3)	(4)	(5)
	Agree that abortion is acceptable when				
	Mother's health is at risk	Child is physically handicapped	Mother is not married	More children are not wanted	Ideal number of children
Muslim	-0.0720**	-0.125***	-0.0882**	-0.0551	0.367***
	(0.0319)	(0.0433)	(0.0426)	(0.0431)	(0.0545)
Dep var Mean for Muslims	0.8333	0.5434	0.6449	0.5435	2.643
Dep var Mean for Non-Muslims	0.9084	0.6881	0.7234	0.6129	2.214
N	2344	2344	2344	2344	5572
R-squared	0.013	0.011	0.008	0.012	0.088

Notes: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Controls include gender, age, education categories, marital status of the respondent and family income categories. Data from World Values Survey for India in 1990 in columns (1)-(4); 6% of this sample is Muslim. Data is from World Values Survey for India in 1990, 1995 and 2001 for column (5).

Table A2
Summary Statistics

	#obs	Mean	s.d.	Mean	
				Non-Muslim households	Muslim households
Panel A: Birth Outcomes and Demographics, NFHS 1998-1999, birth cohorts 1980-1999					
Dummy for girl birth	119,237	0.4800	0.4996	0.4794	0.4842
At birth order 1	40,847	0.4798	0.4996	0.4802	0.4767
At birth order 2	32,731	0.4792	0.4996	0.4787	0.4835
At birth order 3 or higher	45,659	0.4808	0.4996	0.4792	0.4897
Dummy for any birth					
Infant mortality (dummy for child dying in first year of life), girls	57,234	0.0788	0.2694	0.0816	0.0595
Infant mortality (dummy for child dying in first year of life), boys	62,003	0.0819	0.2742	0.0838	0.0689
Neonatal mortality (dummy for child dying in first month of life), girls	57,234	0.0489	0.2157	0.0508	0.0364
Neonatal mortality (dummy for child dying in first month of life), boys	62,003	0.0576	0.2330	0.0588	0.0492
Rural resident	119,237	0.77	0.42	0.79	0.65
Muslim	119,237	0.13	0.33	0	1
Scheduled caste	119,237	0.20	0.40	0.22	0.03
Scheduled tribe	119,237	0.10	0.30	0.11	0.01
Other backward caste	119,237	30.56	0.47	0.33	0.24
Age of mother at birth of child	119,237	30.6	6.0	30.6	30.3
Panel B: Electoral Variables. District-year data, Election Commission of India, 1980-1999.					
Fraction Muslim legislators	8132	0.0796	0.1729		
Fraction Muslim legislators who won in close inter-religious elections (3% vote margin)	8132	0.0073	0.0349		
Fraction of close inter-religious elections (3% vote margin)	8132	0.1438	0.1609		

Table A3
First Stage : Instrumental Variables Stratgy

Dependent variable: Fraction Muslim legislators in the district

	(1)	(2)
	Girl birth sample	Birth sample
Fraction Muslim legislators who won close elections against non-Muslims	0.835***	0.881***
	[0.060]	[0.053]
Fraction of close inter-religious elections	-0.383***	-0.415***
	[0.047]	[0.047]
Observations	119237	541756
R-squared	0.9153	0.9228
F-statistic	193.25	271.46
Margin of victory for close elections	3%	3%

*** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses, clustered at district level. All regressions control for district and year fixed effects, 3rd degree polynomials in the vote margins, demographics of the household (dummies for rural residence, Scheduled Caste, Scheduled Tribe, Muslim, Other Backward Caste, education levels of father and mother, year of marriage of mother) and party identity of politicians. Column (2) controls for time since last birth. Regressions exclude the state of Jammu & Kashmir.

Table A4
Legislator Identity and Sex-Selective Abortion: Heterogeneity by Household Characteristics

Dependent variable: dummy for the birth of a girl

	Wealth index			Education		Location		Caste	
	High	Middle	Low	High	Low	Rural	Urban	Low Caste	High Caste
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Fraction Muslim legislators (ML)	0.0618	-0.222	-0.250*	-0.0907	-0.145	0.0163	-0.193*	-0.0625	-0.203**
	(0.272)	(0.146)	(0.151)	(0.172)	(0.116)	(0.200)	(0.104)	(0.150)	(0.0981)
ML*birth order 2	0.125	0.0123	0.0498	0.0211	0.000193	-0.178	0.0499	-0.0926	0.0324
	(0.225)	(0.162)	(0.123)	(0.172)	(0.115)	(0.179)	(0.101)	(0.172)	(0.0956)
ML*birth order>=3	0.0177	0.222*	0.174	0.270	0.167**	0.154	0.193**	0.0566	0.173***
	(0.262)	(0.120)	(0.108)	(0.177)	(0.0842)	(0.189)	(0.0784)	(0.142)	(0.0647)
Fraction of close	0.00195	0.0713	-0.0324	0.0662	-0.0278	-0.0368	0.000560	0.0130	0.00928
inter-religious elections	(0.122)	(0.0735)	(0.0568)	(0.0802)	(0.0369)	(0.0894)	(0.0357)	(0.0499)	(0.0377)
Birth order 2	-0.00603	-0.00306	-0.00484	-0.00351	-0.00101	0.000105	-0.00135	0.00393	-0.00320
	(0.0162)	(0.0110)	(0.0131)	(0.0129)	(0.00869)	(0.0138)	(0.00783)	(0.00987)	(0.00801)
Birth order>=3	-0.0349*	-0.00107	-0.0203*	-0.0367**	-0.00895	-0.0289*	-0.0105	-0.00135	-0.0184**
	(0.0185)	(0.00963)	(0.0122)	(0.0143)	(0.00755)	(0.0157)	(0.00701)	(0.00890)	(0.00737)
Observations	18,299	42,938	37,868	37,152	82,085	27,460	91,777	74,110	83,463

*** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses, clustered at district level. Coefficients are from 2SLS regressions, controlling for district and year-of-birth fixed effects, 3rd degree polynomials in the vote margins, demographics of the household (dummies for rural residence, Scheduled Caste, Scheduled Tribe, Muslim, Other Backward Caste, education levels of father and mother, year of marriage of mother), and party identity of politicians. Regressions exclude the state of Jammu & Kashmir. High, middle and low in columns 1-3 refer to terciles of wealth index constructed from a suite of household assets; high education refer to mothers having completed primary school; low caste includes the categories of Scheduled Castes and Other Backward Castes.

Table A5
Legislator Identity and Fertility: Robustness Tests

Dependent variable: dummy for the birth of a girl

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	State*year FE	District-specific trends	Control for household wealth	Include Jammu & Kashmir	District-years with at least one close inter-religious election	Close elections with 2.5% vote margins	Muslim representation 5 years after birth
Fraction Muslim legislators (ML)	-0.139**	-0.0151	-0.0887	-0.0572	-0.143	-0.0214	-0.110*
	(0.0601)	(0.0704)	(0.0831)	(0.0702)	(0.108)	(0.0700)	(0.0663)
ML*birth order 2	0.0237	0.0178	0.0422	0.0180	0.200*	-0.0170	0.0178
	(0.0615)	(0.0630)	(0.0854)	(0.0692)	(0.112)	(0.0721)	(0.0539)
ML*birth order>=3	0.208***	0.208***	0.247**	0.230**	0.284**	0.173*	0.0884
	(0.0790)	(0.0807)	(0.106)	(0.0943)	(0.127)	(0.0931)	(0.0606)
Fraction of close	-0.0130	-0.0135	-0.0172	-0.0178		-0.0191	0.000431
inter-religious elections	(0.0176)	(0.0229)	(0.0249)	(0.0214)		(0.0247)	(0.0184)
Birth order 2	0.0183***	0.0172***	-0.0550***	0.0174***	-0.0291	0.0202***	0.0282***
	(0.00570)	(0.00570)	(0.00749)	(0.00668)	(0.0199)	(0.00615)	(0.00584)
Birth order>=3	-0.0844***	-0.0856***	-0.164***	-0.0918***	-0.109***	-0.0825***	-0.0603***
	(0.00748)	(0.00756)	(0.00935)	(0.00981)	(0.0226)	(0.00809)	(0.00690)
Observations	573879	573879	496800	591713	82462	573879	757805

*** p<0.01, ** p<0.05, * p<0.1. Standard errors in parentheses, clustered at district level. Coefficients are from 2SLS regressions, controlling for district and year-of-birth fixed effects, 3rd degree polynomials in the vote margins, demographics of the household (dummies for rural residence, Scheduled Caste, Scheduled Tribe, Muslim, Other Backward Caste, education levels of father and mother, year of marriage of mother), and party identity of politicians. All regressions control for the time since the last birth. Regressions exclude the state of Jammu & Kashmir.

Table A6
Gender and Fertility Preferences by Religion

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	World Values Surveys : Agreement with statements				NFHS Survey		
	Husband and wife should both contribute to household income.	University education is more important for a boy.	Men make better political leaders than women do.	Men make better executives than women do.	Ideal number of boys	Ideal number of girls	Ideal share of boys
Muslim	-0.0550***	-0.00461	-0.0263	0.0489	0.245***	0.174***	-0.00281
	(0.0203)	(0.0227)	(0.0235)	(0.0429)	(0.0282)	(0.0179)	(0.00256)
Dep var Mean for Muslims	0.7417	0.4073	0.5571	0.6563	1.582	1.124	0.579
Dep var Mean for Non-Muslims	0.8079	0.3936	0.5690	0.6079	1.349	0.944	0.586
N	5411	4435	4344	1255	40336	40336	40290
R-squared	0.019	0.070	0.055	0.037	0.273	0.134	0.064

Notes: Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Data for column (1) is from World Values Surveys of 1990, 1995, 2001; data for columns (2) iand (3) is from 1995, 2001 and 2006 waves and for column (4) is from 2006. Dependent variables are binary and were obtained by transforming variables initially coded as integer on [1,4]. Controls include gender, age, educational category and marital status of the respondent, family income category and year of survey. Regresssions in columns 5-7 use data from NFHS2 and control for age of respondent (and its square), education level, rural residence, caste identity, year of marriage and state fixed effects. Standard errors are clustered at district level.

Table A7
Legislator Religion and Violence Against Women

Panel A: Domestic Violence and Contraception

	(1)	(2)	(3)	(4)
	No beatings	Beaten many times	Beating acceptable (any reason)	Beating acceptable (all reasons)
Fraction Muslim legislators (ML)	0.240	0.189	0.104	0.056
	(0.369)	(0.212)	(0.303)	(0.102)
Observations	35776	35776	161551	158927
Mean of dependent variable	0.484	0.133	0.561	0.029

Panel B: Muslim Legislators and Crimes Against Women

	(1)	(2)	(3)	(4)	(5)	(6)
	Rape	Kidnapping of women and girls	Molestation	Sexual harassment	Cruelty by husband or relatives	Dowry deaths
Fraction Muslim legislators (ML)	0.413	0.804	0.420	1.463	1.182	-0.082
	(0.484)	(0.559)	(0.650)	(1.853)	(1.172)	(0.788)
Observations	6143	3674	1534	1032	1507	1405

Standard errors in parantheses, clustered at district level. The coefficients are from 2SLS regressions, controlling for party identity of legislators, fraction of close inter-religious elections in the district and 3rd order polynomials in the victory margin. In addition, regressions in Panel A control for individual demographics and state*year of interview fixed effects. Regressions in Panel B control for district and year fixed effects, district population and literacy rates. Panel A: Dependent variables are dummy variables defined as follows: (1) equal to one if the respondent reports using any method of contraception; (2) equal to one if respondent reports not being beaten in the last 12 months; (3) equals one if respondent reports being beaten "many times" in the last 12 months; (4) equals one if the respondent agrees that it is acceptable for a husband to beat his wife for any one of the following reasons: if he suspects her of being unfaithful; if her natal family does not give expected money, jewellery, or other items; if she shows disrespect for her in-laws; if she goes out without telling him; if she neglects the house or children; or if she does not cook food properly; (5) equals one if the respondent agrees that it is acceptable to beat the wife for all of these reasons. Panel B: dependent variables are log(# of reported crimes per 100,000 women). Crime data obtained from National Crime Records Bureau for 1980-1999 period.

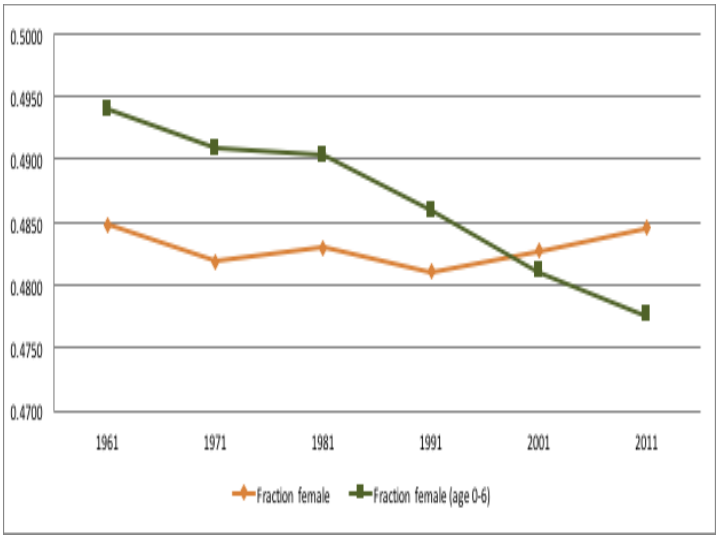
Table A8
Women Legislators and Birth Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)
	Girl birth	Any birth	Infant mortality girls	Infant mortality boys	Neonatal mortality girls	Neonatal mortality boys
Fraction Women legislators (WL)	-0.194	-0.0454	0.0404	0.0459	0.0399	-0.166**
	(0.129)	(0.0877)	(0.104)	(0.0998)	(0.0681)	(0.0746)
WL*birth order 2	0.185	0.0441	-0.0391	-0.154	-0.00971	-0.00727
	(0.163)	(0.0961)	(0.115)	(0.119)	(0.0874)	(0.0936)
WL*birth order>=3	0.141	-0.0261	-0.199*	-0.107	-0.144*	0.0288
	(0.119)	(0.129)	(0.112)	(0.104)	(0.0773)	(0.0829)
Fraction of close mixed-gender elections	0.0965	0.000957	0.0268	-0.0257	0.0143	-0.00388
	(0.0618)	(0.0217)	(0.0451)	(0.0357)	(0.0284)	(0.0312)
Birth order 2	-0.0102	0.0167**	0.00834	0.000914	-0.00280	-0.00871*
	(0.00801)	(0.00667)	(0.00616)	(0.00655)	(0.00491)	(0.00526)
Birth order>=3	-0.00914	-0.0703***	0.0360***	0.00525	0.0113**	-0.00820*
	(0.00734)	(0.00796)	(0.00707)	(0.00622)	(0.00518)	(0.00496)
Observations	119237	573879	53604	58033	56841	61536

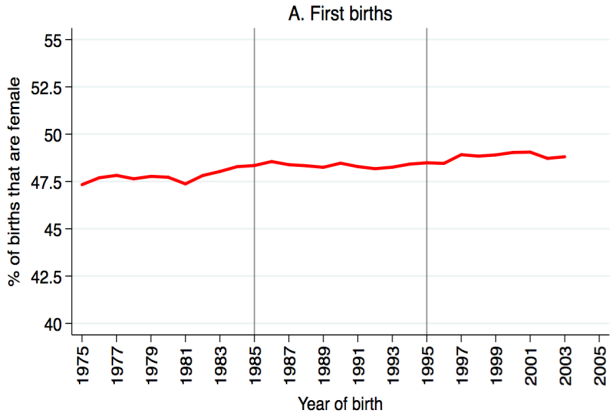
*** p<0.01, ** p<0.05, * p<0.10. Standard errors in parentheses, clustered at district level. Coefficients are from 2SLS regressions, controlling for district and year-of-birth fixed effects, 3rd degree polynomials in the vote margins, demographics of the household (dummies for rural residence, Scheduled Caste, Scheduled Tribe, Muslim, Other Backward Caste, education levels of father and mother, year of marriage of mother), and party identity of politicians. Regression in column (2) controls for time since last birth. Regressions exclude the state of Jammu & Kashmir.

Figure A1
Sex Ratio Trends in India (Fraction of Females)

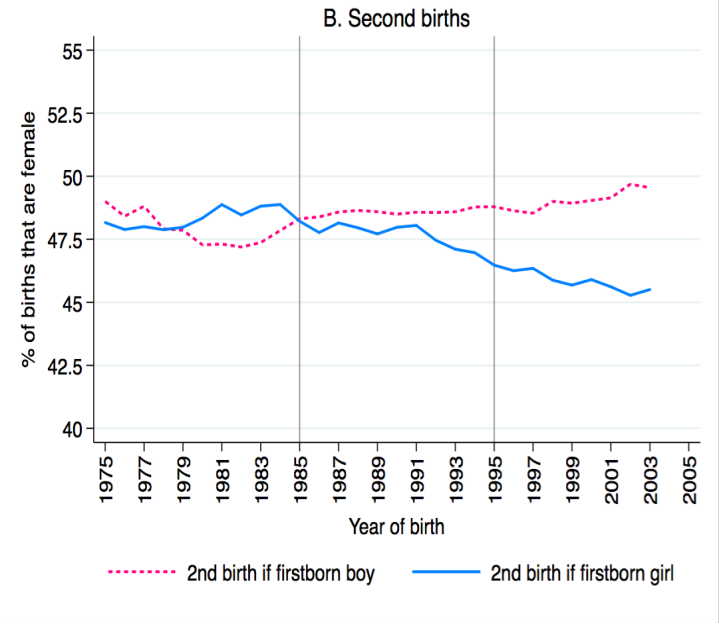
A: Total and 0-6 Years (Census Data)



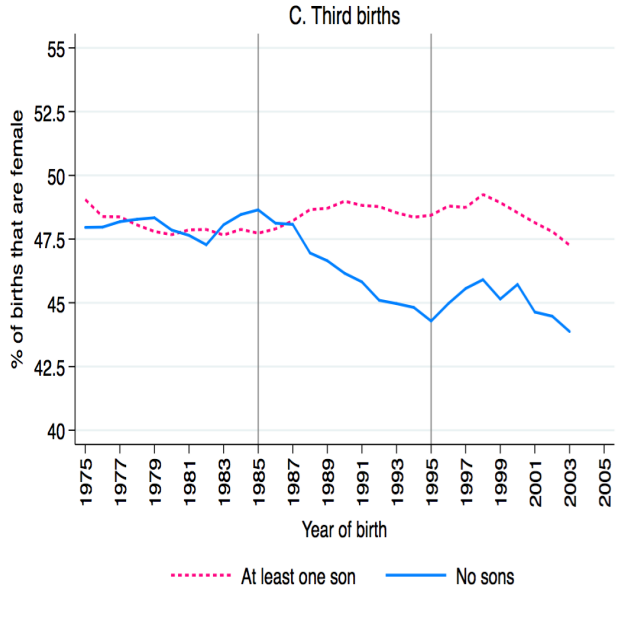
B. At Birth, First Births



C. At Birth, Second Births



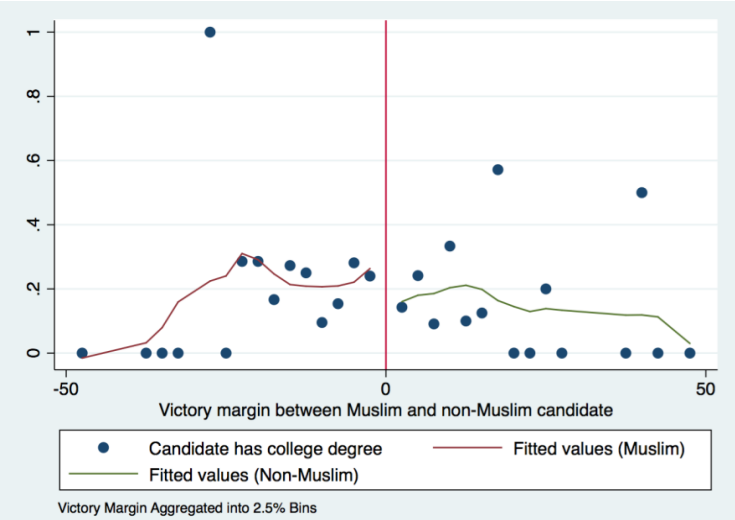
D. At Birth, Third Births



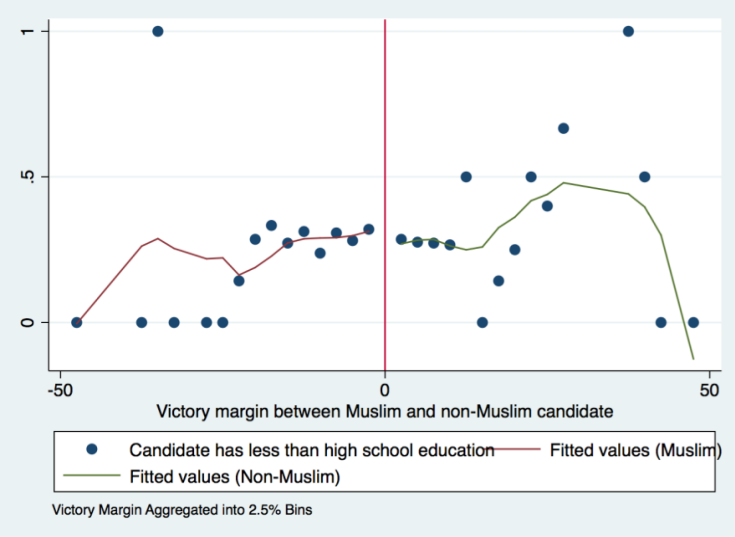
Source: Census reports for A; Author calculations from NFHS surveys for B, C, D.

Figure A2: Continuity in Candidate Characteristics

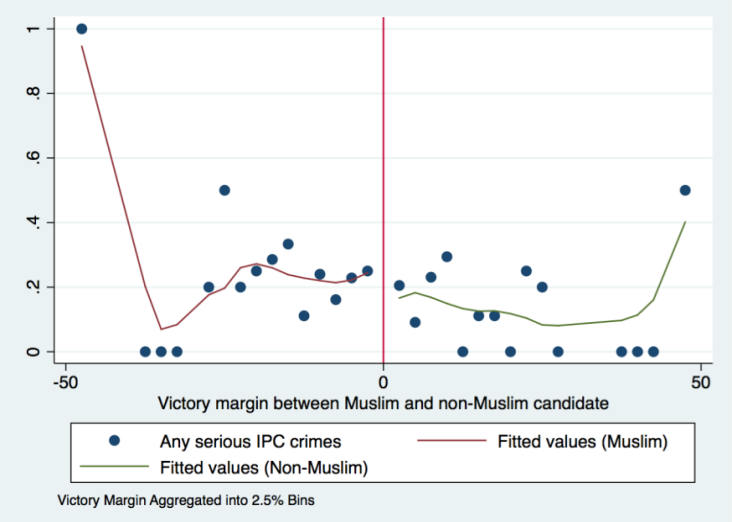
A: Candidate is college-educated



B: Candidate did not complete high school



C: Any serious criminal charge filed against candidate



D. Log net worth of candidate