

Seeing is Believing - Can increasing the number of female politicians reduce sex selection in Rural India?

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Abstract

Cultural values and traditional views regarding gender roles encourage gender discrimination and the practice of sex selection in India. Increasing political and work force participation of women in India challenges such normalcies. Exploiting the implementation of an Indian law that required one-third of local political seats be reserved for women, I investigate the impact of female leadership on the practice of sex selection in Rural India. I find that higher birth order children are less likely to be male if political seats at the local level have been reserved for women. Additionally, I also find that higher birth order female child mortality rates decline once states implement female reservations.

1 Introduction

Sex-selective abortions and unusually high death rates for female infants are known to be the cause of high male to female sex ratios in many Asian countries. Son preference in India is generally attributed to the fact that girls leave home after marriage and do not contribute to the family later in life. In a traditional sense, a daughter's contribution to the family is generally limited to helping with the household chores. Deeply embedded cultural views regarding female roles are challenged as increasing political and work force participation of women in India define the new norm. Increasing the status of women

allows them to break social sanctions and to have the financial means to provide support for their parents. In 1993, drastic measures to increase female political representation in India were implemented. The 73rd and the 74th Amendments to India's constitution required that required local governments to reserve one-third of total seats, including those of chairpersons, for women. While the 73rd Amendment focused on rural governance, the 74th Amendment focused on urban governance. Within a short window of time following passage, India experienced a large influx of female local leaders. This natural experiment has motivated several important studies investigating the effects of female governance. One such study suggests that exposure to female leaders improves parent's stated aspirations for female children (Beaman et al., 2012). In the same vein, I argue that increasing female visibility and power outside of the household could reduce male preference, and hence sex selection. To the best of my knowledge, there is no conclusive evidence that such an effect exists. In this analysis, I focus on the 73rd Amendment and investigate the impact of an increased female role in politics on the practice of sex selection in Rural India.

Although Indian women occasionally serve as state governors, comparing sex selection across states with female governors to states with male governors will not reveal a causal effect of female governance on sex selection. While whether a female is elected is a choice made by the country's President and could potentially be argued as exogenous to the state, of the nine female governors appointed since 1990 six have been in Southern Indian states that are known for low gender discrimination. This suggests that the president chooses female governors in places known not to gender discriminate, and as such a causal comparison across states with female and male governors could not be made. Instead, I rely on a change in national policy that increased the number of local government positions served by women. While a form of local governments called Panchayat Raj Institutions (PRIs) have existed in India for centuries, it was not until 1993 that these institutions were recognized by the nation's constitution. The 73rd Amendment to India's constitution came into effect in April 1993. The Amendment established a three-tier system of PRIs at the village (Gram Panchayat), the block (Panchayat Samiti) and the district levels (Zilla

Parishad) with the goal of generating financial resources through taxes to spend on local needs. In addition to establishing a three-tier system of PRIs, the 73rd Amendment stated that one-third of total seats, as well the positions of chairpersons, of Panchayats at all three levels had to be reserved for women. I exploit the ratification of the 73rd Amendment to investigate whether increased political role of women reduces sex selection in Rural India. Variation in the timing of when a state has a Panchayat election following the 73rd Amendment, or effectively the time that seats for women are first reserved is interacted with birth order of child to estimate a difference-in-difference (DD) model that investigates the impact of female seats reservations on the likelihood that the child is a boy. Since sex selection is known to occur at high birth orders, investigating birth order-specific effects is important. I find that higher birth order children born after a Panchayat election in line with the 73rd Amendment, or after female seats have been reserved, are less likely to be male in Rural India. In addition, I find that girls of high birth orders born after seats for women are reserved are less likely to die by age 5, relative to boys of high birth orders born after seats for women are reserved.

I begin my analysis with an overview of existing literature on female reservations in India in Section 2. The implementation of the 73rd Amendment has been heterogenous across states and Section 3 provides important background information of the policy change. The analysis makes use of several data sources, and these are discussed in Section 4. The methodology relies on variation in the timing a state has a relevant election reserving seats for women and birth order of child. The corresponding estimating equations are introduced in Section 5. The timing of when states in the sample have an election is explicitly discussed and the choice of states in the most preferred sample is explained in Section 6. Section 7 provides summary statistics of the main data source, the DLHS II. Section 8 presents the main results of estimation of Equations 1 and 2 using timing of state elections. As additional support for the effect, I also exploit the status of district reservations and study whether a high birth order child born in a district while it was reserved is less likely to be a boy. While the paper focuses on the effect of Panchayat reservations on Rural

India, when studying the effect of district level panchayat reservations, I investigate the impact for both rural and urban areas. The reason for this is that the Zilla Parishad, or the district Panchayat, is responsible for governing both rural and urban local bodies. I find that district reservations do not significantly effect the likelihood that a family has a boy in Rural India, but significant decreases in high birth order sex selection is observed for Urban India. This is suggestive evidence that, in Rural Indian communities, the lower level Panchayats at the village and block level are driving the result. Previous literature also finds that the impact of female leadership is through reservations at lower level Panchayats (CITE IYER). However, my findings suggests that researchers should look at both urban and rural populations separately as urban populations may be impacted through district level reservations. Using limited data on two districts of Orissa, I am also able to show that Gram Panchayat (village level) reservations yield a drop in high birth order sex selection. Furthermore, Section 9 presents evidence that the difference-in-difference model estimated is valid and this in both graphs and equations. As an additional robustness check, the effect for West Bengal only is also show. Finally Section 10 concludes.

2 Relevant Literature

An extensive literature shows that cultural preferences for boys is associated with a higher ratio of boys (Anderson and Ray, 2010; Das Gupta, 1987; Goodkind, 1996; Lin et al., 2008; Qian, 2008). Recently, a large literature has also begun investigating the impact of increased female political roles in India. Exploiting the 73rd Amendment, various studies support different effects of female government on economic and behavioral outcomes in Rural India. Using data on the randomization of female head assignment of village Panchayats from Rajasthan and West Bengal, Chattopadhyay and Duflo (2004b) finds that village leaders invest more in infrastructure more closely related to the needs of their own gender. More specifically, female leaders in West Bengal invest more in water and road constructions and less in education, while female leaders in Rajasthan invest more in water and less in roads.

Ban and Rao (2008) extend the findings of Chattopadhyay and Duflo (2004b) to South Indian states, where gender disparity is a lesser concern. They find that village Panchayats with female chairs are no better or worse than those with male chairs. Moreover, they do not find evidence supporting Chattopadhyay and Duflo (2004b)'s finding for Southern Indian states, and chairs are not found to be more likely to serve the needs that more directly impact their own gender.

Beaman et al. (2011) finds increased female citizen participation at local political meetings. While there is no impact on the gender of the attendees at the meetings, women are significantly more likely to speak at the village Panchayat meetings when the village Panchayat chair is also a woman. Beaman et al. (2009) finds voters are more likely to elect women as leaders once females have served as the chair of the village Panchayats in West Bengal. The authors argue that the mechanism underlying the effect is a shift in voters' beliefs regarding the effectiveness of female politicians. Beaman et al. (2012) reports that female political reservations in India increases girls' aspirations and educational attainment. Additionally, the authors find that the gender gap in parents' aspirations for their children closes by 20% if the head of the village Panchayat is also a woman. While previous research suggests that increasing female visibility and power through an increased role in the government affects various outcomes, both behavioral and economic, to my knowledge there is no research that studies the impact of female role in government on fertility outcomes in Rural India. While researchers have found evidence of increased parental aspirations for their daughters, I investigate whether this also translates into a decreased gender bias at birth and a reduction in sex selection.

3 Background

Prior to the adoption of the 73rd and the 74th Amendments, the states were the smallest units of government recognized by the Indian constitution. Frustrations from the failure of the national government to deliver public services, infrastructure, and efforts to alleviate

poverty led to a general consensus amongst the public debate that devolving of powers to the local levels was the solution (Chaudhuri (2003)). The efforts to devolve powers have origins dating back to 1989, at which time early versions of the Amendments were introduced as the 64th Amendment. While the bill was generally received well, it was eventually defeated because the states did not have enough discretion in the implementation of the bill (Chaudhuri (2003)). Allowing states flexibility in design and implementation, the 73rd and the 74th Amendments were re-introduced in the parliament and were eventually passed in December of 1992. The 73rd Amendment went into effect in April of 1993, whereas the 74th Amendment went into effect in June (Chaudhuri (2003)). The Amendment established a pyramid structure for the local government, with the base consisting to the Gram Sabha, or the people of the village, who elect members of Gram Panchayat. The Gram Sabha also help hold elected members accountable and ensure funds are being properly used. The Gram Panchayat is the local government unit above the Gram Sabha. Taluk (block level) Panchayats, are next up in the hierarchy of local Panchayats. They provide the link between Gram Panchayats and the highest unit of local governance at the district level Panchayat, the Zilla Parishad. The Zilla Parishad provides the direct link between the state and local governments. The task of the new local government bodies, at both the rural and the urban level, was to implement development plans based on local needs. Responsibilities included land improvement, infrastructural and ecological development, poverty alleviation and development of women, children, scheduled and backward castes.

The 73rd Amendment included both mandatory and discretionary provisions. The mandatory provisions called for the establishment of local Panchayats at the village, block and the district level. Further required were direct elections, with manditory elections every 5 years, for Panchayats at all three levels. Seats in all Panchayats, including those of chairpersons, were to reserved for historically disadvantaged castes in proportion to their population. Additionally, one-third of total seats, including those of chairpersons, at all three levels of Panchayats were to be reserved for women. Also required were seat reservations for the disadvantaged scheduled castes and scheduled tribes. The states were given 1

year to pass conformity acts by either amending existing laws or by passing entirely new laws in line with the 73rd Amendment (Chaudhuri (2003)).

In short, the discretionary provisions of the Amendment were those that allowed these local bodies to self-govern. For example, devolution of powers and responsibilities and planning of schemes for development, poverty alleviation, development of women and children were discretionary (Chaudhuri (2003)). While the Amendments set up local bodies of governments, how effective the states were in actually delivering locally felt needs depended on how much power the states bestowed on them. While most states have taken mandatory actions regarding the election set up, not surprisingly, the level of devolution of power varied across states. Nevertheless, for the first time, about 800,000 women participated in local government after the first round of elections between 1993 and 1994.

4 Data

I make use of several data sets. The main specification uses two different data sets. First, I use data from the District Level Health and Facility Survey (DLHS), which were purchased from the International Institute for Population Sciences (IIPS) in Mumbai, India. These data include detailed information on a woman's fertility history. For each pregnancy, I have information on the child's date of birth, birth order, gender, and information on whether the child is still alive. The data also provide information on household and mother's characteristics. The finest level of location identified is at the district level. In addition to the fertility survey, I construct a data set on when the new policy of reserving female seats in each state became effective. Because states in India have control over when local elections for Panchayats are held, female seats were not reserved until a state had its first Panchayat election. I collect information on when each state had Panchayat elections after the 73rd Amendment went into effect. These data are mostly collected from a textbook titled *Status of Panchayati Raj in the states and the union territories of India 2000*. I also rely on states' Panchayat websites to provide information on the timing of the first election that

reserved seats for women. Linking the fertility and state election data sets together, I define treatment as whether a child is born after his/her state had its first election that reserved seats for women.

A key feature of the 73rd Amendment is that female seat reservations were assigned at random in most states. Since fertility data from DLHS provide district level information, I also make use of data on district level reservations for each state. Mainly, I use reservation status of chairpersons in each district for 5 states. I also make use of End line Survey 2010 from the India Malaria Impact Evaluation Project (IMIEP). These data only cover 2 districts of Orissa, but identify the village a household is located in. I combine these data with Gram Panchayat level reservations for the 1997, 2002 and the 2007 Orissa Panchayat elections. Since the data from IMIEP are not collected with the intent to study fertility, the data are imperfect and the sample is small for the purposes of my analysis. Nevertheless, these data from the India Malaria Impact Evaluation Project allow me to study a much finer level of variation.

5 Methodologies

5.1 Main Specifications

A difference-in-difference model described in Equation (1), is estimated to uncover the effect of the law change on sex selection. The first difference is across timing of when states have an election that reserves seats for women, the second difference is across birth order as sex selection varies at different birth orders.

$$\begin{aligned}
 Boy_{icd} = & \beta_1 Order_{3plus} \times Post Reservation_{cs} + \beta_2 Order_2 \times Post Reservation_{cs} & (1) \\
 & + \beta_3 Post Reservation_{cs} + Order_{3plus} + Order_2 + \gamma_d + \theta_c + \Gamma X_{icd} + \epsilon_{icd}
 \end{aligned}$$

The dependent variable indicates whether or not child i , of birth cohort c , born in

district d is a boy. $Post\ Reservation_{cs}$ is a dummy variable for whether a child is born after his/her state had its first Panchayat election following the Amendment, or equivalently after the first time the state reserved seats for female leaders. As families tend to sex select the most at the highest birth orders, it is important to control for birth order. I interact the effect of being born post seats reservations, $Post\ Reservation_{cs}$, with the fixed effects for both birth order 2 and birth order 3 or greater. Although my results indicate most additional sex selection in India occurs at birth orders 3 or greater, by including separate effects for birth order 2, I allow for the equation to pick up any changes that may occur at the second birth order as well. Children of birth order 1 are the omitted category. β_1 and β_2 are the parameters of interest as they compare changes in the likelihood that a child born at high birth orders after reservations is a boy with changes in the likelihood that a child born at the first birth order after reservations is a boy. Also included are the fixed effects for birth orders 3 or greater and the main effect for birth order 2. To increase the precision of how the treatment is defined, I use both month and year variation to code birth and post-reservation dates. Also included in the regression are district fixed effects that control for district-specific differences in the ratio of boys. Fixed effects for birth year of the child are also included to help control for trending changes in the ratio of boys in India. I also control for factors that affect a mother's fertility and her son preference, such as age at the time of first pregnancy, literacy, and religion. Type of house the family resides in (whether the construction of the house is considered weak, semi-strong or strong) is included as an estimate of household income. I cluster all standard errors at the district level. For the validity of a DD model, it is implicitly assumed that trends in sex selection do not change for children at birth order 1. Additionally, it is assumed that once all other variables are controlled for, trends in high and low birth order ratios are the same prior to the law change.

While the law change could be viewed as exogenous, a state's ability to choose when to have an election following the law introduces issues of endogeneity. It could be the case that states that postpone elections after the new law is in place are the ones who have the strongest male preference and are buying time before they have to adapt to increased

female political leadership. Since the timing of the first election and sex selection within a state may be correlated, Equation (1) may not reveal a causal effect. One way to deal with this issue of endogeneity in Equation (1) is to only investigate an effect for states that are early adopters of the law. Since the law required that states either amend existing laws or pass new laws in line with the 73rd Amendment within a year, states with elections within 2 years of the law could be argued to be the states that are simply following the law. I estimate Equation (1) for a sample of states that have their first election within 2 years of the law change. This effectively reduces the analysis to 10 states in total. These states are shown in Figure 5.

The state of Orissa held village and block level Panchayat elections between May to June of 1992. These were held according to the provisions of the 73rd Amendment prior to the law coming into effect in April of 1993. Similarly the state of Maharashtra also reserved female seats for Panchayat elections at the district and the village level in November of 1992, prior to the law change. The eagerness of Orissa and Maharashtra to adopt the law *prior* to its coming into force could be correlated with state unobservables that impact the state's male preference. Then, there are reasons to exclude Orissa and Maharashtra from the analysis. Additionally, in 1994 the state of Haryana offered a financial incentive to eligible parents with daughters. Haryana is one of the richest states in India with one of the most distorted of sex ratios in the nation. To reduce male preference, the state introduced the *Apni Beti Apna Dhan* (ABAD) program in October of 1994. The program provided families with daughters a monetary award within 15 days of her birth, and each girl was also endowed with an additional reward redeemable at the age of 18. Another attempt to reduce sex ratios in Haryana was implemented in September of 2002. *Devirupak* provided monthly cash transfers to couples who chose to get sterilized after the birth of their first child, with a larger transfer paid to families who chose to get sterilized after a birth of a daughter. ABAD was introduced in the state in October of 1994, while the state had its first election that reserved seats for women in June of 1994. The timing of these two events is nearly identical, and with treatment determined by timing, it is difficult to distinguish

which policy underlies the effect for the state of Haryana. Due to the coinciding timing of the two policies and its continued financial efforts to reduce gender imbalance, I also exclude Haryana from the analysis. Limiting the states to only those who have their first election within 2 years of the 73rd Amendment while excluding Orissa, Maharashtra, and Haryana reduces the analysis to 7 Indian states in total. The remaining states are the focus of the analysis and their location within India is shown in Figure 6. Male preference in India varies greatly across states, mainly Southern Indian states do not exhibit such a strong male preference. It is reassuring to find that the main sample has states from Northern, Eastern and Southern regions of India.

Most sex selection in India still occurs after birth and prenatal choices such as sex-selective abortions are less common (Das Gupta et al., 2003). Although sex ratios of live children provide the best measure of sex selection, it is useful and possible to test for changes in reported female death rates because the survey asks mothers whether the child is still alive. The reason why this is a less informative measure is because survey data are known to have incidences of forgotten deaths of infants. In a sex-selective society, one can imagine that a female death is less memorable and hence is more likely to suffer from recall bias. Moreover, if the female child died because of sex-selective practices, discomfort regarding the subject may lead to deliberate lying.

$$\begin{aligned}
 Dead_{idc} = & \beta_1 Order_{3plus} \times Post_{sc} \times Girl_i + \beta_2 Order_2 \times Post_{sc} \times Girl_i \quad (2) \\
 & + \beta_3 Post_{sc} \times Girl_i + \beta_4 Order_{3plus} \times Post_{sc} + \beta_5 Order_2 \times Post_{sc} + \beta_6 Order_{3plus} \times Girl_i \\
 & + \beta_7 Order_2 \times Girl_i + \beta_2 Post_{sc} + \beta_6 Girl_i + \gamma_d + \theta_c + \Gamma X_{idc} + \epsilon_{idc}
 \end{aligned}$$

Equation 2 estimates a difference-in-difference-in-difference (DDD) model with the three differences being across birth order, timing of birth and the gender of child. Again, it is known that high birth order girls experience higher level of discrimination, and if there is a decline in deaths rates by age 5 for girls, it will likely be disproportionately more so at

high birth orders. $Dead_{idc}$ is a dummy variable indicating that child i , of birth cohort c , born in district d , is dead by 5 years of age. It is regressed on the interaction of whether the child is born in a year after the state had a relevant election with a dummy variable for whether the child is a girl and also interacted with whether the child is born at a high birth order. Here, β_1 indicates the additional change in the probability (in percentage points) of death for high birth order females, relative to that of high birth order males. Additional controls are as described in Equation (1). Again, to deal with potential issues of endogeneity in election delays and early adoptions, I propose estimating Equation (2) for a sample of states that were early adopters of the policy. For reasons explained above, I exclude Orissa, Maharashtra, and Haryana in estimation. All standard errors are clustered at the district level.

5.2 Zilla Parishad (District Panchayat) Reservations

A key feature of the 73rd Amendment is that female seat reservations were assigned at random in most states. Since fertility data from DLHS provide district level information, I propose to exploit the random assignment of female chairpersons at the ZP, or the district level. I present results from using ZP level reservation status from Rajasthan, West Bengal, Gujarat, Andhra Pradesh and Kerala. These states are chosen due to data availability. These are the states that I have reservation status for the first election reservations, and those that did not reserve seats prior to the Amendment. Using district level data, I estimate a difference-in-difference-in-difference (DDD) model shown in Equation 3. It is analogous to Equation 1 in that it interacts treatment with birth order and a post election variable. Additionally, Equation 3 exploits variation in district chairperson reservation status. As such, the DD terms are also interacted with the main effect of whether the district was reserved in the first election. I estimate the equation for a sample of children born between 1990 and until the last year the first reservation was in effect. That is the sample does not include children born at or after the time of the second reservation. This allows me to cleanly identify the effect as the control group, unreserved districts, have never been reserved

before. As mentioned above, there are reasons to believe that Zilla Parishad reservations may have impacted both urban and rural populations.. As a result, I estimate Equation 3 for both urban and rural populations separately. The model also includes birth year, district, mother’s age at time of birth, mother’s literacy, mother’s religion and type of house fixed effects.

$$\begin{aligned}
Boy_{idc} = & \beta_1 Order_{3plus} \times Reserved_d \times Post_c + \beta_2 Order_2 \times Reserved_d \times Post_c & (3) \\
& + \beta_3 Reserved_d \times Post_c + \beta_4 Order_{3plus} \times Reserved_d + \beta_5 Order_2 \times Reserved_d \\
& + \beta_6 Order_{3plus} \times Post_c + \beta_7 Order_2 \times Post_c + \\
& Order_{3plus} + Order_2 + \gamma_c + \rho_d + \Gamma X_{idc} + \epsilon_{idc}
\end{aligned}$$

Assuming randomization occurs successfully, a causal effect of a female leader at the Zilla Parishad level on ratio of boys can be determined. Randomization would entail that the the effects of reservation status prior to reservation at different birth orders are not distinguishable from zero, or that β_4 and β_5 are not statistically different from zero. I find this to be the case. Note that the main effect of reservation drops out as the model includes district fixed effects.

5.3 Gram Panchayat (Village Level) Reservations

Finally, I also make use of data on Gram Panchayat reservations for the 1997, 2002 and the 2007 elections in the state of Orissa. I found it difficult to identify a data source with village identifiers and fertility information. However, the IMIEP record characteristics of individuals that are part of the household. Since fertility history is not recorded, children observed in the household are used as a proxy of actual fertility. Equation 4 is analogous to Equation 3 and also exploits reservation status of GP, birth order and timing of birth (pre or post-reservation). Since the dataset available is small, I make use of as much data as I reasonable can and investigate differential effects across three reservations elections years, and not just one as in Equation 3.

$$\begin{aligned}
Boy_{igc} = & \sum_t \beta_{1t} Order_{3plus} \times Res_t \times Post_t + \sum_t \beta_{2t} Order_2 \times Res_t \times Post_t & (4) \\
& + \sum_t \beta_{3t} Res_t \times Post_t + \sum_t \beta_{4t} Order_{3plus} \times Res_t + \sum_t \beta_{5t} Order_2 \times Res_t \\
& + \sum_t \beta_{6t} Order_{3plus} \times Post_t + \sum_t \beta_{7t} Order_2 \times Post_t + \\
& Order_{3plus} + Order_2 + \gamma_c + \epsilon_{igc} \\
& \text{for election year } t = 1997, 2002, 2007
\end{aligned}$$

Equation 4 is estimated for children born since 1990 till the time of the survey, 2010. Between 1990 and 2010, there were 3 elections in Orissa that reserved seats for women following the 73rd Amendment. The potential effect for each election is considered. One concern is that Orissa reserved seats for women prior to the 73rd Amendment. However, I do not know what GPs were reserved and as such I am unable to control for this reservation. However, since controls groups have received some form treatment, the likely bias on the estimate is downward. Since the model considers only the two districts the IMIEP surveys and sample size is small, I only include birth year fixed effects not location specific fixed effects. In this specification, I cluster standard errors at the Gram Panchayat level.

6 State Elections

India currently has 28 states, of which 3 were carved out from existing states following the year 2000. Table 1 provides the most complete list of relevant elections for 18 Indian states I was able to construct. According to the 2011 census, 90.42% of the nation's population lives in one of these 18 states. For each state, I report when the state had an election following the 73rd Amendment. For the first election which the state reserved seats for women, I report both the month and the year of election. States were required to hold elections every 5 years following the first election. I also report the year the state had a second election or third election after the law change. I only report election years up the year 2004 because the

DLHS II was conducted in 2004 and a result my sample only considers children born up to 2004. Local Panchayats have operated prior to the establishment of the 73rd Amendment in some states, albeit the constitutionalization of them required a three tier system and regularity in elections. When possible, I report the last Panchayat election the state had prior to the constitutional establishment of PRIs. Additionally, I report the state's ratio of boys born in 1992, a year prior to the law change. I define early adopters of the policy as states that have an election that reserves seats for women within 2 years of the law change or by April 1995. Because of issues described above, I exclude Orissa, Maharashtra, and Haryana from the main analysis. Although the number of restrictions reduces the sample to only 7 states, nearly 48% of the nation's population resided in one of these 7 states in 2011.

7 Summary Statistics

Table 2 provides summary statistics for mothers in the sample. I split the table between mothers in the sample with at least one child who is born after their state reserved seats for women and mothers with no children born following reservations. In general, mothers with no children born after their state reserved seats are older, more likely to be able to read and come from houses that are made of strong construction. While they have fewer children ever born, they have more children who have died. While there are no more or less boys born to mothers with at least one child born after reservations, there are significantly more girls born to them.

Tables 3 and 4 provide summary statistics in line with the difference-in-difference model. Table 3 shows birth order-specific ratio of boys for children born in states that were early adopters of the 73rd Amendment while excluding Haryana and Orissa. I find that 53.4% of the children born at birth order 3 or greater pre-reservation are boys and that this ratio declines to 52% for children born at birth order 3 or greater post-reservation. Additionally, I do not find evidence that sex ratios for children born at birth orders 1 or 2 change after seats

for women are reserved. Similarly Table 4 shows that both boys and girls are less likely to be dead by the age of 5 if they are born following the reservation of female seats. This effect could be explained by health improvements over time. However the drop in death rate by age 5 is greater for girls than boys by 0.08 percentage points. This difference-in-differences estimate is statistically significant at the 1% level.

8 Results

8.1 Main Results

Table 5 presents the results from estimating Equation 1. Column 1 reports the results from estimating the equation for all of the states in Table 1. For the entire sample, a child born at the third or higher birth order after the state reserved seats for women is about a 0.8 percentage point less likely to be a boy. Children born before the law change were a 0.63 percentage points more likely to be a boy if they were born at the highest birth order. Column 2 limits the sample to states that were early adopters of the law, that is, they had their first election within 2 years of the law change. For the set of early adopters, children born at the highest birth order prior to the law change are 0.8 percentage point more likely to be a boy in comparison to first birth order children. The likelihood that the child is a boy at the highest birth order declines by 1.1 percentage points if the child is born after the state had elections that reserved seats for women in compliance with the 73rd Amendment. Column 3 limits the sample to early adopters and excludes the states of Orissa, Haryana and Maharashtra for reasons discussed. This leads to a larger reduction in high birth order sex selection at the higher birth order (1.6 percentage points). While children of highest birth order born prior to female seat reservations were nearly 1 percentage point more likely to be male, the reduction of the likelihood that the child is a boy by 1.6 percentage points more than offsets the excess higher birth order sex selection. Finally, Column 4 further restricts the sample to children born within 1990-1997, or those born right around states' elections that reserved seats for women. When looking for an effect right around the law

change, I find that high birth order children are more than 2 percentage points less likely to be a boy. These results are consistent with the prior that the involvement of females into politics could reduce gender preference and sex selection. In general, I find that children of highest birth order are less likely to be a boy if they are born after the state requires local panchayat positions to be served by women.

Table 6 presents results from estimating Equation 2. I find that in comparison to higher birth order boys born after the law change, higher birth order girls are significantly less likely to be reported dead by age 5 for the entire sample by a 0.98 percentage point if they are born in a state that already had an election that reserved Panchayat seats for women. When the sample is reduced to states that were early adopters of the policy in Column 2, I find an effect of 1.09 percentage point reduction in the likelihood that a high birth order girl is reported dead by age 5. In Column 3, I exclude Haryana, Maharashtra and Orissa from the sample and find the largest effect at a decline of 1.5 percentage point. Finally Column 4 limits the most preferred sample to birth years born closer to the law change between 1990 and 1997. While the point estimate is still within a 1 percentage point decline range, it is no longer statistically significant.

Results in Table 6 show that girls in general are less likely to be reported as dead, as the coefficient on *Girl* is negative and statistically significant in all specifications, but high birth order girls are significantly more likely to be reported as dead. While one may suspect that this is just a fertility effect and that high birth order children come from larger families so they are more likely to die, the same is not true for boys. Since first birth order boys are the omitted category, the estimated coefficient on *Order_{3plus}* and *Order₂* provide the differential in death by age 5 rates for boys in comparison to boys at birth order 1. Negative and significant coefficients on high birth order fixed effects indicates that high birth order boys are less likely to be reported dead than their low birth order counterparts. Both higher death rates for high birth order girls and low death rates for high birth order boys is consistent with high birth order sex selection. Reassuringly though, I do not find that female reservations lead to fewer amount of deaths as coefficients on *Order_{3plus} × Post*,

$Order_2 \times Post$ and $Post$ are not negative. This is important because it implies that the reduction in sex ratios is not likely explained by improved health care for all children provided by female leaders, in which case, one could imagine the marginal child -high birth order females- have the most to gain. If anything, I find that reported deaths for high birth order children increased after female leaders are brought into power in Column 3.

8.2 Zilla Parishad Reservations

Table 7 shows the results from estimating Equation 3 for urban and rural areas. The Zilla Parishad is the only form of PRI that is responsible for both rural and urban planning. While all other estimation in this analysis is limited to rural areas only, when studying the direct effect of Zilla Parishad reservations, I look at both urban and rural communities. Column 1 presents the estimation results for rural areas, and I do not find that district chairperson reservations for women had a significant impact on the likelihood that a child is a boy. Column 2 presents the results from investigating the impact of female district level reservations in urban areas. In urban areas, however, female district reservations lead to a 6.5 decline in sex selection for children born at the highest birth order. While other studies confirm that root of the effect of female reservations in the 73rd Amendment most likely lies in female reservations at lower level Panchayats, I find evidence that the Zilla Parishad must be treated differently and heterogenous effects across urbanism should be studied. Finally, it is important to that ZP chairperson reservations were as good as random as higher birth order children in reserved districts are just as likely to be boys as higher birth order children in non-reserved districts and the coefficient on $Order_{3plus} \times Reserved$ and $Order_2 \times Reserved$ are statistically indistinguishable from zero.

8.3 Gram Panchayat Reservations

Estimation of Equations 4 for two districts in Orissa is presented in Table 8. These results are not perfect due to the many data limitations. Nevertheless, they are consistent with the story. I find that children born at birth order 2 in the family are less likely to be boy if they

were born after reservations in an GP that reserved a chairperson seat in 1997. This effect is large at a 21.6 percentage point decline in these GPs. However children born after their GP was reserved in 2002 or 2007 are not more or less likely to be male than the children born in unreserved districts. The sample size in this analysis is small and history of fertility is not collected in the dataset. Despite the limitations, these data also indicate that female reservations decreased sex selection. As reservations at the Zilla Parishad is shown to have no statistical impact on sex ratios in Rural India, these results imply that the likely source of the decline is exposure to women closer to home at the Gram Panchayat level.

9 Robustness Checks

A difference-in-difference estimation relies on the assumption that prior to the law change, trends between the treatment and the control groups are identical. For the validity of Equation 1, it is required the trends in ratio of boys at birth order 1 is identical to that of higher birth order children. Similarly the validity of Equation 2 requires that death by age 5 rates follow the same trends for both boys and girls. Tables 9 and 10 perform falsification tests and test for whether the estimation of Equation 1 or 2 yields an effect at times prior to the law change. If trends prior to the law change are not different across birth order, I expect the effect of time prior to the law change to be zero. Table 9 estimates Equation 1 for a sample of children born between 1987 and 1992 in states that were early adopters of the 73rd Amendment while excluding Orissa, Maharashtra, and Haryana. Specifically I test for whether there are statistically significant changes in the ratio of boys across different birth order children born in or after 1988, 1989, 1990 and 1991 separately in Columns 1 through 4 of Table 9 respectively. Since seats for women have not yet been reserved in a sample of children born between 1987 and 1992, I expect that the birth order-specific ratios of boys does not vary by over time. Results of Table 9 show that within children born pre-reservations, higher birth order children are not statistically less likely to be a boy if they are born in or after different years. Finding no effect in a time period we do not expect

one suggests that the effect reported is not just a result of a pre-existing decline in higher birth order male preference.

Analogously Table 10 shows the effect of time on gender-specific death rates by age 5 for children born prior to the law change. Columns 3 and 4 find that high birth order girls born in or after 1990 or 1991 are not more or less likely to die by age 5 in comparison to high birth order boys. However for a sample of children born prior to the reform, girls born in or after 1988 and 1989 as shown in Columns 1 and 2 are significantly less likely to die by age 5. Column 1 shows a larger magnitude in reduction of high birth order death rates for girls than Column 2. It is possible that the results in Columns 1 and 2 are driven by the a single comparison year in high birth order deaths. Verifying this suspicion, omitting 1987 from the specification in Column 2, yields a point estimate of -0.013 and it is statistically indistinguishable from zero. Nevertheless, for the years closest to the policy change reported deaths by age 5 rates for high birth order girls do not change. Moreover, the point estimate is positive.

Although, Tables 9 and 10 help establish that prior to the reform a trend in declining high birth order sex selection was not occurring, treatment defined in the main specification does not occur at a fixed time, but at various times that states choose to have elections that reserve seats for women. Figures 1 through 4 help further validate the choice of the DD design. Figure 1 presents the coefficient estimates of Equation 1 while allowing the effect to vary depending on how many years from the election the child is born. The graph shows changes in sex ratios for children born 6 years prior to the election up to children born 8 years following the election. The omitted category are low birth order children born 7 years prior to a relevant election. Strikingly, the graph shows that estimated change in the likelihood that high birth order children born prior to elections are boys fluctuates between -0.01 and -0.02, however immediately following election reservations, this estimate begins to fluctuate in between -0.02 and -0.04.

Further validating the design, Figure 2 shows similar years-from-election point estimates of Equation 1. There is no obvious decline in the estimated effect for boys born at birth

order 2 following the law change. The graph appears nearly symmetrical verifying the findings of Table 5 that reservations for women did not lead to a decline the likelihood that a child is a boy for second children, but did so for the third or younger children.

Similar graphs of estimated effects of year-from-election for Equation 2 is shown in Figures 3 and 4 for girls at birth orders 3 or greater and for girls at birth order 2 respectively. Prior to the reform, it appears that the effect on reported deaths for girls at birth order 3 or greater increases as birth years get closer to the election years that reserve seats for women. However, almost immediately following reservations for women the trend appears to drop. This graph seems to support the known problem known to be present in survey data of “forgetting” dead children. If forgetting is less likely to happen for more recent births, it could be that reported deaths increase for high birth order girls because they are less likely to be forgotten closer to the reform, or are more recent in time. If women are more likely to forget births that occurred further away in time, the reported effect of changes in reported deaths for high birth order girls is an underestimate. In other words, the drop in reported death by age 5 rates for high birth order girls is likely larger than what is reported. Similarly Figure 4 shows that the decline for girls born at the second birth order is less obvious. In fact, immediately following reservations, there appears to be slight increases in the estimated effect on death by age 5 rates for birth order 2 girls. However, as mentioned earlier any increases with time could be explained by less “forgetting” of deaths in more recent periods. Nevertheless a significant drop in death by age 5 rates is found for girls birth after 5 years of first reservation for both second order and third and greater birth order girls. After 5 years of first election, states were up for round 2 of elections. These sharp declines could be explained by the second round of elections that effectively increased number of local governments that had ever been reserved seats for women.

Last but not least, West Bengal is the single state in which Panchayats have operated in a regular fashion. The state has held a Panchayat election every 5 years since 1978 and its election following the 73rd Amendment was also 5 years after its previous election. Then timing of the state of West Bengal’s election can be more confidently argued to be exogenous.

Tables 11 and 12 present the estimation of Equations 1 and Equation 2 respectively for the state of West Bengal alone. Table 11 shows that within the state of West Bengal, children born at the birth orders 3 or greater after reservations are 4.98 percentage points less likely to be a boy. There is also a reduction in second order sex ratios following reservations by 3.74 percentage points. The model includes birth year fixed effects and sample in Table 11 is limited to West Bengal. Then treatment occurs in May 1993 for West Bengal. With the inclusion of birth year fixed effects, while still identified because treatment is defined at both month and year, the meaning of the coefficient on *Post Reservation* is not that is typical of a difference-in-difference model. The estimate on *Post Reservation* can interpreted as the difference in the likelihood of having a boy if the child is born after May in the month of 1993. This is not a problem in interpretation of $Order_{3plus} \times Post\ Reservation$ and $Order_2 \times Post\ Reservation$ and typical difference-in-difference interpretations apply.

Table 12 presents the estimate of Equation 2 for the state of West Bengal. In general, there is no decline in reported deaths by age 5 rates for just West Bengal. However, even prior to the reform stated death by 5 rated for high birth order girls was not significantly larger than low birth order girls.

10 Conclusion

I find results consistent with the prior that female political empowerment could reduce gender bias. My findings suggest that families of Rural India respond to female empowerment and I find a reduction in ratio of boys born at the highest, or the most sex selective, birth orders as well as a reduction in high birth order female death rates by age 5. Kalsi (2013) shows that sex selection in Taiwan is more prevalent following the legalization of abortion, and that girls born at birth orders where sex selection is most common are more likely to attend a university. This result is consistent with the substitution hypothesis that prenatal and postnatal discrimination are substitutes. I argue that families with a strong distaste for girls in Taiwan choose to abort female fetuses and as a result girls, on average, are born into

families that desire and invest in them more once abortion is legalized. While Kalsi (2013) argues that there are reasons not to place full bans on the practice of sex selection, this paper provides a way to potentially reduce sex selection without placing bans altogether. While there are serious economic consequences of sex selection, bans on the practice could lead to increases in postnatal sex selection, postnatal female discrimination, and the prevalence of dangerous illegal abortions. A better way to deal with sex selection would be to reduce the underlying son preference that causes sex selection. This research shows that increasing female involvement in politics could reduce sex selection.

I use two measures of sex selection. The preferred measure is whether the alive child is a boy. Sex selection can occur in many different ways and the actual sex ratio of alive children helps capture all methods, both pre and post natal forms. The other measure is when the child is reported to be dead by the age of 5 by the mother. Although informative, this measure is slightly less preferred because mothers are known to under-report dead children. This is likely a bigger problem for sex-selective deaths as they are by definition less valuable to the mother. My results consistently show that sex selection did decline once seats for women were reserved in Rural India. As observed sex ratios of children is better measure of sex selection, the findings of a decline in overall sex ratios in Rural India are extremely robust. Resulting using death rates are not as clean, but they are consistent with declining high birth order sex selection. Finally, I find that reservations are not associated with reduced death by age 5 rates. This indicates that the mechanism is not general improved health provided by the women in power leading to a larger improvement for the marginal child, the high birth order girls. Moreover, the West Bengal case shows the effect is not caused by a devolution of powers as West Bengal already had local bodies with consistent elections prior to the reform and a reduction in high birth order likelihood of boys is still found in West Bengal. Additionally, it appears that the effect reported comes from reservations at the smallest level of PRIs at the Gram Panchayat level. While the paper focuses on Rural India, I find that reservations at the district level have an impact on reduction in sex ratios in Urban India. This suggests that the reservations at

the Zilla Parishad could impact rural and urban populations differently and each should be studied separately. The paper concludes that the 73rd Amendment has led to a decline in high birth order sex selection in Rural India. Finally, the findings support that it is the reservations closer to home at the village level that lead to this decline in sex selection for Rural India.

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Table 1: Panchayat Election Dates

	Post Reservation			Election 3	Pre Amendment	Ratio of Boys 1992
	Election 1	Election 2			Election	
	Month	Year	Year	Year	Year	
Orissa	May	1992	1997	2002	1992	0.486
Maharashtra	Nov	1992	1997	2002	1992	0.509
West Bengal	May	1993	1998	2003	1988	0.544
Karnataka	Dec	1993	2000			0.518
Haryana	June	1994	2000		1991	0.519
Madhya Pradesh	June	1994	2000		1982	0.521
Tripura	August	1994	1999	2004		0.547
Rajasthan	March	1995	2000		1988	0.537
Andhra Pradesh	March	1995	2001		1970	0.504
Uttar Pradesh	April	1995	2000			0.541
Gujarat	June	1995	2002		1975	0.532
Kerala	Sept	1995	2000			0.525
Tamil Nadu	Oct	1996	2001		1986	0.520
Goa	Jan	1997	2002		1991	0.477
Manipur	Jan	1997	2002		1978	0.515
Punjab	June	1998	2003		1993	0.537
Assam	Nov	2000	2007		1992	0.581
Bihar	April	2001	2011		1978	0.523

Election dates up to 2004 for every state. The last pre-Amendment Panchayat election date is reported.

Table 2: Summary Statistics

At least 1 child born after reservations?	No	Yes	Diff
Age	32.47	25.77	-6.7***
Mother is Literate	0.40	0.36	-0.04***
Total Children Born	2.37	2.75	0.38***
Total Boys Born	1.42	1.41	-0.01
Total Girls Born	0.95	1.34	0.39***
Total Children Dead	1.85	1.77	-0.08***
Have a Strong House	0.27	0.17	-0.10***
First Birth Age	18.25	18.11	-0.14***
Observations	7,097	78,391	

Table 3: Change in Birth Order-Specific Ratio of Boys

	Pre Reservation	Post Reservation	Diff
Order 3 plus	0.534	0.520	-0.014***
Order 1 or 2	0.520	0.520	0.000
Diff	0.014***	0.000	-0.014***

Sample weights used. Sample restricted to children (dead or alive) born between 1987-2004 in states that are early adopters. Haryana, Maharashtra, and Orissa excluded from sample.

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

Table 4: Change in Gender-Specific Death by Age 5 Rates

	Pre Reservation	Post Reservation	Diff
Girl	0.080	0.059	-0.021***
Boy	0.076	0.063	-0.013***
Diff	0.004**	-0.004***	-0.008***

Sample weights used. Sample restricted to children (dead or alive) born between 1987-2004 in states that are early adopters. Haryana, Maharashtra, and Orissa excluded from sample.

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

Table 5: Birth Order-specific change in ratio of boys

VARIABLES	(1) boy	(2) boy	(3) boy	(4) boy
<i>Order_{3plus} × Post Reservation</i>	-0.00789** (0.00374)	-0.0112** (0.00450)	-0.0164*** (0.00503)	-0.0208*** (0.00794)
<i>Order₂ × Post Reservation</i>	0.000100 (0.00415)	0.000207 (0.00507)	-0.00381 (0.00583)	-0.00579 (0.00905)
<i>Post Reservation</i>	0.00618 (0.00440)	0.00287 (0.00620)	0.0127 (0.00803)	0.0135 (0.00918)
<i>Order_{3plus}</i>	0.00631* (0.00357)	0.00840* (0.00455)	0.0112** (0.00504)	0.00480 (0.00721)
<i>Order₂</i>	0.000968 (0.00318)	0.000361 (0.00430)	0.00254 (0.00458)	0.00168 (0.00572)
Early adopters Only?	No	Yes	Yes	Yes
Orissa, Maharashtra & Haryana Included?	Yes	Yes	No	No
Birth Years	1987-2004	1987-2004	1987-2004	1990-1997
Observations	588,974	398,341	300,059	147,438

Sample weights used. District clustered standard errors. All specifications include birth year, district, mother's age at time of birth, mother's literacy, mother's religion, and type of house fixed effects.

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

Table 6: Gender-specific change in death by age 5 rates

VARIABLES	(1) dead5	(2) dead5	(3) dead5	(4) dead5
<i>Order_{3plus} × Post × Girl</i>	-0.00978** (0.00393)	-0.0109** (0.00503)	-0.0152*** (0.00540)	-0.00959 (0.00846)
<i>Order₂ × Post × Girl</i>	-0.00524 (0.00374)	-0.00360 (0.00466)	-0.00473 (0.00516)	0.00767 (0.00895)
<i>Post × Girl</i>	-0.00264 (0.00299)	-0.00197 (0.00392)	-0.00169 (0.00437)	-0.00676 (0.00667)
<i>Order_{3plus} × Girl</i>	0.0324*** (0.00316)	0.0353*** (0.00435)	0.0367*** (0.00478)	0.0326*** (0.00650)
<i>Order₂ × Girl</i>	0.0174*** (0.00300)	0.0163*** (0.00421)	0.0154*** (0.00470)	0.00938 (0.00634)
<i>Girl</i>	-0.0153*** (0.00237)	-0.0169*** (0.00342)	-0.0154*** (0.00383)	-0.0120** (0.00493)
<i>Order_{3plus} × Post</i>	0.000246 (0.00293)	0.00560 (0.00367)	0.00718* (0.00402)	0.00214 (0.00595)
<i>Order₂ × Post</i>	0.00177 (0.00305)	0.00473 (0.00390)	0.00686 (0.00436)	0.00221 (0.00656)
<i>Post</i>	0.00497 (0.00311)	-0.000220 (0.00473)	0.00259 (0.00583)	0.00471 (0.00648)
<i>Order_{3plus}</i>	-0.0124*** (0.00260)	-0.0171*** (0.00354)	-0.0182*** (0.00402)	-0.0123** (0.00535)
<i>Order₂</i>	-0.0131*** (0.00233)	-0.0161*** (0.00322)	-0.0165*** (0.00355)	-0.0110** (0.00485)
Observations	588,969	398,337	300,056	147,437
Early adopters Only?	No	Yes	Yes	Yes
Orissa, Maharashtra & Haryana Included?	Yes	Yes	No	No
Birth Years	1987-2004	1987-2004	1987-2004	1990-1997
Observations	588,969	398,337	300,056	147,437

Sample weights used. District clustered standard errors. All specifications include birth year, district, mother's age at time of birth, mother's literacy, mother's religion, and type of house fixed effects.

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

Table 7: District reservations: The effect of first Zilla Parishad election

VARIABLES	(1)	(2)
	boy	boy
	Rural	Urban
$Order_{3plus} \times Reserved_d \times Post$	-0.0152 (0.0258)	-0.0652** (0.0303)
$Order_2 \times Reserved_d \times Post$	-0.0272 (0.0225)	0.00535 (0.0525)
$Reserved_d \times Post$	0.0147 (0.0174)	-0.0102 (0.0444)
$Order_{3plus} \times Reserved_d$	0.0125 (0.0159)	0.0241 (0.0194)
$Order_2 \times Reserved_d$	-0.0171 (0.0154)	-0.00864 (0.0240)
$Order_{3plus} \times Post$	-0.0197* (0.0112)	0.0426** (0.0171)
$Order_2 \times Post$	-0.00830 (0.0131)	0.0307 (0.0227)
$Post$	0.0194 (0.0149)	-0.0639* (0.0333)
$Order_{3plus}$	0.0108 (0.0106)	0.0126 (0.0168)
$Order_2$	0.0199** (0.00878)	-0.00394 (0.0137)
Observations	79,975	31,976

District clustered standard errors. All specifications include district, birth year, mother's age at time of birth, mother's literacy, mother's religion, and type of house fixed effects. Sample is restricted to children born after 1990 until first district reservations were in effect.

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

Table 8: Orissa GP Reservations

$Order_{3plus} \times Res_{97} \times Post_{97}$	0.0224 (0.0857)
$Order_2 \times Res_{97} \times Post_{97}$	-0.216* (0.124)
$Res_{97} \times Post_{97}$	0.0566 (0.0637)
$Order_{3plus} \times Res_{97}$	0.0504 (0.106)
$Order_2 \times Res_{97}$	-0.0188 (0.120)
$Order_{3plus} \times Post_{97}$	0.0227 (0.0587)
$Order_2 \times Post_{97}$	0.0970 (0.0679)
$Order_{3plus} \times Res_{02} \times Post_{02}$	0.0105 (0.0878)
$Order_2 \times Res_{02} \times Post_{02}$	0.0239 (0.0900)
$Res_{02} \times Post_{02}$	0.00863 (0.0685)
$Order_{3p} \times Res_{02}$	0.0796 (0.0499)
$Order_2 \times Res_{02}$	-0.180*** (0.0577)
$Order_{3p} \times Post_{02}$	0.0105 (0.0794)
$Order_2 \times Post_{02}$	0.0349 (0.0682)
$Order_{3plus} \times Res_{07} \times Post_{07}$	0.119 (0.138)
$Order_2 \times Res_{07} \times Post_{07}$	0.102 (0.179)
$Res_{07} \times Post_{07}$	-0.0960 (0.136)
$Order_{3plus} \times Res_{07}$	0.0568 (0.0379)
$Order_2 \times Res_{07}$	-0.142*** (0.0459)
$Order_{3plus} \times Post_{07}$	-0.0819 (0.0867)
$Order_2 \times Post_{07}$	-0.0341 (0.107)
$Order_{3p}$	-0.0622 (0.0591)
$Order_2$	0.117 (0.0747)
Observations	3,918

Gram Panchayat clustered standard errors. All specifications include birth year fixed effects.

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

Table 9: Falsification Tests- Birth Order-specific change in ratio of boys

VARIABLES	(1) boy	(2) boy	(3) boy	(4) boy
$Order_{3plus} \times Post$	-0.00639 (0.00987)	-0.000288 (0.00846)	-0.00213 (0.0110)	0.000644 (0.0113)
$Order_2 \times Post$	-0.00325 (0.0118)	0.00450 (0.0103)	0.00595 (0.0113)	0.00828 (0.0140)
$Post$	0.00891 (0.00924)	0.00448 (0.00917)	8.85e-05 (0.0101)	0.00260 (0.0104)
$Order_{3plus}$	0.0220** (0.00960)	0.0176** (0.00723)	0.0183** (0.00743)	0.0173** (0.00675)
$Order_2$	0.00602 (0.0110)	0.00122 (0.00813)	0.00147 (0.00705)	0.00208 (0.00641)
Post Year	1988	1989	1990	1991
Observations	87,315	87,315	87,315	87,315

Sample weights used. District clustered standard errors. All specifications include birth year, district, mother's age at time of birth, mother's literacy, mother's religion, and type of house fixed effects. Sample limited to states that were early adopters of the 73rd Amendment and excludes Haryana, Maharashtra and Orissa. Sample of children born between 1987-1992.

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

Table 10: Falsification Tests- Gender-specific change in death by age 5 rates

VARIABLES	(1) dead5	(2) dead5	(3) dead5	(4) dead5
<i>Order_{3plus} × Post × Girl</i>	-0.0272** (0.0133)	-0.0204* (0.0119)	0.00458 (0.0105)	0.00895 (0.0139)
<i>Order₂ × Post × Girl</i>	-0.00996 (0.0129)	-0.0177 (0.0114)	-0.00763 (0.0120)	0.0146 (0.0159)
<i>Order_{3plus} × Post</i>	0.0183** (0.00928)	0.0151* (0.00824)	0.0111* (0.00667)	0.00480 (0.00914)
<i>Order₂ × Post</i>	0.0116 (0.0100)	0.0138* (0.00836)	0.0170** (0.00824)	0.00554 (0.0102)
<i>Post × Girl</i>	0.0198** (0.00959)	0.0134 (0.00918)	0.00156 (0.00834)	-0.0113 (0.0109)
<i>Order_{3plus} × Girl</i>	0.0546*** (0.0105)	0.0465*** (0.00773)	0.0332*** (0.00623)	0.0335*** (0.00589)
<i>Order₂ × Girl</i>	0.0258** (0.0102)	0.0285*** (0.00776)	0.0217*** (0.00714)	0.0160** (0.00623)
<i>Order_{3plus}</i>	-0.0268*** (0.00848)	-0.0221*** (0.00680)	-0.0177*** (0.00542)	-0.0147*** (0.00501)
<i>Order₂</i>	-0.0242*** (0.00832)	-0.0235*** (0.00595)	-0.0223*** (0.00508)	-0.0170*** (0.00457)
<i>Girl</i>	-0.0293*** (0.00732)	-0.0226*** (0.00606)	-0.0158*** (0.00539)	-0.0131*** (0.00498)
Post Year	1988	1989	1990	1991
Observations	87,315	87,315	87,315	87,315

Sample weights used. District clustered standard errors. All specifications include birth year, district, mother's age at time of birth, mother's literacy, mother's religion, and type of house fixed effects. Sample limited to states that were early adopters of the 73rd Amendment and excludes Haryana, Maharashtra, and Orissa. Sample of children born between 1987-1992.

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

Table 11: Birth Order-specific change in ratio of boys. West Bengal Only

VARIABLES	(1) boy
<i>Order_{3plus} × Post Reservation</i>	-0.0498*** (0.01095)
<i>Order₂ × Post Reservation</i>	-0.0374*** (0.0123)
<i>Order_{3plus}</i>	0.0287** (0.0118)
<i>Order₂</i>	0.0099 (0.0114)
<i>Post Reservation</i>	0.0593** (0 .0278)
Observations	20,264

Sample weights used. District clustered standard errors. All specifications include district, mother's age at time of birth, mother's literacy, mother's religion, and type of house fixed effects.

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

Table 12: Gender-specific change in death by age 5 rates. West Bengal Only

VARIABLES	(1) dead5
<i>Order_{3plus} × Post Reservation × Girl</i>	0.00677 (0.0184)
<i>Order₂ × Post Reservation × Girl</i>	0.00778 (0.0140)
<i>Post Reservation × Girl</i>	-0.00262 (0.0146)
<i>Post Reservation × Girl</i>	-0.00148 (0.0186)
<i>Order_{3plus} × Post Reservation</i>	0.00997 (0.0112)
<i>Order₂ × Post Reservation</i>	0.0189 (0.0156)
<i>Order_{3plus} × Girl</i>	0.0159 (0.0194)
<i>Order₂ × Girl</i>	0.00266 (0.0162)
<i>Girl</i>	-0.0156 (0.0161)
<i>Order_{3plus}</i>	-0.0289* (0.0150)
<i>Order₂</i>	-0.0192 (0.0147)
Observations	20,264

Sample weights used. District clustered standard errors. All specifications include district, mother's age at time of birth, mother's literacy, mother's religion, and type of house fixed effects.

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

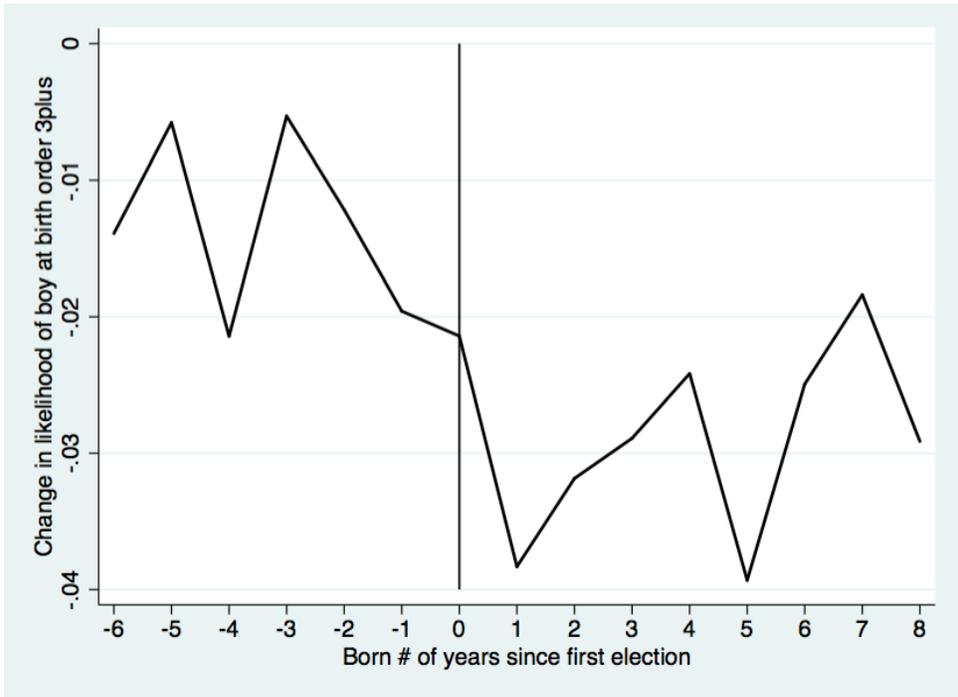


Figure 1: Sample restricted to states that reserved seats within 2 years of the 73rd Amendment, excluding Haryana, Orissa, and Maharashtra.

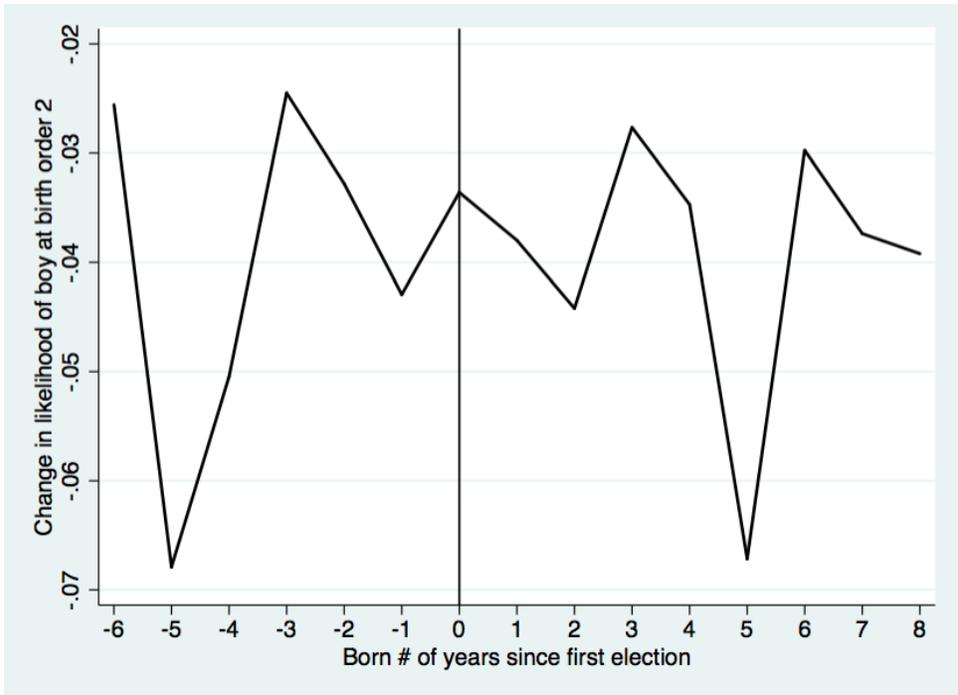


Figure 2: Sample restricted to states that reserved seats within 2 years of the 73rd Amendment, excluding Haryana, Orissa, and Maharashtra.

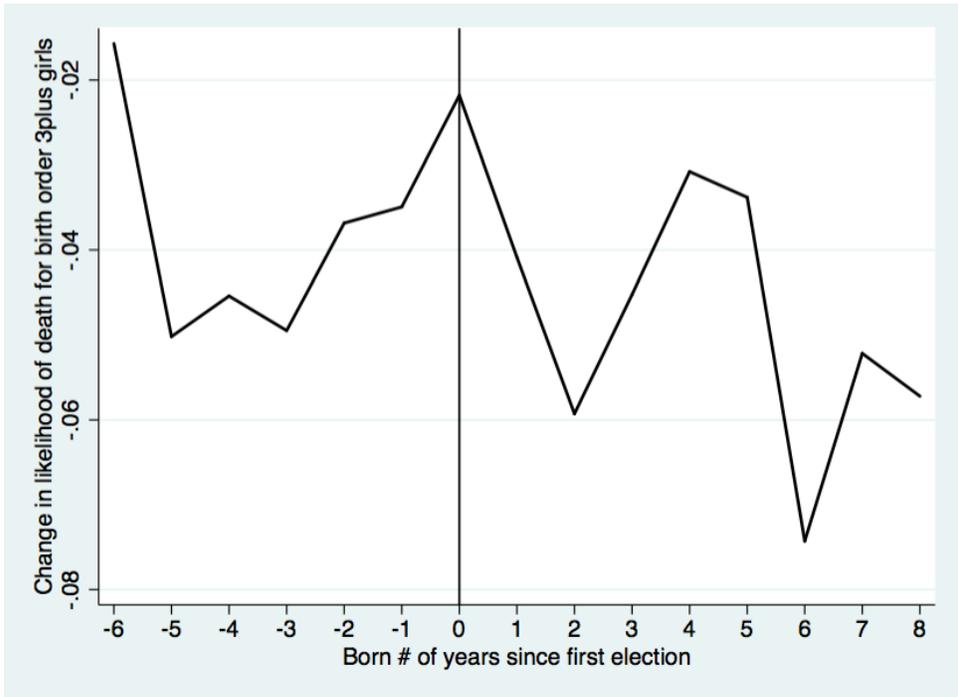


Figure 3: Sample restricted to states that reserved seats within 2 years of the 73rd Amendment, excluding Haryana, Orissa, and Maharashtra.

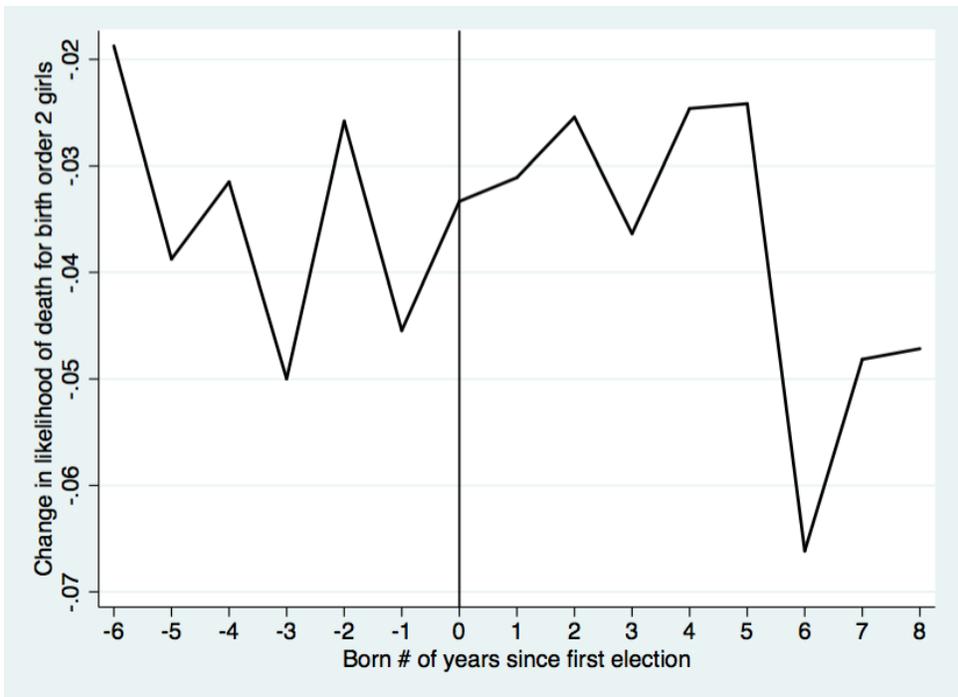


Figure 4: Sample restricted to states that reserved seats within 2 years of the 73rd Amendment, excluding Haryana, Orissa, and Maharashtra.



Figure 5: States with elections within 2 years following the implementation of 73rd Amendment



Figure 6: States with elections within 2 years following the implementation of 73rd Amendment: excluding states that had elections prior to the reform and Haryana.