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Effect of political decentralization and female leadership on institutional births and child mortality in rural Bihar, India

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ABSTRACT

In this paper, we investigate the impacts of political decentralization and women reservation in local governance on institutional births and child mortality in the state of Bihar, India. Using the difference-in-differences methodology, we find a significant positive association between political decentralization and institutional births. We also find that the increased participation of women at local governance led to an increased survival rate of children belonging to richer households. We argue that our results are consistent with female leaders having policy preference for women and child well-being.

1. Introduction

In the realm of women empowerment at the grassroots level, one of the landmark constitutional amendments the Indian government made, is the 73rd Amendment in 1992 that paved the way to political decentralization and increased participation of women in local governance. The new policy mandates Indian states to hold elections at the *panchayat* level, the lowest tier of governance, every five years and reserve at least one-third of the seats for women.[1] This policy change entailed devolution of powers and responsibilities to the local female leaders and shifted the developmental approach from top-down to bottom-up. At least five states have increased the women's share of reserved seats to 50% by 2010, with Bihar being the first Indian state to reserve 50% of the panchayat seats for women. In theory, decentralization and increased participation of women are argued to move society's welfare function in an upward direction because decentralization improves the efficiency in public service delivery, and female leaders are more likely to influence local policy decisions in favor of women and children than male leaders (Chattopadhyay and Duflo, 2004; Beaman et al., 2010; Bhalotra and Clots-Figueras, 2014). Compared to men, women politicians are more likely to invest in women and children well-being, and redistribution (Besley and Case, 2003).

More than a million women have been elected in India since 1993 but their impacts on local policy decisions are far from conclusive. The empirical evidence is mixed and mostly focuses on delivery of public services (Chattopadhyay and Duflo, 2004) and not on actual health outcomes. There has, however, been limited evidence on the relationship between women reservation and health outcomes in India (Bhalotra and Clots-Figueras, 2014) and in low- and middle-income countries (Quamruzzaman and Lange, 2016). This paper aims to fill this gap in the literature. The objective of this study is to investigate the impact of political decentralization and women reservation in local governance on institutional births and child mortality in rural Bihar, one of the poorest states in the eastern parts of India, with 40% of its population living on less than $1 a day. In a seminal paper, Chattopadhyay and Duflo (2004) show that women reservation in two Indian states (West Bengal and Rajasthan) increased investment in public infrastructure needed by women. In these two states, women leaders had strict preference to invest in public goods that were mostly used by women, such as

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[1] A panchayat is a cluster of villages in rural areas and is the lowest-level of administration.

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drinking water.

In contrast, several other studies have found no impact of women reservation on the provision of public goods (Besley et al., 2004; Ban and Rao, 2008; Bardhan et al., 2010). These results are not consistent with simple citizen candidate models of electoral politics in which political reservation in favor of one group (women in this context) results in greater allocation of public goods to that group. Bardhan et al. (2010) explain that the insignificant impact of women reservation is due to coexistence of elite capture and clientelism which affects the allocation of different benefit programs according to relative preferences of elites and non-elites.[2] They further note that election of politically inexperienced and less educated women may negatively affect policy decisions. Quamruzzaman and Lange (2016) show that female political representation is positively associated with improved child health in 51 low- and middle-income countries. Bhalotra and Clots-Figueras (2014) show that a 10% increase in women's representation led to an increased survival of neonates by 2.1 percentage points in India.

To date, there has been limited evidence on the relationship between women reservation and health outcomes in India (Bhalotra and Clots-Figueras, 2014). In particular, there has been no exploration of whether greater political representation of women in local governance is able to improve health outcomes of women and children. In addition to female leaders being capable of increasing investment in public goods (supply of infrastructure), they can also effectively increase the demand for health services by empowering women in their own village. This paper aims to fill this gap in the literature by investigating whether female leaders are effective in improving health outcomes (institutional births and child mortality) of women and children in the Indian state of Bihar.

Estimating the impact of political decentralization and women reservation on health outcomes is not straightforward. The key identification challenge in estimating the impact of political decentralization and women reservation is the lack of a counterfactual because the decentralization policy was launched across the full state of Bihar. The pre- and post-comparison in the outcome variables could simply reflect broader trends and may not be caused by the policy change. We address this concern by employing the Difference-in-Differences (DID) method using data from the pre-decentralization period (1998–99) and the post-decentralization period (2007–08). We compare the change in outcomes before and after the policy change in Bihar (*the treated state*), with the same difference in Jharkhand (*the control state*).[3] This DID estimate would yield a causal impact of the policy change if the parallel trend assumptions were not rejected. Political decentralization occurred in 2001, while the women reservation policy of reserving 50% of the panchayat seats was added to political decentralization in 2006 in Bihar.

Bihar is an interesting setting to study this question. On the one hand, the major health and demographic indicators of the state, like infant mortality rate (IMR), maternal mortality ratio (MMR), and total fertility rate (TFR), are much higher than the overall average in India, reflecting a poor health status in the state. On the other hand, Bihar was the first state to reserve 50% of the panchayat seats for women. Additionally, the creation of the state of Jharkhand from Bihar provides a kind of natural experiment and a credible counterfactual to isolate the impacts of the decentralization on health outcomes. Jharkhand was a part of Bihar for over 50 years and got separated administratively in 2001, thus making Jharkhand a very attractive counterfactual state for employing the DID method.[4] Availability of data in the pre- and post-policy years for Bihar (right after the women reservation policy) is another attractive feature that allows us to answer this question accurately in this setting. Almost a decade has passed since the first panchayat election in Bihar; therefore, it is of tremendous policy interest to understand the impact of political decentralization and women reservation on health outcomes.

Bihar held its first panchayat election in 2001 after a gap of 22 years, albeit without any kind of reservation, neither caste nor gender, in the leadership positions in panchayats. The 2001 panchayat results showed that less than 1% of women were selected as “village sarpanch” in Bihar which is far less representation than the constitutionally mandated share of 33%. The panchayat election occurs every five years. In the next panchayat election in 2006, the government of Bihar took the pivotal and unprecedented step of reserving 50% of the panchayat seats for women at all the three tiers of local administration. It was the first time that any state had actually exceeded the constitutionally set provisions of 33% reservations for women. In contrast, the first panchayat election was held in Jharkhand towards the end of 2010, after a gap of 32 years (this is first election after the formation of Jharkhand state), where women won about 58% of the total numbers of seats (see Table 1 for the timing of the policy change). Political decentralization occurred in 2001, while women reservation policy of reserving 50% of the seats was added to political decentralization in 2006 in Bihar. In contrast, political decentralization combined with women reservation took place in the first panchayat election in Jharkhand in 2010.

We use the first and third waves of the District Level Household Survey (DLHS) to estimate the impact of political decentralization and women reservation on health outcomes in Bihar. DLHS-1 was implemented in 1998–99 (pre-decentralization period), while DLHS-3 was implemented in 2007–08 (post-decentralization and women reservation period). Our results show that decentralization was positively associated with increased institutional births in Bihar but had negligible impacts on child mortality. Results show some evidence of non-uniform impacts, as the women reservation policy had effected decline in infant and child mortality in richer households only.

The remainder of the paper is organized as follows. In section 2 we discuss the data used in the analysis. This is followed by the empirical strategy in Section 3. In section 4, we discuss the main results, and concluding comments and discussion are outlined in Section 5.

2. Data

We use data from the first and third waves of the District Level Household Surveys (DLHS-1 and DLHS-3) which is a health survey covering family planning, maternal and child health, reproductive health of ever-married women and adolescent girls, and use of maternal and child health-care services at the district level for all states in India.

The DLHS-1 and DLHS-3 were carried out in 1998–99 and 2007–08, respectively. In the first round of DLHS (DLHS-1), 474,463

[2] Elite capture means that powerful and wealthy households are able to capture the benefits of public investments, as local politicians and bureaucrats tend to favor them. Clientelism refers to strategic transfers made by political parties and governments to poor and disadvantaged groups as a means of securing their votes, in an effort to consolidate political power (Mookherjee and Bardhan, 2012).

[3] We use Jharkhand as the comparison group for Bihar because these two states were part of the unified state of Bihar until November 2000 and were administratively bifurcated into two states in November 2000. Thus, the governance structure of the two states was identical until 2001, and the quality of governance in the two states was comparable for a few years after the bifurcation.

[4] Bihar, the third most populous state in India, with an estimated population of 103 million and a population density of 880 persons per sq. km., is one of the poorest states in India with 40 percent of its population below poverty line.