Democracy and Demography: Societal Effects of Fertility Limits on Local Leaders*

S Anukriti[†] Abhishek Chakravarty[‡]

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Abstract

We investigate whether legally restricting elected leadership positions to candidates with "desirable" characteristics leads to wider adoption of those characteristics by constituents in a low-income democracy with high political participation. Exploiting quasi-experimental variation in legal fertility limits on village council members in India, we find that married couples of childbearing age in rural areas reduced their fertility in response to the limits. However, the fertility decline was concentrated among wealthier, more educated, and upper-caste households, raising concerns regarding political representation of the disadvantaged and elite capture of societal resources. The fertility limits also increased the already male-biased sex ratio at birth in socioeconomic groups with strong son preference. Restricting access to elected leadership to achieve social objectives therefore has potentially adverse consequences for societal inequality, if institutions driving discrimination are not taken into account.

JEL Codes: J13, J16, H75, O11

Keywords: India, Panchayat Elections, Fertility Limits, Sex Ratio

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[†]Department of Economics, Boston College. anukriti@bc.edu.

[‡]Department of Economics, University of Essex. achakrb@essex.ac.uk.

1 Introduction

Representative democracy as a political institution promotes stable economic growth (Rodrik (2000), Mobarak (2005)), narrows large income inequalities (Acemoglu and Robinson (2000), Gradstein (2007)), and prevents elite capture of property rights and productive resources (Brown and Mobarak (2009), Foster and Rosenzweig (2004), Bardhan and Mookherjee (2000)), all of which are critical for welfare improvement in developing countries. Theory and empirical evidence further establish that democracy delivers these outcomes more effectively when voter participation is sufficiently high and punitive to hold leaders accountable (Bidner and Francois (2013), Mueller and Stratmann (2003)). The natural complement to voter participation as a mechanism for democratic health is the participation of leaders, as policy actors and as role models. In this paper, we take advantage of a unique policy experiment in India to answer a hitherto unanswered question: can restricting elected leadership positions to candidates with "desired" attributes lead citizens to adopt those attributes in a democratic developing country? India is the only democratic country in the world that has attempted to achieve social objectives by legally limiting access to elected local leadership based on candidate characteristics. The effectiveness of this approach in inducing broad societal change is as yet unknown. Further, it has crucial implications for the efficacy of democratic institutions in protecting the welfare of the socially disadvantaged, who may be less likely to meet the desired leadership criteria than elites, but depend on political representation to obtain resources otherwise prone to elite capture. We therefore examine the impact of such restrictions to elected office created to reduce fertility rates in India, which is the world's second most populous country, and consequently where population control is seen by policy makers as essential to reducing the high national incidence of poverty.

We specifically analyze the impact of state-level laws in India that bar individuals with more than two children from contesting local government (*Panchayat*) elections on fertility-related outcomes. The Panchayat system comprises village-, block-, and district-level councils that exercise considerable power in their constituencies. Starting in 1992, eleven states have enacted the fertility limits for at least some years and they remain in effect in seven major states. These laws provided a one-year grace-period from the time of announcement, during which an individual could have additional children and still remain eligible for election. However, for people with two or more children by the end of the grace-period, a subsequent birth leads to disqualification. Individuals with fewer than two children by the end of the grace-period are limited to at most two children afterwards to maintain eligibility.[1]

We exploit the quasi-experimental geographical and temporal variation in announcement of these laws to estimate their causal impacts on demographic outcomes of *the constituents*. These effects may be directly driven by individuals' desire to maintain eligibility for Panchayat membership ("aspirations/ incentives channel").[2] Additionally, if elected representatives serve as role models, their constituents may be indirectly affected by these limits as they emulate their leaders' fertility choices ("role-model channel").[3]

We find that the fertility limits increase the likelihood that a woman has two living children in any given year and decreases the likelihood of three or four living children. However, the fertility decline is concentrated among educated households and those with higher socioeconomic status in terms of wealth ownership and caste, indicating that public resources may become more prone to capture by local elites who are more aware of the policy change (Bardhan and Mookherjee (2000)). Hence the fertility limits potentially counteract the beneficial impacts of mandated Panchayat representation for women and lower castes, both historically disadvantaged groups, via welfare-improving public expenditure and reduced discrimination (Beaman et al. (2012), Chattopadhyay and Duflo (2004)).[4] The fertility limits also adversely affect the already male-biased sex ratio among upper-caste families, increasing the number of missing girls. Thus, among upper-caste couples that restrict their fertility to two children, a greater number ensure that the second child is male if the first is not.

According to our estimates, at least X% of married women aged 15-44 in the states that have enacted these laws, i.e., more than X million married couples, reduced their fertility after the limits were passed.[5] These impacts are large, and consistent with the large number

[1]The same rules apply for dismissal of an elected member who exceeds the fertility limit while in office.

[2]For more on aspirations failure as a cause and consequence of poverty, see Appadurai (2004), Mookherjee et al. (2010), Ray (2006), Genicot and Ray (2014), Dalton et al. (2014), and Bernard et al. (2012).

[3]The role-model channel appears to be the primary mechanism the policymakers had in mind when these laws were enacted. For example, `http://www.nytimes.com/2003/11/07/world/states-in-india-take-new-steps-to-limit-births.html`. In general, individuals in positions of authority do exert considerable influence on their followers' behaviors and outcomes (Beaman et al. (2012), Bettinger and Long (2005), Jensen and Oster (2009), Chong et al. (2012), Olivetti et al. (2013), and Bassi and Rasul (2014)).

[4]In fact, Bardhan et al. (2015) find that high and even rates of political participation and awareness across socioeconomic strata in the Indian state of West Bengal are negatively correlated with anti-poor bias in targeting of public goods within a village.

[5]This estimate is based on data from the 2001 Census of India.

of people of childbearing age who contest Panchayat elections in each cycle, and could also act as role models if elected.[6] The results are also consistent with the deep involvement of Indian citizens in democratic politics. Voter turnout in Panchayat elections routinely exceeds 70%. In the 2014 World Values Survey, 53% of the respondents (69% among the "lower class") say that politics is "very important" or "rather important" in their life and about 48% of the respondents are members of a political party.[7] Thus our results have important implications for the understanding of the relationship between democratic participation and social change.

Our paper also contributes to two other literatures: (i) on the relationship between fertility and career decisions and (ii) on the determinants of sex ratios. Improvements in labor market opportunities, especially for women, increase the opportunity cost of having children and thereby lower fertility (Chiappori et al. (2002), Rosenzweig and Wolpin (1980)). We examine a similar relationship between fertility and political careers where the change in the opportunity cost of children is caused by the two-child limits. Recent papers have also highlighted the effect of fertility decline on rising sex ratios in societies like India where sons are preferred (Ebenstein (2010), Anukriti (2014), Jayachandran (2014)). We augment this second literature by analyzing a new source of fertility decline and show that it too has an unintended effect on sex ratios.

The rest of the paper is organized as follows. Section 2 discusses the legislations in detail. Sections 3 and 4 describe our data and empirical strategy. Section 5 presents the estimation results and Section 6 concludes the paper.

2 Background

India is the world's second most populous country and houses a third of its poorest citizens (Olinto et al. (2013)). Consequently, population control remains a policy priority. Based

[6] The Association for Democratic Reforms reports an average of 2.43 candidates per Panchayat seat. Typically a village Panchayat has 5-15 elected members, and our treatment states had 912,597 seats across all three tiers of the Panchayat system in 2004. This implies that in each election cycle the fertility limits directly target 1.34% of the population aged 15-44 in our treatment states (details in Section 3). If we also take into account (i) individuals who consider running but do not actually file nominations, (ii) that each election has some new candidates, and (iii) that the "treatment" states have had 3-4 elections thus far, the number of affected individuals is even larger.

[7] About 72% say that a democratic political system is a "very good" or "fairly good" way of governing the country. According to the 2005 India Human Development Survey, in 28% of households a member attended a public meeting called by the local council in the last year and in 10% of households someone from or close to the household is a member of the local council.

on the recommendations of the 1992 Committee on Population, several states enacted the two-child laws for Panchayat candidates.[8] These laws aim to lower fertility through the role-model channel. However, they also incentivize individuals who intend to contest elections to plan smaller families.

India has a three-tiered system of local governance in rural areas, known as the Panchayati Raj. It comprises village-level councils (*Gram Panchayat*), block-level councils (*Panchayat Samiti*), and district-level councils (*Zila Parishad*). Regular Panchayat elections have taken place every five years in most states. The village councils are the building blocks of the Indian democratic system and exercise considerable power in their constituencies. They receive substantial funds from national and state governments,[9] and are authorized to implement development schemes.[10] Panchayats are also responsible for providing public goods such as village roads, wells, and water-works. They can collect taxes and license fees, and receive seignorage from the auction of local mineral and forestry resources.

The typical monthly salary of a Panchayat chief is about USD 50 - USD 60 and other council members are paid less. While these official wages are not substantial, the potential private returns from political rents and corrupt practices may provide a strong incentive for becoming an officeholder. According to the Association for Democratic Reforms, an average candidate spends USD 400 - USD 800 during a Panchayat election.[11] However, the benefits from even one term as a Panchayat member are likely to be much higher. The average declared wealth of re-contesting candidates (for elections to the Parliament and state legislative assemblies) in 2004 was 134% higher than their wealth during the first election (Sastry (2014)). Fisman et al. (2014) show that the annual asset growth of winners in state elections is 3-5 percentage points higher than that of runners-up. Similar statistics are not available for Panchayat candidates, but the returns are likely to also be large.

The average population per village Panchayat is about 3,100, although the size varies widely. The minimum age to contest elections is 21 years. There are no term limits on

[8] In fact, the Committee recommended these restrictions for all elected positions—from Panchayats to the national Parliament.

[9] For example, in Tamil Nadu, all Panchayats received at least USD 4,900 in annual state grants in 2009-10, and 35% of them received funds in the range of USD 16,330-40,800. These are significant budgets considering that India's annual per capita income was USD 1,570 in 2013 (Source: The World Bank).

[10] Panchayats are often authorized to identify local beneficiaries of major central and state development schemes, such as the National Rural Employment Guarantee Scheme.

[11] Source: `http://www.ndtv.com/india-news/the-rs-81-500-crore-lie-565175`

Panchayat members. In Rajasthan and Uttar Pradesh, respectively, 19% and 33% of council chiefs were under 36 years old and 56% and 51% were in the 36-50 year age-group.[12] The council members are typically younger: 47% of Panchayat members in 2012 in Rajasthan were under 36 years of age and 41% were in the 36-50 year age-group. The PR Act requires that at least one-third of all member and chief positions are reserved for women.[13] Similarly, positions are reserved for Scheduled Castes (SC) and Scheduled Tribes (ST) in proportion to their population share. Quotas are implemented in a stratified manner—among positions reserved for SC, ST, and "general" castes, one-third are randomly chosen for women.

Rajasthan was the first state to introduce the two-child limit for its village councils in 1992;[14] this requirement was later included in the state's 1994 PR Act.[15] Andhra Pradesh and Haryana announced their legislations in 1994,[16] although the latter revoked its law in 2006. Orissa announced the limit for its district councils in 1993 and for the village and block councils in 1994. Himachal Pradesh (HP), Madhya Pradesh (MP), and Chhattisgarh[17] introduced their laws in 2000 and repealed them in 2005. In Maharashtra, the law has been in retrospective effect since 2002. Lastly, Bihar and Uttarakhand adopted the limit respectively in 2002 and 2007, but only for municipal elections. Table 1 presents a more detailed timeline for the announcement, grace-period, and implementation of these laws[18] and Table A.1 shows the election years for which they were effective. The relevant clauses from each state's PR Act are presented in Section B.

Candidates do not have to explicitly state their number of children when filing their nomination papers. However, they have to declare that, to the best of their knowledge, they are qualified for the Panchayat seat.[19] Table 2 shows the number of Panchayat members

[12] In West Bengal, the average age of chiefs was 36 years in 2000 (Chattopadhyay and Duflo (2004)) and in Andhra Pradesh it was 43 years in 2011 (Afridi et al. (2014)).

[13] In 14 states, half of all seats are reserved for women.

[14] Rajasthan's law predates the recommendations of the Committee on Population.

[15] The 1994 Act included a grace-period from April 23, 1994 to November 27, 1995. Effectively, this resulted in a nearly three-year grace-period since the original announcement was made in 1992.

[16] However, since the 1994 elections in Haryana took place before the announcement and since members are elected for a period of five years, no one was disqualified during 1995-2000.

[17] Chhattisgarh inherited the law when it was carved out of MP in 2000. Since 2004, candidates below 30 years of age in Chhattisgarh are also required to be literate.

[18] This information is largely based on Buch (2005) and Buch (2006).

[19] The Returning Officer (nominated by the Election Commission) is responsible for scrutinizing the information submitted by the nominees and any objections raised by the rival candidates, general public, or the media.

that have been disqualified under these laws in Haryana, Rajasthan, MP, and AP during 2000-2004.[20] Newspaper reports suggest that, in some instances, the fertility limits have led to abandonment of wives, selective abortion of female fetuses, and giving up of children for adoption to avoid disqualification. Consequently, implementing states have faced criticism from women's rights advocates and civil society organizations, as well as from the central government.[21] The revocation of the limits in four states may have been in response to this pressure. To summarize, eleven states have imposed fertility limits on Panchayat members for at least a few years and they remain in effect in seven states.

3 Data

We utilize three cross-sectional rounds of the National Family Health Survey (NFHS-1, 2, 3) of India that were conducted in 1992-93, 1998-99, and 2005-06. Each round is representative at the state-level and includes a complete retrospective birth history for the woman interviewed, containing information on the month and the year of birth, birth order, and mother's age at birth. We combine these birth histories to construct an unbalanced woman-year panel; a woman enters the panel in her year of first marriage and exits in her year of survey.

For consistency across rounds, we limit the sample to women in the 15-49 age-group who were married at the time of survey.[22] We also drop women (i) whose marriage took place more than 20 years before the survey to avoid issues related to imperfect recall, (ii) whose husband's age was below 15 or above 80 in the year of survey, and (iii) who had given birth to more than ten children, to prevent any composition-bias since these women are likely to be fundamentally different from rest of the sample. Lastly, we exclude mothers who have had twins since multiple births in our context are largely unplanned and do not reflect parents' fertility preferences. However, all our results are robust to the inclusion of these observations.

Our final sample comprises 156,541 women and 381,124 births from 18 major states[23] and covers the time period 1973-2006. We define treatment based on the year of announcement

[20] Data for the remaining states and years is not readily available and is being collected by the authors.

[21] http://policydialogue.org/files/events/Aiyar_Key_Role_of_Panchayati_Raj_in_India.pdf

[22] The questionnaires were administered to 13-49-year old ever-married women in NFHS-1 and 15-49-year old ever-married women in NFHS-2, 3.

[23] The states of Uttarakhand, Jharkhand, and Chhattisgarh were, respectively, carved out from Uttar Pradesh (UP), Bihar, and MP in 2000. Since our data does not include districts-identifiers for all rounds, we subsume these three new states into their parent states for our analysis.

of the law, i.e., the earliest year when the law might have had an effect in a state. Since the most recent year in our sample is 2006, we cannot credibly examine the effect of revocations that took place in 2005.[24] However, we have a large number of post-announcement years, ranging from 4 to 13 years, to estimate the long-term effect of the fertility limits.

Table 3 displays the years we use for defining the treatment period for each affected state. Table 4 presents the sample means and standard deviations for the key variables used in our analysis, separately for never-treated and treated states. We further split the treated sample into pre- and post-treatment observations. About two-thirds of women in our sample live in a rural area. A majority of them are Hindus, with a larger share of Hindus among treated relative to never-treated households. In terms of caste-composition, scheduled castes comprise about 16% of the sample. Educational attainment of women is low, with about half the sample being uneducated; in comparison, 26% of the husbands are uneducated. The pre-treatment average terminal fertility (as measured by fertility of women more than 40 years old) in treated states is 2.8.

The sample means for the three groups in Table 4 are similar along many socioeconomic dimensions. Nevertheless, to ensure that our estimates are not confounded by underlying differences between these samples, we control for religion, caste, standard of living, husband's and wife's years of schooling, and residence in an urban area in all regressions. To take into account state-specific factors, we include state fixed effects and state-specific linear time trends (or state-year fixed effects). We also show (in the next section) that the timing of announcement of the limits across states is uncorrelated with changes in these socioeconomic characteristics across states and over time.

4 Empirical Strategy

The goal of our empirical strategy is to estimate the causal effect of the two-child limits on candidates in village council elections in a state on fertility-related outcomes among residents in the same state. To do so, we utilize the quasi-experimental geographical and temporal variation in announcement of these laws across Indian states. Although eleven states have enacted such a law thus far, due to data limitations we can estimate the impact for only

[24] The only other source of demographic data after 2006 is the National Sample Survey (NSS) of India. However, the household roster in the NSS does not match mothers with their children.

seven (eight) states: Rajasthan, Haryana, AP, Orissa, HP, MP (including Chhattisgarh), and Maharashtra. The limits came into effect in Bihar and Gujarat after 2006, which is the most recent year in our dataset, so in our sample these states are in the control group. Gujarat announced its law in 2005, so we can potentially include it in the treatment group and use 2006 as the post-treatment year; doing so makes no difference to our results. Uttarakhand announced its law for urban municipal elections in 2002, however, we exclude it from the treatment group because Uttarakhand was a part of Uttar Pradesh until 2000 and we cannot distinguish between the two in the pre-2000 sample.[25] Moreover, as we will shortly describe, we do not find significant effects in urban areas, and thus will focus on the rural sample for most of the paper, and Uttarakhand has not enacted a limit for rural Panchayats. For these reasons, we keep Uttarakhand in the control group. In addition to Bihar, Gujarat, and Uttarakhand, our control group comprises nine other states. Figure 1 depicts the treatment and control states in a map.

We begin with an examination of the evolution of the hazard of birth before and after the announcement of the laws in an event-study framework. Specifically, for a woman i of age a in state s and year t we estimate the following regression specifications:

$$Y_{iast} = \sum_{k=-6}^{6} \beta_k Post_{s,t+k} + X_i^{'}\delta + \gamma_s + \theta_t + \psi_a + \mu_s t + \epsilon_{iast} \tag{1a}$$

$$Y_{iast} = \sum_{k=-6}^{6} \alpha_k T_s * Post_{s,t+k} + \sum_{k=-6}^{6} \beta_k Post_{s,t+k} + X_i^{'}\delta + \gamma_s + \theta_t + \psi_a + \mu_s t + \epsilon_{iast} \tag{1b}$$

The dummy variable T_s is one for treatment states and zero for never-treated or control states. For treatment states, $Post_{s,t+k}$ indicates years during which the law is in place in a treatment state s; the year before the year of announcement is the omitted year. For control states, $Post_{s,t+k}$ indicates k years during which a fictitious law is in place; typically we assign the same announcement year to a control state as one of its neighboring treatment states. We control for fixed effects for state, year, and woman's age (γ_s, θ_t, and ψ_a, respectively), state-specific linear time trends ($\nu_s * t$), and the following covariates (X_i): five categories each for a woman's and her husband's years of schooling, indicators for the religion (five categories), caste (four categories), and the standard of living (three categories) of the household,

[25] Note that Uttar Pradesh has never enacted a two-child limit for its local politicians.

residence in an urban area, and indicators for the year of interview. We estimate these event study graphs separately for the sub-samples of treatment and control states (using equation (1a)) and also estimate the evolution of the difference between the hazard of birth in treatment and control states (using equation (1b)).

The outcome variables in (1a) and (1b) are indicators for first, second, third, fourth, and fifth birth. In regressions where the outcome indicates a birth of order b, the sample is restricted to women with at least b children and to years after birth $(b-1)$ and until birth b. For example, the hazard of second birth is estimated using years after the year of first birth and excluding the years after the year of second birth. In specification (1b), the β_k coefficients capture how the hazard of birth evolves in never-treated states and the α_k coefficients capture the changes in the hazard of birth in treatment states after differencing out the control group. To the extent that we assign fictitious treatment years to the control states, we expect the α_k coefficients to not reveal any trend-breaks around the year of announcement, thereby allowing us to interpret the $beta_k$ coefficients in a causal manner.

The previous set of equations focuses on the marginal effect of the limits on an additional birth conditional on already having a certain number of children. In order to evaluate the overall impact of the laws on total "stock" of fertility, we estimate the following equations using indicators for whether a woman reports having one, two, three, four, and five living children in a given year:

$$Y_{iast} = \alpha + \beta Treat_{st} + X_i^{'}\delta + \gamma_s + \theta_t + \psi_a + \nu_s * t + \mu_{sa} + \epsilon_{iast} \tag{2a}$$

$$Y_{iast} = \alpha + \beta_1 T_s * Post_{st} + \beta_2 Post_{st} + X_i^{'}\delta + \gamma_s + \theta_t + \psi_a + \nu_s * t + \mu_{sa} + \epsilon_{iast} \tag{2b}$$

In specifications (2a) and (2b) we include both treatment and control states in the regressions. In (2a), $Treat_{st}$ is equal to one for women residing in the treated states if $t \geq$ the year of announcement, and zero otherwise, i.e., $Treat_{st}$ is always zero in (2a) for control states. Corresponding to (1b), we also estimate specification (2b) using fictitious treatment years for control states. Additionally, in some versions, we control for state x mother's age fixed effects (μ_{sa}) and fixed effects for years since last birth or marriage. Unlike the hazard analysis, in (2a) and (2b) we do not impose any restrictions in terms of the prior number of children and use all available years for each woman. If the two-child limits are effective, we expect the likelihood of having two children to increase after the laws have been announced in the treatment states.

The two-child laws may also affect the sex ratio of second births for couples who have one child at announcement. For instance, if parents desire at least one son, couples who have one daughter and no sons when the law is announced may be more likely to practice sex-selection at second parity due to the two-child limit. Prior literature on India has shown that, despite the availability of prenatal sex-determination technology, sex of the first birth is plausibly random (Bhalotra and Cochrane (2010), Das Gupta and Bhat (1997), Visaria (2005)) and most instances of sex-selection occur for higher-order births. This finding is consistent with recent survey data that suggests that Indian parents do not always prefer having a son over a daughter—Jayachandran (2014) finds that although the vast majority of families want to have a son if they can only have one child, at a family size of two they prefer having one daughter and one son over having two sons. As desired and actual fertility in India is well above one, it is reasonable to assume that parents are not averse to having one daughter, despite a strong desire for at least one son. In fact, Table 4 shows that the sex ratio at first birth in our sample is "normal" (i.e., between 0.516 and 0.519) in the never-treated states and in the treatment states (both pre- and post-treatment). Therefore, it is reasonable to compare the sex ratio at second birth for couples with a firstborn son and couples with a firstborn daughter. To test this, we interact $T_s * Post_{st}$ in (2b) with an indicator for whether the first child is a girl ($Girl_i$), we estimate:

$$\begin{aligned} Male_{isat} = \alpha + \beta_1 T_s * Post_{st} * Girl_i + \beta_2 Post_{st} * Girl_i + \phi_t * Girl_i + \tau_s * Girl_i + \nu_{st} \\ + \omega Girl_i + X_i^{'}\delta + \gamma_s + \theta_t + \psi_a + \mu_{sa} + \epsilon_{isat} \end{aligned} \tag{3}$$

where the outcome variable is an indicator for the second child being male and the sample is restricted to women whose first child is born before the law is announced in her state.

The inclusion of state and year fixed effects in our specifications controls for all time-invariant state-level variables and state-invariant time trends that might affect the outcomes. The state-specific time trends account for differential linear trends in fertility and sex-selection patterns across states over time (e.g., due to differential growth rates of state GDP or availability of abortion and other health services). In specifications (3), we are able to control for state-year fixed effects that provide full non-parametric control for state-specific time effects. The inclusion of state-mother's age fixed effects in (2a), (2b), and (3) controls for any confounding differences in the age composition of mothers across states.

Our underlying identifying assumption is that the state-year variation in the timing of law announcement is uncorrelated with other time-varying determinants of the outcomes of interest. Although we control for state-specific linear trends or state-year fixed effects in our regressions, we explicitly test if the timing of announcement is correlated with other socioeconomic characteristics that vary by state and time. In Table 5 we present the coefficients from regressions that use various maternal, paternal, and household characteristics as dependent variables in the estimation of equation (2a) with state and year fixed effects, and state-specific time trends, but without any other controls for the rural sample. None of the 21 coefficients are significant, eliminating any concerns about endogenous timing of announcements. The same is true if we include the urban sample in this regression. Moreover, during the time-period we examine, there were no other state-specific programs in the treatment states that promoted smaller families and whose timing coincided with the fertility limits.

As treatment varies at the state level, we cluster standard errors by state to allow for correlations in the error terms of women in each state. In specifications where the sample is restricted to only the treated states, we report standard errors based on a clustered wild bootstrap-t procedure described in Cameron et al. (2008) to address econometric issues pertaining to a small number of clusters.[26]

5 Results

5.1 Event-study analysis of the effects on the hazard of birth

We start by examining the evolution of the hazard of birth (for birth orders two to five) in rural areas of treatment and control states using specification (1a). We expect the hazard of third and higher order births to increase during the grace period. The effect on the hazard of second births is not a priori obvious. If families are unaware of the grace period option or fear a further tightening of these limits, couples that have one child at announcement may rush into a second birth. On the other hand, if families are more likely to practice sex-selection to ensure that their last child is a boy, their second birth may be delayed. Second births may also be postponed for reasons other than sex-selection, such as to improve the survival

[26] We use the STATA code written by Busso et al. (2013) that computes the errors by assessing the fraction of bootstrap test statistics (in 1,000 repetitions) greater in absolute value than the sample test statistic.

probability of the last birth.

The time trends in the hazard of births over a 12-year period are presented in Figure 2. The vertical line indicates the year before announcement for treatment states and the year before the fictitious announcement year for control states. The corresponding figures for the hazard of first birth in rural areas, for hazards in the sample of both rural and urban women, and for hazards in only urban areas are respectively available in Appendix Figures A.1, A.2, and A.3. Although we control for year fixed effects and state-specific linear time trends in specification (1a), the hazard of birth appears to be declining over time for all birth orders during the pre-treatment years for both treatment and control states. However, after the fertility limits are announced, there is an immediate increase in the hazard of second birth during the year of announcement which declines but remains positive during the grace period, and in the post-grace period there is a slowing down of the pre-treatment decline. There is no similar spike in the hazard of second birth in the control states. Similarly, for birth orders three, four, and five, the trends for control states are quite flat around the year of announcement. But for treatment states, the pre-treatment downward trend in the hazard of third, fourth, and fifth births is halted until the end of the grace-period, and thereafter the pre-treatment decline resumes itself.

To test if these changes in treatment states are significant relative to the changes in control states and relative to the pre-trends, we turn to specification (1b). The coefficients for the interaction terms, $T_s * Post_{s,t+k}$ are presented in Figure 3 and Table 6. The patterns in Figure 3 are similar to those in Figure 2. The gap between the treatment and control states' hazards is flat for all birth orders during the pre-treatment years. Thereafter, once the law is announced, the hazard of second birth increases relative to the hazard of second birth in control states and relative to the pre-trend. The spike in the hazard of second birth is statistically significant as reflected in the coefficient of $(t+1)$ in column (2) of Table 6—the fertility limits lead to a 4 percentage point or a X% increase from a baseline hazard of Z. The other columns in Table 6 show that there was no significant effect on the hazards of third and higher order births in rural areas due to the announcement of the fertility limits. The patterns for the entire sample (i.e., rural and urban areas together) in Figure A.2 is quite similar to those in Figure 2, however, the spike in the hazard of second births is only significant in rural areas. This is consistent with the fact that the fertility limits have mostly been enacted for rural Panchayats. In the graphs for urban areas in Figure A.3, there are no discernible changes for neither treatment nor control states in the post-announcement years.

Next we examine if the effects on birth hazards of second birth vary by household wealth, caste, and husband's and wife's literacy status. To do so, we re-estimate specification (1b) for various sub-samples; these results are presented in Figure 4 and Table 7. For brevity, we only report the coefficients for post-treatment years in Table 7. The hazard of second birth increases in the year of announcement for all groups except for Muslims and significantly so in several columns. We expect the fertility response to be stronger for more politically dominant families (i.e., families that are from upper castes, are wealthier, and where wife and/or husband are literate) as they are more likely to be concerned about maintaining electoral eligibility. On the other hand, affirmative action since 1992 has ensured that one-third of all Panchayat positions are reserved for lower-caste individuals who tend to be poorer and less educated relative to upper castes. Chattopadhyay and Duflo (2004) find that caste-based reservations have conferred significant political power on lower-caste Panchayat leaders and have improved provision of public goods to these disadvantaged groups. Consequently, the political aspirations of lower-caste individuals might be strong enough for the two-child limits to also cause a change in their fertility. In terms of caste, we find that the most significant increase takes places among OBC and upper caste groups. High SLI mothers exhibit a larger increase in second births relative to low SLI mothers, although in terms of literacy, the spike is similar across literate and illiterate husbands and wives.Thus, on the whole, it seems that the fertility limits have impacted birth hazards mainly for politically dominant families.

5.2 Effects on the total number of children

The results thus far have focused on the marginal effect of the limits on an additional birth conditional on a woman already having a certain number of children. However, they do not tell us the extent of substitution from, say, having four children to having two children. In order to evaluate the overall impact of the laws on total "stock" of fertility, we estimate specifications (2a) and (2b) using indicators for whether a woman reports having one, two, three, four, and five living children in a given year. Unlike the hazard analysis, in these regressions we do not impose any restrictions in terms of the prior number of children and use all available years for each woman. If the two-child limits are effective, we expect the likelihood of having two children to increase after the laws have been announced in the treatment states relative to control states and relative to pre-treatment years.

In Table 8 the dependent variable is an indicator for a woman reporting that she has two living children in a given year. We examine the effect of the fertility limits on this outcome using specifications (2a) and (2b) for women who are under 33 years of age in a given year. The age restriction is meant to avoid any sample selection issues due to changes in the cohort composition across NFHS rounds. As Figure A.5 displays, the average age of mothers evolves smoothly over time and around announcement across birth parities. As Figure A.5 displays, the average age of mothers evolves smoothly over time across birth parities. In Appendix Table A.2, we also present the results from regressions where mothers' age is not restricted; the results are similar to those in Table 8.

The coefficients of $Treat_{st}$ in Panel A and of $T_s * Post_{st}$ in Panel B in Table 8 are both positive for the overall rural sample (in column (1)) but insignificant. Sub-sample coefficients in the remaining columns show that the likelihood of two children significantly increased for high SLI families and families where the wife or the husband is literate. While the effects for caste subgroups are insignificant in Panel A, the magnitude of the effect on upper caste families is, as expected, much larger. In Panel B, the coefficient is significant for OBC women. This heterogeneity is consistent with the differential effects on hazard rates across socioeconomic groups that we described in the previous sub-section.

To understand whether this increase in the likelihood of two children is a result of substitution from higher fertility levels, Table A.3 presents the effects on other indicators of the total number of children. For brevity, these coefficients are for specification (2a); specification (2b) yields similar results that are available upon request. Column (1) shows that the likelihood of three, four, and five children has declined due to the limits, and the coefficient for four children is also significant. Thus, the fertility limits have led higher socioeconomic status families concerned with maintaining political eligibility to reduce their fertility levels and have made them more likely to have just two children.

5.3 Effect on the sex ratio of second births

Next we examine the heterogeneous effects on the sex ratio of second births by household caste and sex of the first child using specification (3). We restrict the sample to women whose first child was born before the announcement. To maintain eligibility for elections, these families can have only one additional birth. Moreover, the grace-period is irrelevant for them. Consequently, if son preference is sufficiently strong, they may be more likely to practice sex-selection at second parity. The increase in sex-selection at second parity is likely to be even stronger for couples whose only child at announcement is a girl. Prior literature suggests that upper-caste families have a stronger preference for sons and are more likely to practice sex-selection; they are also more politically dominant. Thus the effect on the sex ratio of second birth is likely to be stronger for upper castes.

We test these hypotheses in Table 9. Columns (1)-(4) correspond respectively to the sub-samples of upper castes, SCs, STs, and OBCs and column (5) is for the entire rural sample. The coefficient of $Post_{st} * Girl_i$ measures the impact on the sex ratio of second birth for families with firstborn girls in control states and the coefficient of $T_s * Post_{st} * Girl_i$ estimates the differential impact for families with firstborn girls in treatment states. The likelihood of second child being male increases substantially for upper castes and OBC households. Although the coefficient of $T_s * Post_{st} * Girl_i$ for upper castes becomes insignificant when we control for state-firstborn girl specific trends, the OBC coefficient stays large and becomes significant. The sex ratio of second birth increases by about 4 to 7 percentage points for upper castes and about 10 to 12 percentage points for OBCs in treatment states relative to control states. The coefficients for control states are mostly insignificant and negative.

Our findings point to leadership aspirations or anticipation of stricter laws to being the more likely mechanisms behind the fertility responses. A role-model effect is unlikely to be immediate as it would take a few years after the laws are enacted for the constituents to observe and emulate their leaders' fertility outcomes, especially since the first set of post-treatment elections took place a few years after the announcements (Table A.1). Instead, the shift in timing of childbirth is most plausibly explained by families attempting to have an additional child without sacrificing future electoral eligibility.

These results cannot rule out a competing mechanism wherein the law lowers fertility by changing a family's intrinsic preference over the ideal number of children (independently of role-model and incentive channels).The limits can also affect fertility through adjustments in age at marriage. Forward-looking individuals (or their parents) wishing to maintain future electoral eligibility may delay marriage. To test if this is the case, we estimate specification (2a) with a woman's age at first marriage as the dependent variable and find no impact of the two-child limits on age at first marriage. These results are available upon request. Any effect of the fertility limits on marital separation or divorce is likely to be small due to their low prevalence rates among Indian marriages. Among women who were surveyed in the treatment states in post-treatment years, only 1.52% report being separated or divorced from their husbands. For rest of the sample, the corresponding number is equally low (1.66%).

6 Conclusion

We find that the two-child limits on candidates in Panchayat elections decrease fertility among constituents, but also lead to an unintended increase in the already male-biased sex ratio in certain socioeconomic groups. These effects are caused by constituents' political ambitions or anticipation of stricter restrictions in other non-political arenas rather than the role-model influence of their leaders. Political aspirations may not only reflect the desire to effect positive social change, but could also be driven by rent-seeking behavior. The potential income from political rents and corrupt practices may be a strong incentive for becoming an officeholder in low-income countries. While we cannot separately identify these "altruistic" and "selfish" components of political aspirations, we show that these ambitions may be substantial and represent a previously ignored channel of demographic change.

Our findings reiterate that population control measures that ignore son preference can worsen the sex ratio at birth. Similar limits have been proposed for members of state legislative assemblies and the national parliament in India. If incentives for local leadership are stronger than state or national leadership ambitions, the proposed limits may be less effective than the laws we examine.[27]

Fertility restrictions on elected members also have implications for political representation of various socioeconomic groups. The two-child limits impose a more severe constraint on couples with weaker access to contraception or higher demand for children, increasing their risk of disqualification and reducing their political representation. Given that we do not find a significant fertility response among families in the bottom third of the wealth distribution, the limits may be more likely to diminish their political representation. Since a large proportion of the poor belong to lower castes, the limits could also impede the progress made by caste-based affirmative action if only the "creamy-layer" of the lower-castes are able to meet the eligibility criteria. The limits could also undermine gender-based quotas as aspiring female

[27] Genicot and Ray (2014) formalize a related idea as follows: "...the "best" aspirations are those that lie at a moderate distance from the individual's current economic situation standards, large enough to incentivize but not so large as to induce frustration."

leaders may not have autonomy over their fertility due to intra-household gender disparities. Indeed, women comprise the overwhelming majority of individuals in Table 2 that were disqualified for violating the limits.

Recently, some Indian states have enacted similar restrictions to meet policy goals in the areas of education and sanitation. As of 2014, individuals are barred from Panchayat membership in Rajasthan if they have less than primary schooling or do not have a functional toilet in their home.[28] Although 50% of the Panchayat seats in Rajasthan are reserved for women, the female literacy rate is only 45.8% (2011 Census of India).[29] Moreover, lower castes face considerable discrimination in access to sanitation and education. Our results show that these new restrictions are likely to stifle political representation of disadvantaged groups which may cause social conflict. The effects of such barriers to local leadership on political representation, discrimination, and aspirations are key to poverty reduction, and merit further investigation.

[28] The minimum schooling requirements for block and district councils are eight and ten years, respectively.

[29] For tribal women, the literacy rate is even lower (25.22%).

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7 Figures

Figure 1: Treatment and control states

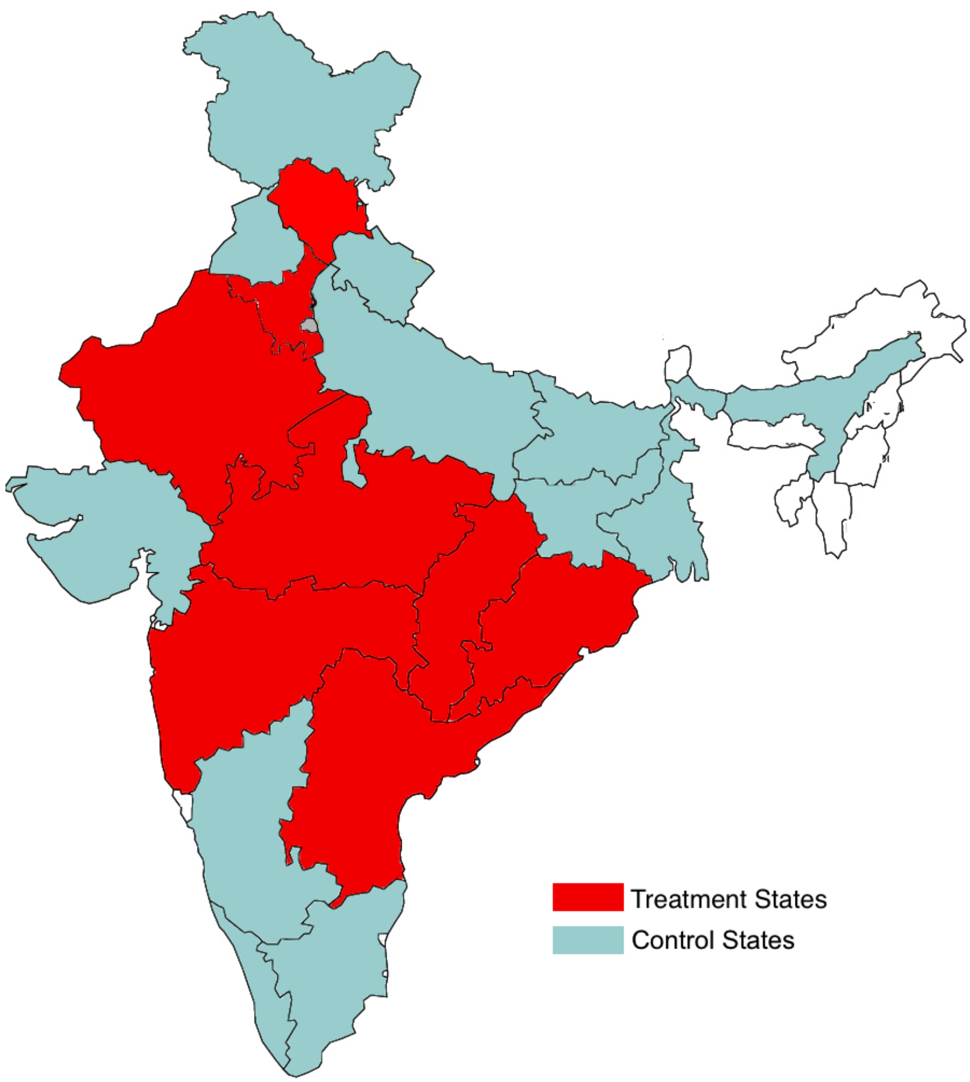
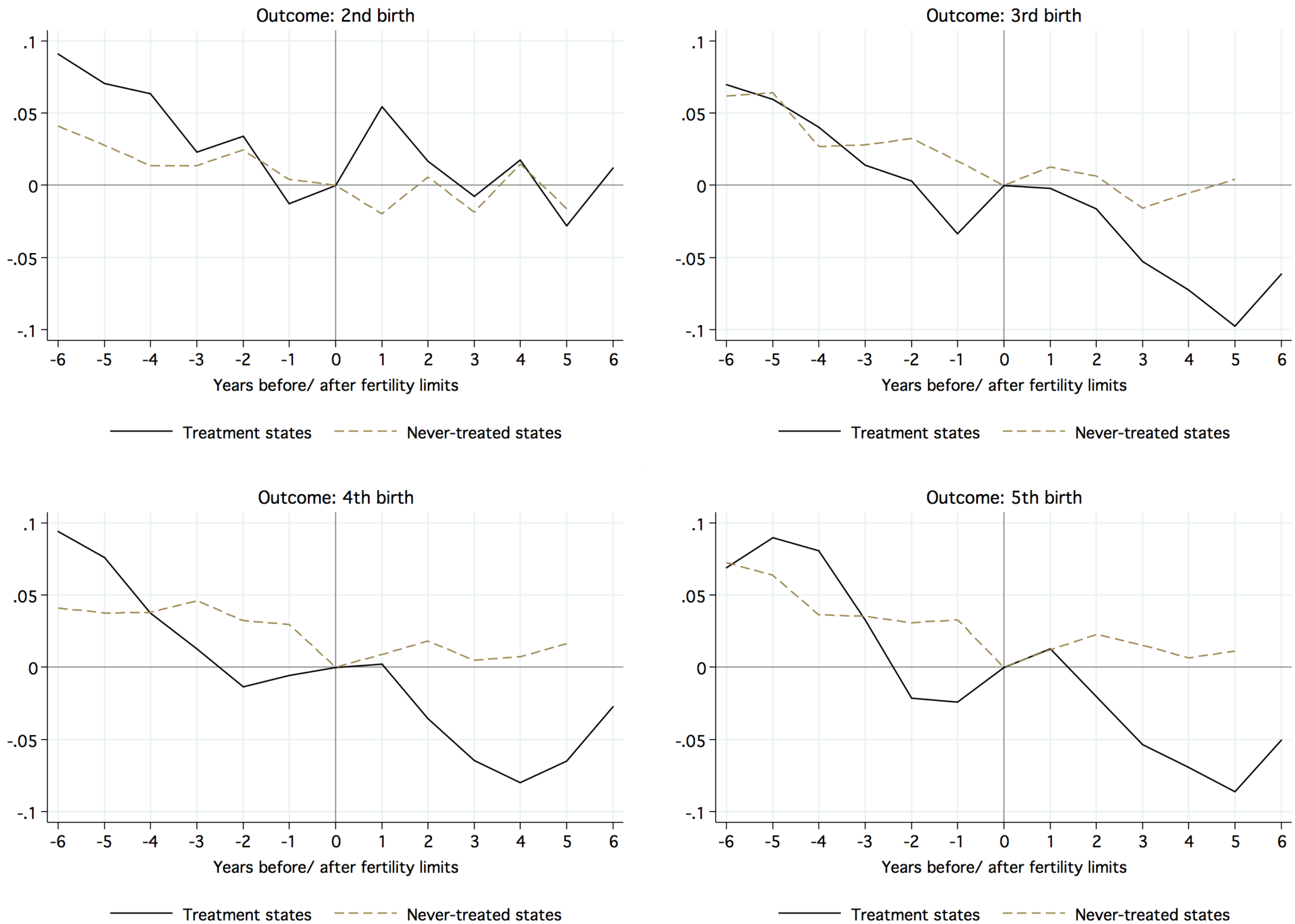
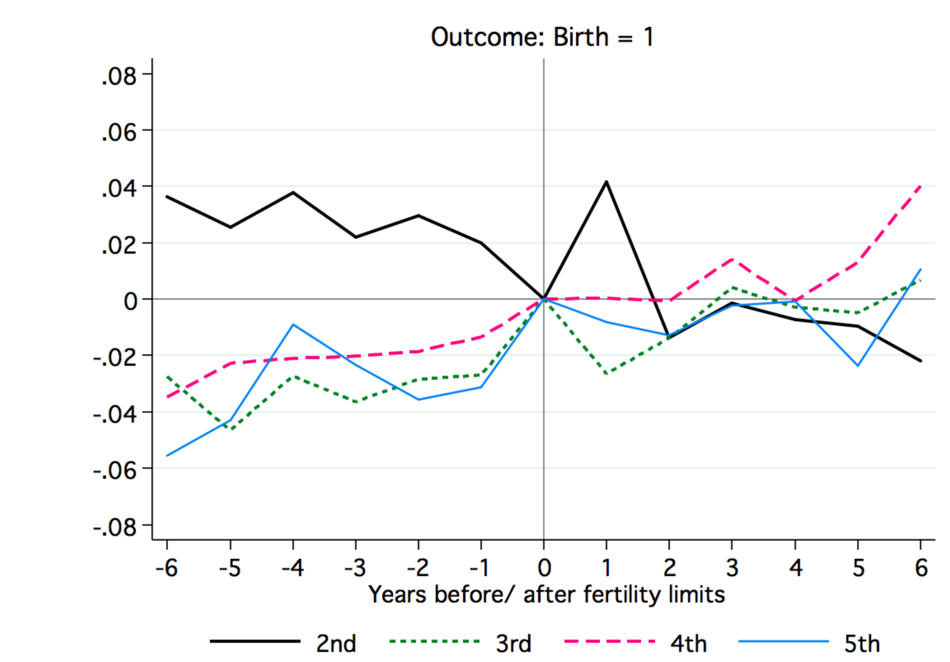


Figure 2: Hazards of birth in treatment and never-treated states (rural), by year



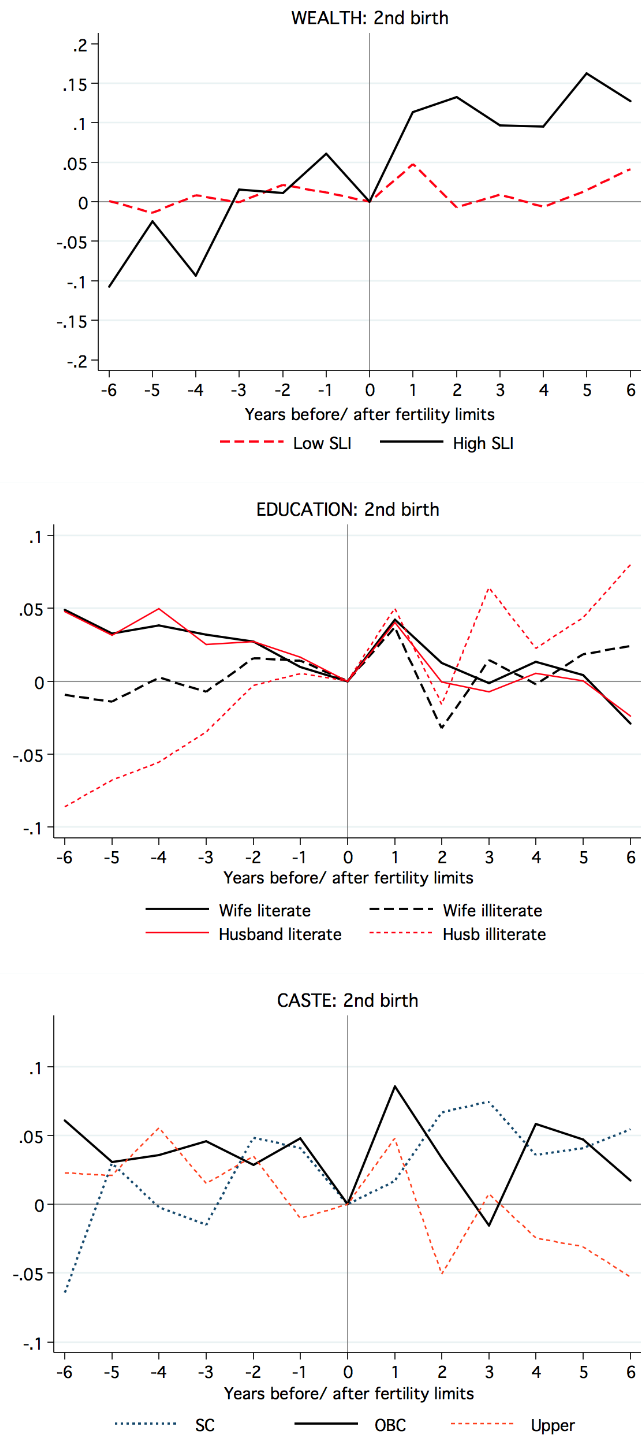
NOTES: This figure plots the β_k coefficients from specification (1a) separately for treatment and control/ never-treated states (using fictitious treatment years). The sample is restricted to women in treatment states. The outcome variables are indicators for births of various orders. Each plot in the graph represents a different birth order. For the regression where birth of order b is the dependent variable, the sample is restricted to years after birth $(b-1)$ and until birth b. Standard errors are clustered by state. The vertical line (at $k=0$) indicates the year before announcement.

Figure 3: Differences in the hazards of birth for treatment and control states (rural)



NOTES: This figure plots the coefficients of $T_s * Post_{s,t+k}$ from specification (1b). The outcome variables are indicators for births of various orders. Each plot in the graph represents a different birth order. For the regression where birth of order b is the dependent variable, the sample is restricted to years after birth $(b-1)$ and until birth b. The vertical line (at $k = 0$) indicates the year before announcement.

Figure 4: Heterogeneity in the effects on second births in rural areas



NOTES: This figure plots the coefficients of $T_s * Post_{s,t+k}$ from specification (1b) for indicators of second, third, fourth, and fifth births for various socioeconomic sub-samples. The vertical line (at $k = 0$) indicates the year before announcement. SC, OBC, and Upper indicate Scheduled Caste, Other Backward Class, and upper caste women, respectively. Low and High SLI (standard of living index) are equal to one if the household belongs to the bottom-third or the top-third of household wealth distribution in India.

8 Tables

Table 1: Timeline for fertility limits across states

State	Announced	Grace Period	In effect	End
Rajasthan	Oct 1992	Apr 23, 1994 - Nov 27, 1995	Nov 27, 1995 -	
Orissa	Sep 1993/1994[40]	Apr 1994 - Apr 21, 1995	Apr 22, 1995 -	
Andhra Pradesh	Mar 1994	May 30, 1994 - May 30, 1995	Jun 1995 -	
Haryana	Apr 1994	Apr 21, 1994 - Apr 24, 1995	Apr 25, 1995 - Dec 31, 2004	Jul 21, 2006 (retro. impl. Jan 1, 2005)
Himachal Pradesh	Jan - Apr 2000	Apr 18, 2000 - Apr 18, 2001	Apr 2001 - Apr 2005	May 30, 2005
Madhya Pradesh	Jan - Mar 2000[41]	Mar 29, 2000 - Jan 26, 2001	Jan 2001 - Nov 2005	Nov 20, 2005
Chhattisgarh	2000	2000 - Jan 2001	Jan 2001- 2005	2005 (earliest mention)[30]
Maharashtra	2003[42]	Sep 21, 2002 - Sep 20, 2003	Sep 2003 -	
Uttarakhand (municipal only)	2002			
Gujarat	2005	Aug 2005 - Aug 11, 2006	Aug 11, 2006 -	
Bihar (municipal only)	Jan 2007	Feb 1, 2007 - Feb 1, 2008	Feb 1, 2008 -	

[40] For district councils in 1993 and for village and block councils in 1994.

[41] Notified on May 31, 2000. This created problems since people whose third child was born in Jan 2001 contested their disqualification for birth within 8 months of the new law.

[42] In retrospective effect from Sep 21, 2002.

Table 2: Panchayat members disqualified during 2000-04, for selected states

State	**Number of disqualifications** (excluding rejected nominations)
Haryana	1,350
Rajasthan	548
Madhya Pradesh	1,140
Chhattisgarh	766
Andhra Pradesh	94*

NOTES: *Data available for 15 out of 23 districts. Source: Buch (2005) and Visaria et al. (2006).

Table 3: Treatment years, by state

State	$Treat_{st} = 1$ **if year** $>$
Andhra Pradesh	1993
Orissa	1993
Haryana	1993
Rajasthan	1994
Himachal Pradesh	1999
Madhya Pradesh (including Chhattisgarh)	1999
Maharashtra	2002

Table 4: Summary statistics

Variable	Never treated		Treated			
			Post = 0		*Post* = 1	
	Mean (1)	Std. Dev. (2)	Mean (3)	Std. Dev. (4)	Mean (5)	Std. Dev. (6)
Urban	0.368	0.482	0.350	0.477	0.387	0.487
Hindu	0.810	0.392	0.910	0.286	0.879	0.326
Muslim	0.166	0.372	0.072	0.258	0.080	0.272
Sikh	0.047	0.211	0.016	0.124	0.009	0.095
Christian	0.041	0.199	0.015	0.120	0.017	0.131
SC	0.165	0.371	0.153	0.360	0.177	0.382
ST	0.049	0.215	0.126	0.332	0.111	0.314
OBC	0.233	0.422	0.180	0.384	0.335	0.472
Wife's years of schooling:						
Zero	0.491	0.500	0.559	0.496	0.480	0.500
5-10 years	0.242	0.428	0.218	0.413	0.251	0.434
10-12 years	0.091	0.287	0.076	0.265	0.091	0.287
12-15 years	0.049	0.216	0.031	0.173	0.045	0.208
$\geq$ 15 years	0.050	0.219	0.036	0.189	0.060	0.238
Husband's years of schooling:						
Zero	0.261	0.439	0.285	0.451	0.262	0.439
5-10 years	0.303	0.460	0.302	0.459	0.308	0.462
10-12 years	0.156	0.362	0.162	0.369	0.150	0.357
12-15 years	0.091	0.288	0.071	0.257	0.081	0.273
$\geq$ 15 years	0.096	0.295	0.083	0.275	0.115	0.319
Low SLI	0.446	0.497	0.476	0.499	0.380	0.485
High SLI	0.227	0.419	0.209	0.407	0.244	0.430
Mother's age at birth	24.885	6.085	23.090	5.624	26.355	6.308
Birth = 1	0.214	0.410	0.234	0.423	0.152	0.359
1st birth is male	0.516	0.500	0.516	0.500	0.519	0.500
N	1,082,017		496,957		222,567	

NOTES: *Post* is defined using the year of announcement of the law (see Table 3). SC, ST, and OBC indicate Scheduled Caste, Scheduled Tribe, and Other Backward Class women, respectively. Low and High SLI (standard of living index) are equal to one if the household belongs to the bottom-third or the top-third of household wealth distribution in India.

Table 5: Correlations between law announcements and socioeconomic variables, in rural areas

Dependent Variable ↓	**Coefficient of $Treat_{st}$** (1)	**Std. Error** (2)
SC	-0.004	[0.008]
ST	0.009	[0.008]
OBC	-0.008	[0.010]
Upper caste	0.003	[0.011]
Hindu	0.012	[0.009]
Muslim	0.003	[0.006]
Sikh	0.001	[0.002]
Christian	0.001	[0.007]
Low SLI	0.009	[0.008]
Med SLI	-0.001	[0.006]
High SLI	-0.007	[0.005]
Wife's years of schooling:		
Zero	-0.005	[0.007]
5-10 years	0.009	[0.010]
10-12 years	0.002	[0.002]
12-15 years	0.001	[0.004]
$\geq$ 15 years	-0.002	[0.002]
Husband's years of schooling:		
Zero	0.003	[0.008]
5-10 years	-0.002	[0.008]
10-12 years	-0.001	[0.003]
12-15 years	0.002	[0.005]
$\geq$ 15 years	-0.000	[0.003]
N	1,143,057	

NOTES: Each coefficient is from a separate regression that includes state, year, and state-age fixed effects, and state-specific linear time trends. Standard errors are in brackets and are clustered by state. SC, ST, and OBC indicate Scheduled Caste, Scheduled Tribe, and Other Backward Class households, respectively. Low, Med, and High SLI (standard of living index) are equal to one if the household belongs to the bottom-third, middle-third, or the top-third of household wealth distribution in India. *** 1%, ** 5%, * 10%.

Table 6: Effects on hazards of birth in rural areas

	Outcome: Birth = 1				
Coefficients of	**1st**	**2nd**	**3rd**	**4th**	**5th**
$T_s * Post_{s,t+k}$	(1)	(2)	(3)	(4)	(5)
$t-6$	0.035	0.0362	-0.0276*	-0.0347*	-0.0554**
	[0.0205]	[0.0208]	[0.0151]	[0.0185]	[0.0221]
$t-5$	0.0197*	0.0255	-0.0466***	-0.0227	-0.0430***
	[0.0103]	[0.0184]	[0.0121]	[0.0157]	[0.0131]
$t-4$	0.0239**	0.0377*	-0.0272**	-0.0210	-0.0091
	[0.0092]	[0.0188]	[0.0111]	[0.0133]	[0.0122]
$t-3$	-0.0040	0.0220	-0.0365**	-0.0202*	-0.0234
	[0.0157]	[0.0176]	[0.0127]	[0.0101]	[0.0140]
$t-2$	0.0220	0.0296	-0.0284**	-0.0185	-0.0355**
	[0.0135]	[0.0169]	[0.0116]	[0.0108]	[0.0122]
$t-1$	0.0257	0.0199	-0.0269	-0.0134	-0.0313**
	[0.0236]	[0.0236]	[0.0189]	[0.0142]	[0.0110]
$t+1$	0.0155	0.0417**	-0.0265	0.0004	-0.0080
	[0.0225]	[0.0177]	[0.0156]	[0.0166]	[0.0110]
$t+2$	0.0075	-0.0138	-0.0137	-0.0005	-0.0130
	[0.0208]	[0.0212]	[0.0199]	[0.0153]	[0.0216]
$t+3$	0.0172	-0.0014	0.0041	0.0142	-0.0023
	[0.0253]	[0.0228]	[0.0195]	[0.0109]	[0.0183]
$t+4$	-0.0005	-0.0074	-0.0029	-0.0006	-0.0010
	[0.0255]	[0.0157]	[0.0149]	[0.0144]	[0.0152]
$t+5$	0.002	-0.0096	-0.0048	0.0131	-0.0238
	[0.0263]	[0.0284]	[0.0214]	[0.0160]	[0.0147]
$t+6$	0.00002	-0.0219	0.0067	0.0402**	0.0106
	[0.0317]	[0.0219]	[0.0141]	[0.0151]	[0.0170]
N	1,79,243	1,04,345	1,17,830	96,502	57,916

NOTES: This table presents the regression estimates corresponding to Figure 3 or specification (1b). Each column is from a different regression. The outcome variables are indicators for births of various orders. For the regression where birth of order b is the dependent variable, the sample is restricted to years after birth $(b-1)$ and until birth b. Standard errors in brackets are clustered by state. *** 1%, ** 5%, * 10%.

Table 7: Heterogeneity in the effect on the hazard of second birth in rural areas

Outcome ↓ **2nd birth = 1**	**Hindu** (1)	**Muslim** (2)	**SC** (3)	**OBC** (4)	**Upper** (5)	**Low SLI** (6)	**High SLI** (7)	**Wife lit** (8)	**Wife illit** (9)	**Husb Lit** (10)	**Husb Illit** (11)
$t+1$	0.0338	-0.0252	0.0169	0.0859*	0.0480*	0.0477*	0.1136**	0.042	0.0369**	0.0401**	0.0499*
	[0.0205]	[0.0924]	[0.0432]	[0.0420]	[0.0226]	[0.0240]	[0.0410]	[0.0243]	[0.0156]	[0.0171]	[0.0262]
$t+2$	-0.0219	-0.1943*	0.067	0.0336	-0.0507*	-0.0069	0.1328***	0.0123	-0.0323	-0.0006	-0.0158
	[0.0216]	[0.0959]	[0.0408]	[0.0337]	[0.0286]	[0.0230]	[0.0425]	[0.0203]	[0.0282]	[0.0193]	[0.0426]
$t+3$	-0.018	-0.1121	0.0746*	-0.0153	0.0076	0.0091	0.0969*	-0.0015	0.0145	-0.0072	0.0641**
	[0.0217]	[0.0792]	[0.0364]	[0.0266]	[0.0345]	[0.0245]	[0.0466]	[0.0245]	[0.0275]	[0.0239]	[0.0285]
$t+4$	-0.0297*	0.0378	0.0359	0.0585	-0.0245	-0.0066	0.0953**	0.0131	-0.0021	0.0054	0.0226
	[0.0141]	[0.0549]	[0.0305]	[0.0342]	[0.0319]	[0.0215]	[0.0427]	[0.0235]	[0.0151]	[0.0175]	[0.0282]
t+5	-0.0299	-0.0264	0.0409	0.0473	-0.0309	0.0147	0.1627***	0.0043	0.0184	0.0001	0.0436
	[0.0319]	[0.0770]	[0.0281]	[0.0375]	[0.0443]	[0.0340]	[0.0461]	[0.0341]	[0.0338]	[0.0302]	[0.0447]
$t+6$	-0.0490**	-0.1381*	0.0545	0.0173	-0.0528	0.0414	0.1271***	-0.0291	0.0241	-0.024	0.0797**
	[0.0190]	[0.0767]	[0.0453]	[0.0438]	[0.0402]	[0.0257]	[0.0368]	[0.0213]	[0.0342]	[0.0197]	[0.0350]
N	87,138	13,051	19,266	28,657	45,051	62,082	10,294	46,114	58,231	72,083	32,262

NOTES: This table presents the regression estimates corresponding to Figure 3 or specification (1b) for various socioeconomic sub-samples. Each column is from a different regression. Lag indicators are omitted from this table for brevity but are included in the regressions. The outcome variable is an indicator for second birth. The sample is restricted to years after first birth and until and including the year of second birth. Standard errors in brackets are clustered by state. SC, ST, OBC, and Upper indicate Scheduled Caste, Scheduled Tribe, Other Backward Class, and upper caste households, respectively. Low and High SLI (standard of living index) are equal to one if the household belongs to the bottom-third or the top-third of household wealth distribution in India. The last four columns split the sample into literate and illiterate wives and husbands. *** 1%, ** 5%, * 10%.

Table 8: Effects on the likelihood of two living children in rural areas

	Outcome: # Living children = 2										
	All	**SC**	**ST**	**OBC**	**Upper**	**Low SLI**	**High SLI**	**Wife lit**	**Wife illit**	**Husb lit**	**Husb illit**
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Panel A:											
$Treat_{st}$	0.0091	0.0069	-0.0011	0.0069	0.0233	0.0035	0.0204**	0.0229***	0.0033	0.0149**	-0.0022
	[0.0061]	[0.0111]	[0.0086]	[0.0059]	[0.0153]	[0.0082]	[0.0093]	[0.0062]	[0.0063]	[0.0061]	[0.0060]
Panel B:											
$T_s * Post_{st}$	0.0125	0.0112	0.0118	0.0172**	0.0218	0.0059	0.0151	0.0290***	0.0037	0.0178*	0.002
	[0.0095]	[0.0146]	[0.0108]	[0.0073]	[0.0171]	[0.0115]	[0.0127]	[0.0087]	[0.0098]	[0.0087]	[0.0118]
$Post_{st}$	-0.0048	-0.006	-0.0168	-0.0122	0.0023	-0.0035	0.0071	-0.008	-0.0005	-0.004	-0.0059
	[0.0064]	[0.0116]	[0.0100]	[0.0077]	[0.0071]	[0.0093]	[0.0098]	[0.0075]	[0.0068]	[0.0056]	[0.0106]
N	1,060,282	189,704	115,842	245,457	509,279	679,932	79,486	382,337	677,945	691,312	368,970

NOTES: This table presents the regression estimates corresponding to specification (2a) in Panel A and from specification (2b) in Panel B using an indicator for two living children as the outcome variable. The sample is restricted to mothers under age 33 in year t but no other restrictions are imposed. Each column within a panel is a different regression. Standard errors in brackets are clustered by state. SC, ST, OBC, and Upper indicate Scheduled Caste, Scheduled Tribe, Other Backward Class, and upper caste households, respectively. Low and High SLI (standard of living index) are equal to one if the household belongs to the bottom-third or the top-third of household wealth distribution in India. The last four columns split the sample into literate and illiterate wives and husbands. *** 1%, ** 5%, * 10%

Table 9: Sex ratio of second births in rural areas, by caste and first child's sex

Outcome ↓ **2nd birth is male**	**Upper caste** (1)	**SC** (2)	**ST** (3)	**OBC** (4)	**All** (5)
$T_s * Post_{st} * Girl_i$	0.0779*	0.0127	-0.0375	0.1039	0.0435
	[0.0383]	[0.0583]	[0.0465]	[0.0726]	[0.0332]
$Post_{st} * Girl_i$	0.0197	-0.1209**	-0.0174	-0.0374	-0.0343
	[0.0272]	[0.0539]	[0.0469]	[0.0395]	[0.0204]
With state-girl trends:					
$T_s * Post_{st} * Girl_i$	0.0451	0.0306	-0.0244	0.1285*	0.0269
	[0.0479]	[0.0750]	[0.0770]	[0.0652]	[0.0303]
$Post_{st} * Girl_i$	0.0160	-0.0910	-0.0350	-0.0195	-0.0211
	[0.0328]	[0.0648]	[0.0887]	[0.0404]	[0.0216]
N	33,254	11,875	7,011	14,682	66,822

NOTES: This table reports the coefficients from specification (3). The sample is restricted to second births to women whose first child was born before the law was announced in her state. Standard errors in brackets are clustered by state. SC, ST, OBC, and Upper indicate Scheduled Caste, Scheduled Tribe, Other Backward Class, and upper caste households, respectively. *** 1%, ** 5%, * 10%.

A Additional Figures and Tables

Table A.1: Timeline of Panchayat elections

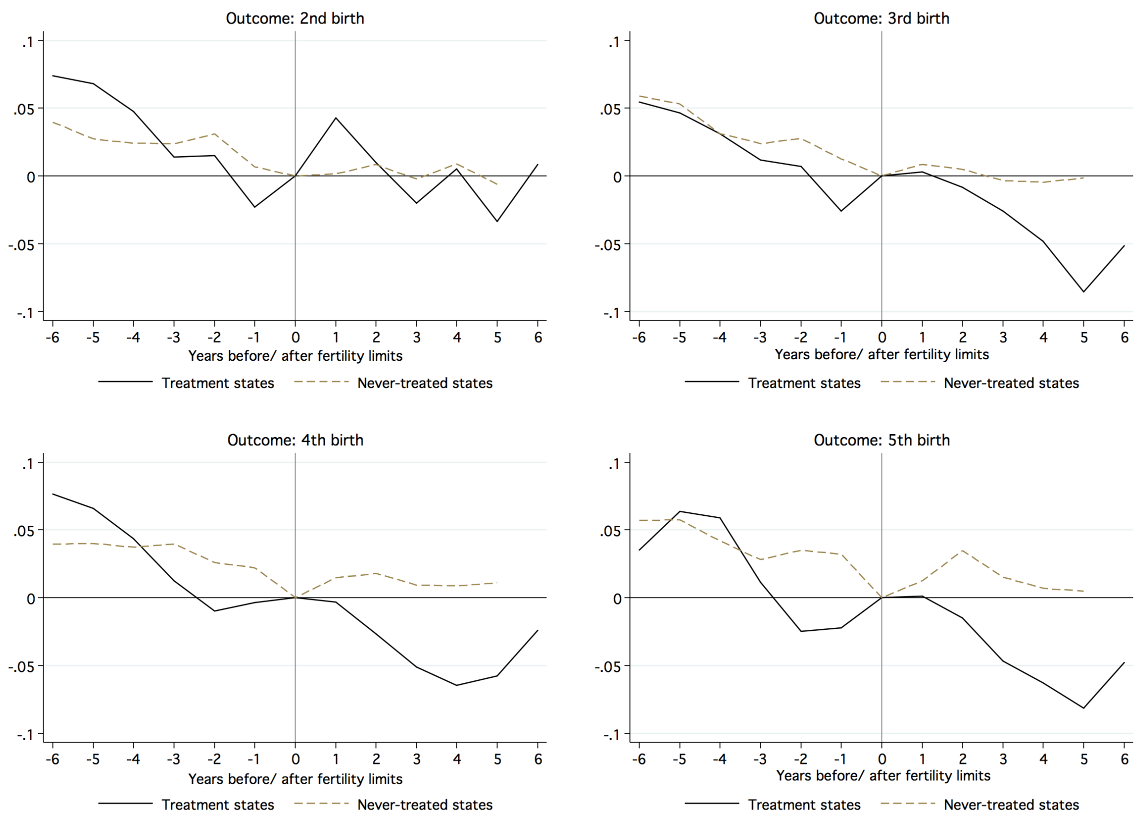
State	**Election Years**	
	Without the limits	With the limits
Rajasthan	1995	2000, 2005, 2010
Haryana	1994, 2010	2000, 2005
Andhra Pradesh		1995, 2001, 2006, 2011
Orissa		1997, 2002, 2007, 2012
Himachal Pradesh	1995, 2005, 2010-11	2000
Madhya Pradesh	1994, 2010	2000,[21] 2005
Chhattisgarh	2010	2000, 2005
Maharashtra	1995, 2000	2007, 2010, 2013
Uttarakhand	2003, 2008, 2014	
Jharkhand	2010	
Gujarat	2001, 2005-06	2010-11
Bihar	2006	2011

Figure A.1: Hazards of first birth in treatment and never-treated states (rural), by year

NOTES: This figure is similar to Figure 2 and plots the hazard of first birth in treatment and control states.

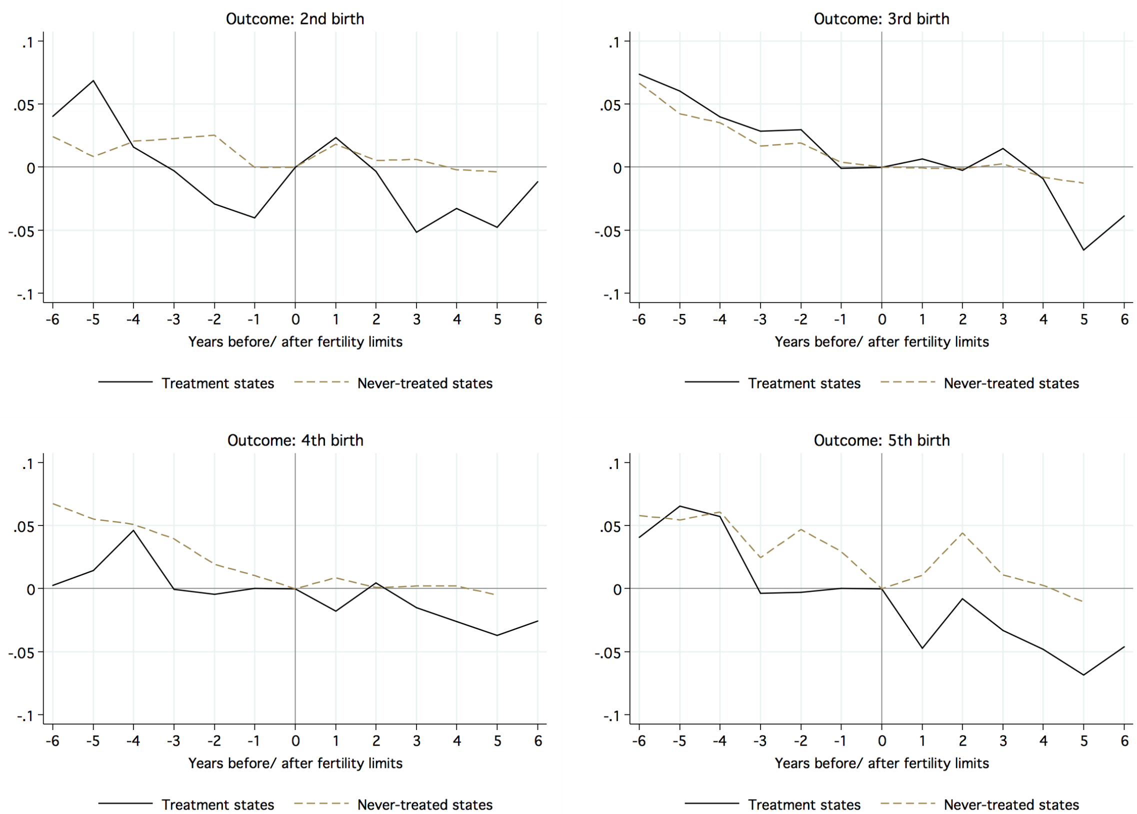
[21] Despite the fact that the two-child norm was officially introduced after the Panchayat elections were over in 2000, the new government began disqualifying elected representatives earlier (Visaria et al. (2006)).

Figure A.2: Hazards of birth in treatment and never-treated states (rural and urban), by year



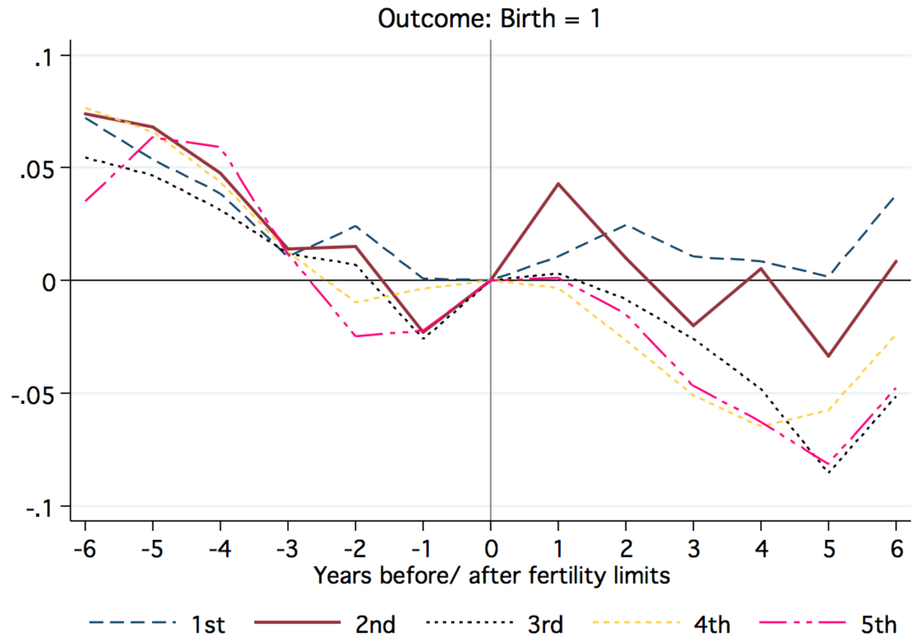
NOTES: This figure is similar to Figure 2 except that the sample comprises both rural and urban areas.

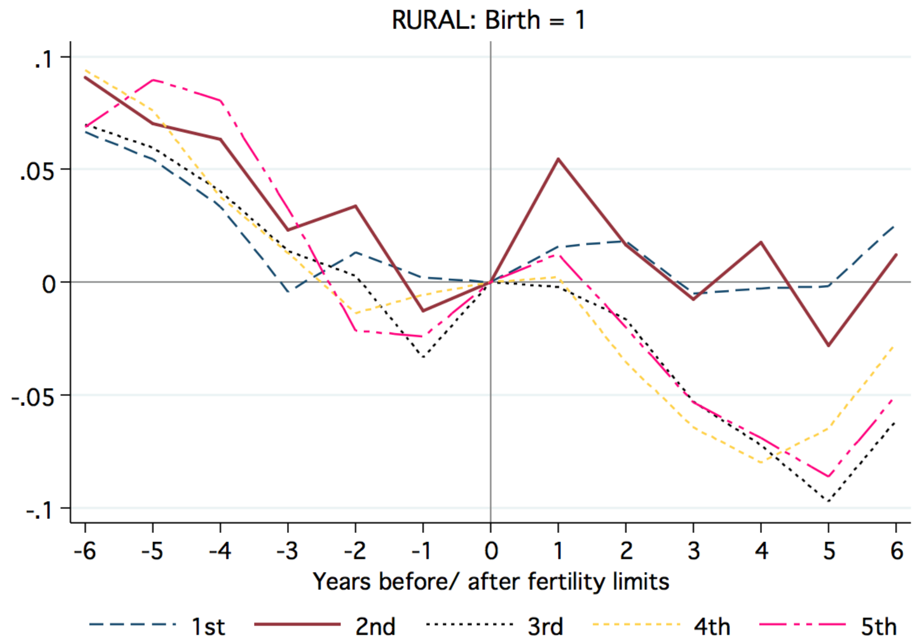
Figure A.3: Hazards of birth in treatment and never-treated states (urban), by year



NOTES: This figure is similar to Figure 2 except that the sample is restricted to urban areas.

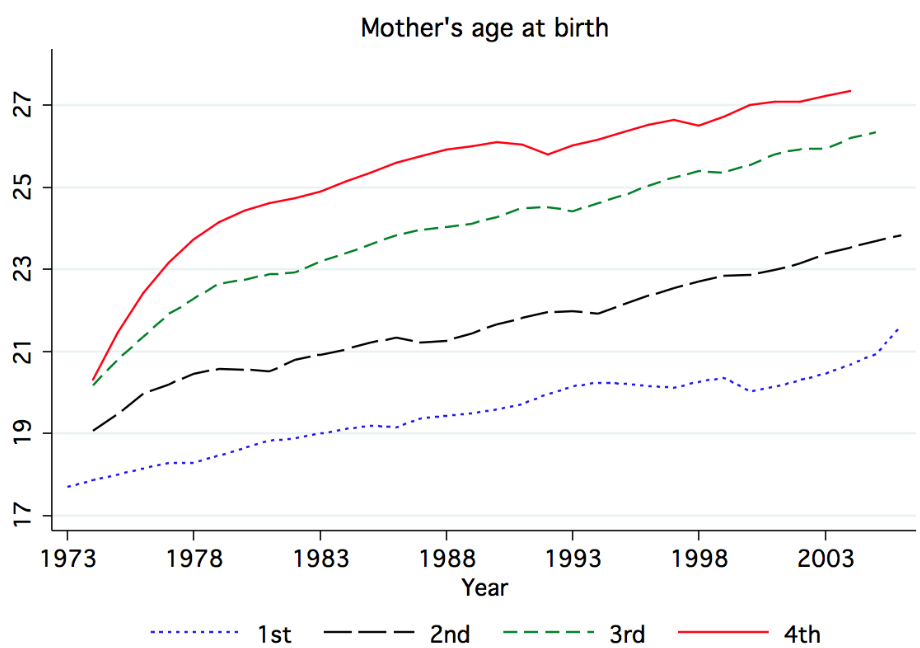
Figure A.4: Hazards of birth in treatment states (all and rural), by year





NOTES: This figure is similar to Figure 2 except that it focuses only on treatment states. The top figure is for both rural and urban areas while the bottom figure is only for rural areas.

Figure A.5: Average mother's age at birth, by year



NOTES: This graph plots the trends in average age of mothers at births of various orders. The sample is restricted to mothers under age 33 in a given year. For each birth of order b, the sample is further restricted to years after birth $(b-1)$ and until birth b. Both urban and rural women are included. The plots are similar for only rural or only urban women.

Table A.2: Effects on the likelihood of two living children in rural areas

	Outcome: # Living children = 2										
	All	**SC**	**ST**	**OBC**	**Upper**	**Low SLI**	**High SLI**	**Wife lit**	**Wife illit**	**Husb lit**	**Husb illit**
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Panel A:											
$Treat_{st}$	0.009	0.0034	0.0004	0.0062	0.0251*	0.0031	0.0288***	0.0231***	0.0034	0.0147**	-0.0017
	[0.0068]	[0.0106]	[0.0076]	[0.0061]	[0.0137]	[0.0076]	[0.0096]	[0.0053]	[0.0062]	[0.0063]	[0.0064]
Panel B:											
$T_s * Post_{st}$	0.0139	0.0088	0.0148	0.0196**	0.0242	0.0062	0.0194	0.0302***	0.005	0.0194**	0.0024
	[0.0100]	[0.0139]	[0.0095]	[0.0080]	[0.0161]	[0.0105]	[0.0126]	[0.0073]	[0.0098]	[0.0089]	[0.0115]
$Post_{st}$	-0.0067	-0.0073	-0.0186*	-0.0157*	0.0013	-0.0043	0.0124	-0.0094	-0.0023	-0.0065	-0.0057
	[0.0062]	[0.0108]	[0.0101]	[0.0080]	[0.0068]	[0.0082]	[0.0107]	[0.0064]	[0.0069]	[0.0054]	[0.0098]
N	1,143,057	202,619	123,071	267,024	550,343	722,793	90,528	416,265	726,792	747,865	395,192

NOTES: This table presents the regression estimates corresponding to specification (2a) in Panel A and from specification (2b) in Panel B using an indicator for two living children as the outcome variable. No sample restrictions are imposed. Each column within a panel is a different regression. Standard errors in brackets are clustered by state. SC, ST, OBC, and Upper indicate Scheduled Caste, Scheduled Tribe, Other Backward Class, and upper caste households, respectively. Low and High SLI (standard of living index) are equal to one if the household belongs to the bottom-third or the top-third of household wealth distribution in India. The last four columns split the sample into literate and illiterate wives and husbands. *** 1%, ** 5%, * 10%.

Table A.3: Effects on the likelihood of 1/3/4/5 living children in rural areas

	All (1)	**SC** (2)	**ST** (3)	**OBC** (4)	**Upper** (5)	**Low SLI** (6)	**High SLI** (7)	**Wife lit** (8)	**Wife illit** (9)	**Husb lit** (10)	**Husb illit** (11)
						# Living children = 1					
$Treat_{st}$	0.0030	0.0017	0.0151	0.005	-0.0043	0.0048	-0.0101	-0.0104	0.0111	0.0011	0.0069
	[0.0061]	[0.0074]	[0.0094]	[0.0076]	[0.0077]	[0.0064]	[0.0092]	[0.0072]	[0.0075]	[0.0060]	[0.0083]
						# Living children = 3					
$Treat_{st}$	-0.0021	-0.0001	0.0017	-0.0016	-0.0082	-0.0023	0.0012	-0.0035	0.0009	-0.006	0.0062
	[0.0057]	[0.0130]	[0.0109]	[0.0076]	[0.0106]	[0.0057]	[0.0061]	[0.0094]	[0.0044]	[0.0064]	[0.0080]
						# Living children = 4					
$Treat_{st}$	-0.0063***	0.0022	-0.0144***	-0.0047	-0.0081	-0.0047	-0.0026	-0.0042	-0.0078**	-0.0060**	-0.0061
	[0.0022]	[0.0078]	[0.0049]	[0.0034]	[0.0051]	[0.0031]	[0.0043]	[0.0031]	[0.0030]	[0.0028]	[0.0050]
						# Living children = 5					
$Treat_{st}$	-0.0024	-0.004	-0.0063	-0.0035	-0.0001	-0.0041	-0.0017	-0.0028**	-0.0037	-0.0012	-0.0052
	[0.0020]	[0.0040]	[0.0044]	[0.0033]	[0.0025]	[0.0032]	[0.0023]	[0.0013]	[0.0030]	[0.0017]	[0.0040]
N	1,060,282	189,704	115,842	245,457	509,279	679,932	79,486	382,337	677,945	691,312	368,970

NOTES: This table presents the regression estimates corresponding to specification (2a). The outcome variables are indicator for one, three, four, and five living children. The sample is restricted to mothers under age 33 but no other restrictions are imposed. Each column within a panel is from a different regression. Standard errors in brackets are clustered by state. SC, ST, OBC, and Upper indicate Scheduled Caste, Scheduled Tribe, Other Backward Class, and upper caste households, respectively. Low and High SLI (standard of living index) are equal to one if the household belongs to the bottom-third or the top-third of household wealth distribution in India. The last four columns split the sample into literate and illiterate wives and husbands. *** 1%, ** 5%, * 10%

B State-wise Regulations

1. Rajasthan:[31]

According to the the Rajasthan Panchayati Raj Act, 1994, "...Every person registered as a voter in the list of voters of a Panchayati Raj Institution shall be qualified for election as a Panch or, as the case may be, a member of such Panchayati Raj Institution unless such person-...(l) has more than two children."..."The birth during the period from the date of commencement of the Act (23rd April, 1994), hereinafter in this proviso referred to as the date of such commencement, to 27th November, 1995, of an additional child shall not be taken into consideration for the purpose of the disqualification mentioned in Clause (l) and a person having more than two children (excluding the child, if any, born during the period from the date of such commencement to 27th November, 1995) shall not be disqualified under that clause for so long as the number of children he had on the date of commencement of this Act does not increase."

2. Haryana:

According to the 1994 Act[32], "...No person shall be a Sarpanch or a Panch or a Gram Panchayat or a member of a Panchayat Samiti or Zila Parishad or continue as such who– (q) has more than two living children: Provided that a person having more than two children on or upto the expiry or one year of the commencement of this Act, shall not be deemed to be disqualified."

Prior to revocation:[33] "Person shall be disqualified for being elected to a Gram Panchayat, Panchayat Samiti or Zila Parishad if:

...(xvii) has more than two living children; provided that this disqualification of more than two living children shall not apply for the persons who had more than two living children before 21st April, 1995 unless he had additional child after the said date."

The Haryana government amended Section 175(q) of the Haryana Panchayati Raj Act, 1994, retrospectively with effect from January 1, 2005 to omit the section (q).[34]

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[31] Source: http://www.rajpanchayat.gov.in/common/toplinks/act/act.pdf

[32] Source: http://www.panchayat.gov.in/documents/10198/350801/The%20Haryana%20Panchayati%20%20Raj%20Act%201994.pdf

[33] Source: http://secharyana.gov.in/html/faq1.htm

[34] Source: http://hindu.com/2006/07/22/stories/2006072207150500.htm

3. Andhra Pradesh:[35]

According to Section 19 (3) of the Andhra Pradesh Panchayati Raj Act, 1994,"...A person having more than two children shall be disqualified for election or for continuing as member:

Provided that the birth within one year from the date of commencement of the Andhra Pradesh Panchayat Raj Act, 1994 hereinafter in this clause referred to as the date of such commencement, of an additional child shall not be taken into consideration for the purposes of this clause;

Provided further that a person having more than two children (excluding the child if any born within one year from the date of such commencement) shall not be disqualified under this clause for so long as the number of children he had on the date of such commencement does not increase;

Provided also that the Government may direct that the disqualification in this section shall not apply in respect of a person for reasons to be recorded in writing."[36]

4. Orissa:[37]

A person shall be disqualified for being elected to a PR institution if he "...has more than one spouse living or has more than two children. The last named disqualification shall not apply if the person had had more than two children before 21.04.1995 unless he begot an additional child after the said date. Rule 25 of O.G.P. Act gives full description of the disqualifications."

5. Madhya Pradesh:[38]

"...condition to disqualify an office bearer of the Panchayat for holding the post: (1) that he must have more than two living children, and (2) out of whom one is born on or after the 26th day of January, 2001..."

The Population Policy of Madhya Pradesh states that "persons having more than two children after January 26, 2001 would not be eligible for contesting elections for *panchayats*, local bodies, *mandis* or cooperatives in the state. In case they get elected, and in the meantime they have the third child, they would be disqualified for that post."

6. Chhattisgarh:[39]

[35]Source: `http://www.ielrc.org/content/e9412.pdf`

[36]Further explanation at: `http://www.apsec.gov.in/RLBS_GPs/CLARIFICATIONS%202013/877%20-%20Qualification.pdf`.

[37]Source: http://secorissa.org/download/FAQ2.pdf

[38]Source: `http://www.indiankanoon.org/doc/1285129/`

[39]Source: `http://www.the-laws.com/Encyclopedia/Browse/ShowCase.aspx?CaseId=023002211000`

"Section 36: Disqualification for being office bearer of Panchayat:- 36(1) No person shall be eligible to be an office bearer of Panchayat who:...(m) has more than two living children one of whom is born on or after the 26th day of January, 2001."

7. Maharashtra:

"...(j-1) No person shall be a member of a Panchayat or continue as such, who has more than two children:

Provided that, a person having two children on the date of commencement of the Bombay Village Panchayats and the Maharashtra Zila Parishads and Panchayat Samitis (Amendment) Act 1995 (hereinafter in this clause referred to as "the date of such commencement") shall not be disqualified under this clause so long as the number of children he had on the date of such commencement does not increase;

Provided further that, a child or more than one child born in a single delivery within the period of one year from the date of such commencement shall not be taken into consideration for the purpose of disqualification mentioned in this clause.

... For the purposes of clause (j-1):

Where the couple has only one child on or after that date of such commencement, any number of children born out of a single subsequent delivery shall be deemed to be one entity.

"Child" does not include an adopted child or children...."