

# Women Reservation in Bihar and Children's Health Outcomes

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Bihar Growth Week, Patna

- Huge variation in growth rate across countries.
  - Neo-classical growth model emphasize the role of physical capital and labor.
  - The difference in access to capital and labor are not enough to explain the difference.
  - Role of human capital- education, health.

- How does better health affect economic growth .
  - Better health increases workforce productivity and hence higher wages.
  - Good health helps to forge improved levels of education by increasing levels of schooling and scholastic performance.
  - Resources that would otherwise be used for preventative health treatments are freed for alternative uses (knock-on effect).

# Objective of the paper

- Does women reservation in panchayats lead to improved health outcomes?
- Specifically, do districts with more female leaders perform better compared to districts with fewer female leaders?

- About 50 percent of world's population are women.
  - However, their participation in political process is far below than parity.
  - As per the latest estimate, women accounted for 18.4 % of parliamentarians worldwide (IPU, 2008) ?
  - Barriers: Institutional barriers, cultural norms, voter discrimination, low education.

# Context and Motivation

- To prevent this inequity, many countries have adopted electoral gender quotas.
- In 1993, India introduced quota-based political reservations for women in rural areas (73rd amendment).
- Promote gender equality in human development by making rural service provision and local governance inclusive and responsive to the needs of women.

# Efficacy of Gender quotas

- The efficacy of these policies is still disputed by many policy makers.
- Pro- needed to correct preexisting gender inequalities.
- Against- Undemocratic, Less effective leaders, elite capturing.
- More evidence needed to truly evaluate the impact of these policies.

- Bihar has been a laggard in implementing 73rd amendment.
- The first panchayat election was held in April 2001 after a gap of 23 years.
- Fifty per cent seats are reserved for women since the 2006 panchayat election.

## Existing evidence

- Chattopadhyay & Duflo - Women leaders are more likely to invest in drinking water facilities across rural India.
- Some recent papers report public good investments by female leaders either on non-water related goods (Munshi and Rosenzweig, 2008).
- Being sensitive to institutional features (Ban and Rao, 2008b).
- Bardhan et al. (2010) exploit within-village (over time) variation in reservation in West Bengal and find no impact of female reservation.
- Beamen et al. women increases investment in drinking water infrastructure, significant effect on availability of public good but insignificant effect on the quality of public good (water, education, transport, fair price shop, public health facilities).

- Ante-natal care (ANC).
- Children vaccination (DPT3, Measles).
- Health knowledge.
- Institutional deliveries.

- Household survey: 2nd and 3rd rounds District level household survey.
- DLHS 2 was conducted in 2001-02.
- DLHS 3 was conducted in 2007-08.

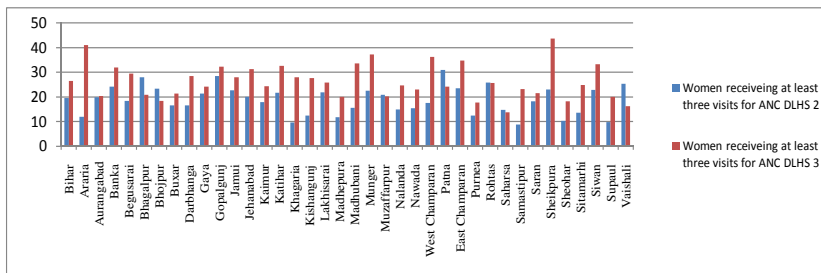
# Empirical strategy- DID

**Design 1:** Employ double-difference (DID)

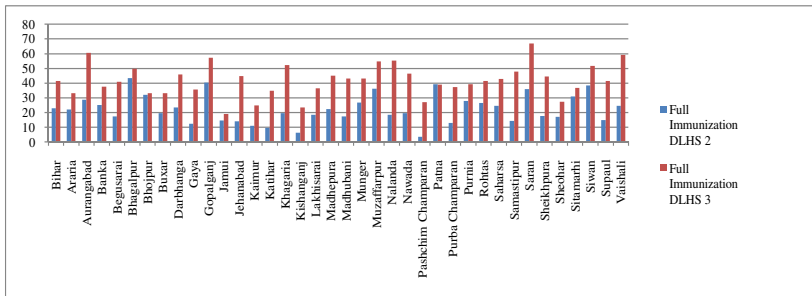
	2007-08 (DLHS 3)	2001-02 (DLHS 2)	<b>Difference</b>
Jharkhand (Control)	A	B	A- B
Bihar (Treatment)	C	D	C - D
<b>Difference</b>	C-A	D-B	<b>DID: C-D- (A-B)</b>

**Design 2:** Exploit the variation in policy intensity

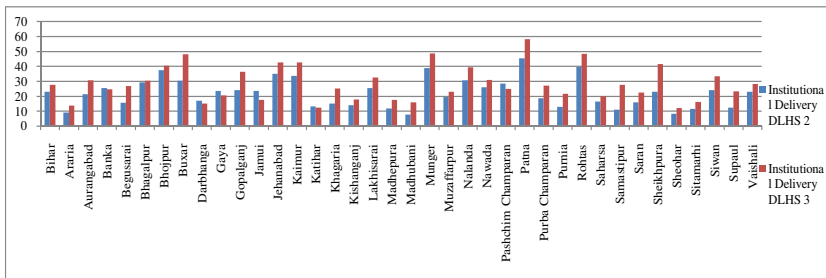
# ANC utilization



# Full Immunization



# Institutional deliveries



# RESULTS (MATERNAL HEALTH)

- Results are from adjusted Diff-in-Diff analysis.
- Antenatal Care.
- During the period of 2001-2007, the percentage of mothers who have received any ante-natal care has increased by 23.2 percent.

- Antenatal Care.
- During the period of 2001-2007, the percentage of mothers who had antenatal check-up in first trimester has increased by 3.1 percent.

- Antenatal Care.
- During the period of 2001-2007, the percentage of Mothers who had three or more ANC has increased by 10.6 percent.

- Antenatal Care.
- During the period of 2001-2007, the percentage of Mothers who had at least one tetanus toxoid injection has increased by 21.3 percent.

- Antenatal Care.
- During the period of 2001-2007, the percentage of Mothers whose Blood Pressure (BP) taken has increased by 5.4 percent.

- Antenatal Care.
- During the period of 2001-2007, the percentage of Mothers who had **full antenatal check-up** has increased by 0.5 percent.

# RESULTS (MATERNAL HEALTH)

- Institutional Deliveries.
- The percentage of **Institutional Deliveries** has increased by 12.3 percent.

# RESULTS (MATERNAL HEALTH)

- The percentage of **Child birth at home** has decreased by 12.7 percent.

- Childhood Immunization from Vaccine Preventable Diseases (VPDs).

# RESULTS (CHILD HEALTH)

- Children 12-23 months who have received BCG vaccine increased by 7.7 percent.
- Children 12-23 months who have received 3 doses of DPT vaccine decreased by 3.6 percent.
- Children 12-23 months who have received 3 doses of DPT vaccine decreased by 7 percent.

# SUMMARY

- Bihar has made substantial progress in health in the last decade, particularly maternal health.
- However, many health indicators are still less than national average.
- Child health, particularly vaccination, is the matter of concern.
- The take-up is low- needs intervention on the demand side (incentivising households)- Udaipur experiment, Guna model