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Abstract

This paper examines the impact of a decentralisation program implemented in India's Schedule Five Areas - home to 100 million indigenous people (Scheduled Tribes, or STs) - on maternal healthcare utilisation. The program institutionalised local governance councils and introduced political reservations for STs, granting these councils formal authority over the provision of public goods and services. Using three rounds of a large-scale reproductive health data and a difference-in-differences strategy exploiting staggered program implementation, we find that the policy significantly increased the use of antenatal care services, particularly from government facilities. It also reduced delivery complications and increased reliance on public services for managing such complications. Evidence suggests that these improvements were driven by increased trust in the health system when political representatives belonged to the ST community. The findings highlight how decentralisation combined with political inclusion can improve public service utilisation and health outcomes among historically marginalised population.

Keywords: Decentralisation, India, Political representation, Maternal healthcare, Public service delivery, Local governance

JEL Code: I15, H75, O12, P16

Decentralisation of governance and maternal healthcare utilisation: Evidence from India*

Bharti Nandwani[1], Ishita Varma[1†]

Abstract

This paper examines the impact of a decentralisation program implemented in India's Schedule Five Areas - home to 100 million indigenous people (Scheduled Tribes, or STs) - on maternal healthcare utilisation. The program institutionalised local governance councils and introduced political reservations for STs, granting these councils formal authority over the provision of public goods and services. Using three rounds of a large-scale reproductive health data and a difference-in-differences strategy exploiting staggered program implementation, we find that the policy significantly increased the use of antenatal care services, particularly from government facilities. It also reduced delivery complications and increased reliance on public services for managing such complications. Evidence suggests that these improvements were driven by increased trust in the health system when political representatives belonged to the ST community. The findings highlight how decentralisation combined with political inclusion can improve public service utilisation and health outcomes among historically marginalised population.

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1 Introduction

Decentralised governance has long been recognised as a policy solution to achieve increased accountability, improved representation of needs of people and accelerated poverty reduction. By institutionalising governments which are closer to the general public, decentralization can lead to better provisioning and equitable utilisation of public services (Faguet, 2014; Oates, 1999; Maro, 1990) (Bardhan and Mookherjee, 2005; Bardhan and Mookherjee, 2006). A large body of work has examined the impact of several decentralisation programs on a range of outcomes including the provision of public goods, composition of government expenditure, delivery of public services, economic growth, poverty, inequality, and quality of governance (for a review, see Martinez-Vazquez et al., 2017). However, there is limited research examining how decentralised policy making can impact utilisation of public services, particularly in a developing country context. This paper address this gap by examining the impact of a decentralisation reform introduced for STs on their maternal health care-seeking and utilisation.

Constituting 8% of India's population, STs are India's indigenous communities that have historically faced marginalisation for multiple reasons including habitation in geographically isolated areas, lack of recognition of their rights over local resources and, political under-representation. One of the major policy initiatives that the government introduced to address their marginalisation was the introduction of Panchayats Extension to Scheduled Areas Act (PESA) in 1996. PESA institutionalised local governments in Schedule Five areas (SAs) - constitutionally created tribal majority districts - and mandated political reservation for STs in these local councils. In particular, all chairperson positions in local government councils, as well as at least half of the council seats, were reserved for STs. The Gram Sabha (village assembly) was given the authority to approve plans, programs, and projects for social and

economic development before implementation by the local council, thereby ensuring community participation in local decision-making. Although PESA was enacted in 1996, its implementation across states (that have SAs) varied over time, depending on the timing of the first PESA elections. We leverage the staggered implementation of PESA to assess its impact on ST women's use of maternal health care.

The reason we focus on the use of maternal health care of ST women is because, as compared to other social groups, STs have had the lowest utilisation of maternal healthcare and exhibited poorest performance in maternal and child health outcomes. Poor access to quality maternal and child health services and preference for traditional methods of pre and post-natal care over institutional care are the major reasons for their continued poor health performance.

The implementation of PESA is expected to improve utilisation of maternal health care for two reasons. One, given that PESA introduced political reservation for STs, we expect public goods provision in SAs to better reflect preferences of STs after its implementation. This follows directly from the theoretical predictions of the citizen candidate model proposed by (Osborne and Slivinski, 1996) that shows that if candidates have partisan preferences and cannot commit to policy platforms, the implemented policy outcome will reflect the preferences of the elected candidates. With limited health care facilities in SAs (See Appendix Table A.2), increased involvement of STs in local decision-making can improve the provision of public health care service, consequently improving the uptake of these services. Second, which is more relevant to our context is that STs have traditionally relied on customary methods rather than institutional care to treat health ailments. Having representatives who are socio-economically closer to the local population can build trust and confidence in government-provided health care services. These representatives can also promote good health seeking behaviour encouraging them to make use of these health care services.

Although these channels suggest a positive impact, the actual effect of PESA is likely to depend on the extent to which the reform is implemented. There have been concerns that PESA implementation has been unsatisfactory and even undermined by

local elites (Dandekar and Choudhury, 2010). Therefore, it is important to empirically examine the extent to which PESA has been successful in affecting maternal health seeking behaviour.

We obtain data on indicators of maternal health seeking from the first three rounds of the District Level Household and Facility Survey (DLHS) conducted in the years 1998-99, 2002-04 and 2007-08. DLHS is a large household health survey conducted by the Government of India that captures comprehensive retrospective information on pregnancies that women had during last five years. We use the staggered implementation of PESA across states in a difference-in-difference (DID) framework wherein SAs are the treatment group and non-SAs form the control group. We compare maternal health care utilisation of ST women in SAs with ST women in non-SAs before and after PESA came into effect.

Our results suggest that implementation of PESA increases the likelihood of ST women attending antenatal check-ups by 14%. Additionally, ST women in SAs are more likely to adopt recommended Antenatal Care (ANC) practices, such as receiving the tetanus vaccine and taking iron and folic acid supplements. We also observe a 28% increase in the use of government facilities for ANC check-ups. However, PESA does not have an impact on institutional deliveries among ST women. The limited uptake of institutional deliveries is likely due to long-standing traditional norms favoring home births among ST communities (Contractor et al., 2018; Begum et al., 2017; Pati et al., 2014). Importantly, we find that the improved health-seeking and utilisation behavior post-PESA contribute to better health outcomes: ST women in SAs are about 20% less likely to report complications during pregnancy compared to those in non-schedule five areas.

We conduct an event study analysis to rule out pre-existing differential trends in maternal health-seeking behavior between SA and non-SA. Furthermore, we provide evidence that the anticipation of PESA implementation; and other state level policy changes that coincide with PESA implementation do not confound our estimates. A crucial robustness check involves assessing if our DID estimates are robust to treatment effects heterogeneity. A recent literature has pointed that when the effect of

treatment is not expected to be homogeneous across groups or time, particularly under staggered introduction of the treatment, the DID estimates are unlikely to identify the Average Treatment Effects (ATE). See De Chaisemartin and d'Haultfoeuille (2023) for a review of this issue. We use the two-stage DID estimator proposed by (Gardner, 2022) to show robustness of our results to allowing for heterogeneous treatment effects. Additionally, our results are also robust to the estimator proposed in (Callaway and SantâAnna, 2021).

We explore the mechanisms driving increased use of maternal health care services and find suggestive evidence that change in perceptions about the quality and cost of ANC services provided by the government, coupled with a shift in traditional views following the appointment of local tribal community representatives, play a key role. We also rule out improvement in the provision of health infrastructure post-PESA as the primary mechanism driving our results.

The rest of the paper is organised as follows: Section 2 provides a review of literature, section 3 provides a background on PESA, state of tribal health in India, and how PESA can impact tribal health. Section 4 outlines the data and the empirical methodology. The results are discussed in Section 5. Section 6 examines the mechanisms at work and Section 7 concludes.

2 Literature Review

Our paper is related to a large literature that has examined the impact of decentralisation programs on a range of outcomes including economic growth (Canavire-Bacarreza et al., 2020; Qiao et al., 2008; Gemmell et al., 2013; Xie et al., 1999; Zhang and Zou, 1998), poverty and economic inequality (Shankar and Shah, 2003; Neyapti, 2006; Sepulveda and Martinez-Vazquez, 2011; Sacchi and Salotti, 2014), and provision of public goods (Foster and Rosenzweig, 2001; Faguet, 2004; Faguet and Sanchez, 2014; Falch and Fischer, 2012). The evidence provided by this literature is mixed at best where the lack of a positive impact has been attributed to capture of local governments by elites (Bardhan and Mookherjee, 2000).

Our work contributes more directly to a small body of work that has looked at the impact of decentralization on provision of health care. Goncalves (2014) examines how a specific form of decentralization - participatory budget management - affects health spending and outcomes in Brazil. The study finds that municipalities adopting this system experience higher spending on health and sanitation and consequently lower infant and child mortality rates. On the other hand, Rocha et al. (2016) report that greater fiscal autonomy in Brazil does not necessarily lead to reduced infant mortality rates. However, municipalities with higher efficiency are better able to improve health outcomes and lower infant mortality compared to less efficient ones. Faguet and Sanchez (2014) document that decentralization improves access to public health services, as evidenced by increased health insurance coverage for the poor in Colombia. del Granado et al. (2018) use a panel data set of 42 countries and find that expenditure decentralization positively influences the share of health expenditure in government budgets.

Since PESA included guidelines for political reservation for STs, our paper is also linked to the literature that studies the impact of mandated political reservation for marginalised groups in India. While, one set of studies have found that political reservation for marginalised groups improves their influence over policy making and leads to an increase in allocation of public resources that benefit these groups (Pande, 2003; Besley et al., 2012; Chattopadhyay and Duflo, 2004; Bardhan et al., 2010; Aneja and Ritadhi, 2022). In contrast, a different strand of literature finds weak distributive effects of reservation for marginalised castes and tribes (Jensenius, 2015; Dunning and Nilekani, 2013).

There are also studies that examine the impact of political representation of women on health care provisioning and health outcomes. Bhalotra and Clots-Figueras (2014) find that political representation of women in state legislatures leads to a reduction in neonatal mortality and increases the utilisation of reproductive and post natal care. Similarly, Kumar and Prakash (2012) examine the impact of gender quotas in local levels of government in India and find a positive impact of these quotas on institutional deliveries and survival rates of children. Rustagi and Akter (2022) ex-

plores the impact of political representation of women on health outcomes of children for a set of 162 countries and documents that female quotas improve child health outcomes, with much larger effects in South Asia and Sub-Saharan Africa.

Further, our work adds to the burgeoning body of work that examines the impact of PESA on different outcomes. Nandwani (2019) evaluates the impact of PESA on the likelihood of an armed insurgency as this government policy was implemented in conflict affected areas of the country. The study finds that the initiative increased the participation of STs in armed conflict due to capture of PESA by ST elites. Gulzar et al. (2020) finds that PESA improved the implementation and performance of two large public development programs. Agarwal et al. (2023) evaluates the impact of PESA on forest conservation and finds that it generated limited positive impact.

3 Background

STs constitute around 8.6% of the total population of India (Population census of 2011) and a majority of them reside around forests and are involved in traditional occupations such as shifting cultivation and collection of minor forest produce. STs have historically been the most marginalised social communities in the country and over the years they have exhibited the worst performance in terms of poverty reduction, education attainment, and healthcare access and utilisation (Soman et al., 2023; Pradhan et al., 2022; Maity, 2017; Ministry of Tribal Affairs). Displacement of forest land where they have traditionally resided, non-recognition of their claims over local resources and traditional ways of managing their societies are some of the reasons for their continued deprivation.

With this backdrop, the government of India introduced PESA in SAs in 1996 - a unique decentralisation initiative aimed at empowering local communities to manage public goods and allocate local resources. SAs, with 35% of their population comprising of STs (Census 1991), have had a history of neglected governance from colonial times. The colonial government considered the indigenous STs primitive due to their traditional ways of living around forests and excluded areas that had

dominant tribal population from colonial administration and categorised them into excluded and partially excluded areas. Following independence, the Indian Constitution retained this classification, designating them as Schedule Five and Schedule Six areas, respectively. This categorisation acknowledges their distinct geography, rich natural resources, and the unique ways STs manage local resources, necessitating special administrative attention.

The aim of PESA introduction was the inclusion of STs in local decision making through their mandated representation in local councils and recognition of their traditional resource management practices. Under PESA, every village was required to establish a Gram Sabha which was tasked with significant executive responsibilities, including (a) identifying individuals eligible for poverty alleviation programs and (b) approving initiatives, projects, and plans aimed at social and economic development. PESA also empowered the Gram Sabha to prevent the alienation of forest lands, make decisions regarding land acquisition, grant mining licenses, resettle individuals displaced by land acquisition, manage minor water bodies and forest resources, and oversee local plans, including Tribal Sub Plans. Importantly, PESA mandated political reservation for STs by stipulating that all chair positions at the three levels of local government must be reserved for STs, with at least 50% of all seats on these councils also reserved for individuals from ST communities.

The PESA Act was implemented in the SAs which are spread across the following nine states: Andhra Pradesh, Jharkhand, Chhattisgarh, Himachal Pradesh, Madhya Pradesh, Gujarat, Maharashtra, Odisha, and Rajasthan. We restrict our analysis to these states in the paper. In the non-SAs in these states (which have about 6% of ST popultion), while there was no PESA implementation, there existed Panchayati Raj Institution (PRI) - the three tier of local self government[1]. The PRI was introduced in all districts other than SAs through a constitutional amendment in 1992. While both PESA and PRI mandated devolution of fiscal power to locally elected councils, PESA differed from PRI as it was specifically designed to empower tribal communities by granting them local autonomy and recognising their traditional rights over

[1]The three tiered government structure consists of village, block, and district councils

local resources. Importantly, while PESA mandated that all chairperson positions be reserved for STs in SAs, PRI included a provision for political reservation for STs in proportion to their population proportion, implying a much lower 6% of local council leader positions to be reserved for STs. Further, Gram Sabha was significantly empowered in PESA as compared to PRI to take decisions concerning local resources and prevent alienation of forest areas. Thus, our analysis in the paper is not an evaluation of introduction of local governments in SAs but devolving autonomy particularly to STs in local decision making in a setup where local governments have been institutionalised.

There are 108 SA districts but not all the villages/blocks in all these districts are covered by the fifth schedule of the constitution. These are the districts which consequently saw partial implementation of PESA as illustrated in Figure A.8. Geographically, SAs encompass approximately 11.3% of India's total land area.

3.1 Health Status of STs

STs face significant health challenges, including malnutrition, chronic diseases, and both communicable and non-communicable illnesses. While the general life expectancy at birth in India is around 67 years, for tribal population, it is notably lower at 63.9 years. Maternal and child health statistics are particularly concerning: about 65% of tribal women aged 14 to 49 suffer from anemia, and institutional deliveries are the lowest among tribal women compared to other caste groups (Ministry of Health and Family Welfare, 2018). The infant mortality rate among STs is the highest in the country, at 74 per thousand live births, compared to 62 for other social groups (Census, 2011). Immunization coverage for children in ST communities is also lower than that of other caste groups (Maity, 2017). Furthermore, STs have demonstrated inadequate utilisation of antenatal and postnatal care, as well as modern contraceptive methods (Maity, 2017).

Several factors contribute to these poor health outcomes among tribal population. Low income levels, inadequate educational attainment, and limited access to clean

water and sanitation significantly affect their health status. Additionally, neglected governance and insufficient public services in areas predominantly inhabited by STs further exacerbate their deprivation. The healthcare that is available often suffers from issues of quality and accessibility (Negi and Azeez, 2021). The historical under-representation of STs in policy making and their political marginalisation also play a critical role in perpetuating these challenges (Bang, 2018; Maity, 2017; Ambagudia, 2019).

4 Data and Methodology

4.1 Data

The data on maternal health care utilisation is obtained from the DLHS - a household level health survey conducted by the Indian Institute of Population Studies (IIPS) in collaboration with the Ministry of Health and Family Welfare (MoHFW), Government of India. The DLHS is a repeated cross-sectional dataset that is representative at the district level, the smallest identifiable geographical unit in the data. We use the first three rounds of the DLHS dataset conducted in the year 1998-99, 2002-04 and 2007-08, respectively. The fourth round of the DLHS is not included in our analysis because it does not provide district identifiers and excluded nine low-performing states[2] four of which have SAs.

DLHS collects information on all the pregnancies that ever married women aged 15 to 49 had until the last survey round. The information provided includes continuation or termination of the pregnancy, survival or death of the born child, and in the event of a live birth, details regarding the child's gender, birth order, and month and year of birth. Comprehensive information is also collected on each woman's utilisation of antenatal care, postnatal care, and delivery services. Using these retrospective birth records focusing on the last child born, we obtain information on pregnancies and child births during the period 1995-2008.

[2]The excluded states are Bihar, Jharkhand, Uttar Pradesh, Uttarakhand, Madhya Pradesh, Chhattisgarh, Odisha, Rajasthan, and Assam.

The DLHS dataset also provides other social and demographic information on the surveyed women including caste and religion of the respondent, type of house owned, age, and educational attainment.

We obtain information on SAs from the Ministry of Tribal Affairs' website.

4.2 Analytical Sample

The ever married women questionnaires of DLHS 1[3], DLHS 2 and DLHS 3 collected information on 4,71,526, 5,07,622, and 6,43,944 women, respectively. Since our analysis focuses specifically on ST women residing in rural areas across the states that have SA districts, we work with a final sample size of 51,407 respondents, distributed across the three rounds as follows: 25,365 in DLHS-1, 13,412 in DLHS-2, and 12,630 in DLHS-3. Due to missing values across variables and instances where respondents do not recall the type of service they utilised, the sample used for analysis is often smaller than the total reported sample size. It is important to note that information on certain variables, namely, number of IFA tablets consumed, person who assisted the delivery, post delivery complications, place for treating post delivery complication, were collected comprehensively only for DLHS 2 and DLHS 3 in which case the analysis is performed using information from only these two rounds.

4.3 Variables of Interest

In this paper, we focus on healthcare utilisation instead of health infrastructure or health outcomes as it captures the trust and confidence that individuals display in the healthcare system along with their beliefs and preferences for types of health care, and their utilisation patterns (such as frequency, duration, and intensity of healthcare service use). This is important to test for STs who have traditionally preferred customary methods of treatment over institutional heath care facilities.

[3]DLHS 1 was conducted under the name of Rapid Household Survey under Reproductive and Child Health Project by IIPS, Mumbai in two phases. The first phase covered half of the districts within each state, while the second phase covered the remaining districts.

The key indicator of maternal health care utilisation that we examine is the uptake of ANC services among pregnant women. ANC is essential for ensuring safe pregnancies and significantly reduces maternal and perinatal morbidity and mortality. Regular ANC check-ups allow mothers to be screened and educated about possible pregnancy complications, such as malpresentation, reduced fetal movement, and vaginal bleeding, which can be life-threatening to both mother and child. It is recommended that expectant mothers receive their first ANC check-up during the first trimester and complete at least four ANC visits (Al-Zubayer et al., 2024; Gebresilassie et al., 2019; WHO, 2016). The WHO (2016) outlines various ANC guidelines to maintain a "positive pregnancy experience," including nutritional interventions such as iron and folic acid (IFA) supplementation and preventive measures such as tetanus toxoid (TT) vaccination. IFA supplements are crucial for preventing iron deficiency and anemia in pregnant women (Peña-Rosas and Viteri, 2009), while the TT vaccine helps protect against maternal and neonatal tetanus (Thwaites et al., 2015; WHO, 2007; Chen et al., 1983).

Additionally, we consider the type of delivery care women choose, as skilled attendance at birth and institutional deliveries are critical for ensuring safe childbirth and reducing the risk of complications that can lead to maternal or neonatal illness or death (Kesterton et al., 2010).

4.4 Summary Statistics

Table 1 reports the difference in the maternal health-seeking behaviour of ST women in SA and non-SA districts before the implementation of PESA. The table suggests that the uptake of ANC (including the timing and number of visits) among ST women is lower in SAs as compared to non-SAs. Pregnant ST women in SAs are less likely to take TT shots but more likely to take IFA tablets. A higher proportion of ST women in SAs prefer to go to non-institutional health facilities for ANC check-ups and their delivery. A higher proportion of women report facing pregnancy complications in SAs but a significantly lower proportion of them treat post-delivery complications. Around 61% of women in SAs report that their delivery is conducted by a mid-

wife which is much higher than non-SAs. This table thus suggests that before the implementation of PESA, ST women in SAs had low levels of utilisation of maternal health care particularly from government facilities.

4.5 Empirical Methodology

While PESA was introduced in 1996, its actual implementation in states varied based on the timing of the first PESA elections after which the act came into effect. While Himachal Pradesh, Madhya Pradesh and Rajasthan were the first states to hold PESA elections in 2000 after the announcement of the act in 1996, Jharkhand held the elections last in the year 2010. Table A.1 reports the year of PESA elections in our sample states. Note that we exclude Jharkhand from our analysis since our dataset does not capture births after the year 2008, the year after Jharkhand implemented PESA.

This staggered implementation of PESA allows us to estimate the impact of PESA in a DID framework. We estimate the following regression equation and compare the maternal healthcare utilisation of ST women in SAs post and pre-PESA implementation with ST women in non-SAs[4].

$$y_{mhdst} = \beta_0 + \beta_1 Post_{st} + \beta_2 Post_{st} * SA_d + \beta_3 X'_{mhdst} + \gamma_d + \delta_t + e_{mhdst} \qquad (1)$$

Here, y_{mhdst} is the outcome variable for mother m residing in household h in district d and state s who gave birth at time t. $Post_{st}$ is a dichotomous variable takes takes a value one for births happening after the first PESA elections are held in state s and year t. This variable partials out all other state-level policy changes that coincide with PESA implementation years and could potentially affect maternal healthcare utilisation of ST women[5]. SA_d takes a value one if the district is a SA district

[4]We exclude women from other social groups from our analysis as we expect their health utilisation behaviour to have very different trends from ST women.

[5]We also check the robustness of our results to considering births happening one year after the PESA elections to allow some lag in the evolution of the outcomes and our results (available on request) remain robust.

and 0 otherwise. Note that since the smallest identifiable unit in DLHS data is a district, in our main regressions we consider an entire district as SA district even if not all the blocks/villages were covered under the fifth schedule of the constitution. In a robustness check later, we also consider an alternative specification where this variable captures the percentage of block/villages in a district that are SAs. X_{mhdst} is a vector of control variables at the mother and household level such as age of the mother, level of education, birth order, religion, caste, and type of house. Our specification includes district fixed effects which account for unobserved heterogeneity in maternal care utilisation at the district level and δ_t represents the year of birth fixed effects. The coefficient of interest is β_2 that identifies the impact of implementation of PESA on maternal healthcare utilisation of ST women. We cluster the standard errors at the district level.

5 Results

5.1 Health Seeking and utilisation Behaviour

The regression results obtained by estimating equation (1) are reported in Tables 2 to 4. Table 2 which reports the impact on the uptake of ANC shows that ST women in SAs are seven percentage points more likely to receive ANC after the implementation of PESA, which amounts to a 14% increase as compared to the average (column 1 panel A). We also evaluate the effect of PESA on the timing of the first ANC visit. The findings, reported in columns 2 and 3, reveal that although PESA does not significantly impact ANC uptake within the first three to five months, there is a notable five percentage point increase in the likelihood of women seeking antenatal care within the first six months of pregnancy in SAs compared to non-SAs. Additionally, our results show a positive effect of PESA on the total number of ANC visits made by pregnant women. Column 5 shows that ST women in SAs are four percentage points (a 33% increase compared to the average) more likely to attend three ANC visits than their counterparts in non-SAs.

Panel B of Table 2 shows that PESA not only increased the likelihood of ST women

seeking ANC, but also improved adherence to recommended ANC practices - such as taking the tetanus vaccine and iron and folic acid supplements. Post-PESA, ST women in SAs were six percentage points more likely to get tetanus vaccine in comparison to ST women in non-SAs (column 1). Given that pregnant women should receive at least two shots of tetanus vaccine during the course of pregnancy (WHO, 2007), our finding of five percentage points increase in the likelihood of women getting two doses of the tetanus vaccination post PESA implementation is encouraging (column 2). Additionally, we observe a weak positive increase in the likelihood of pregnant women in SAs taking IFA supplementation.

PESA also resulted in increased use of government health care facilities and decreased reliance on private health care providers for ANC by pregnant women as reported in Table 3. We find a seven percentage point increase in the likelihood of ST women going to government facilities for ANC in the SA districts post PESA implementation. This shift likely reflects a growing confidence among ST women in utilising government-provided healthcare services. Given that public healthcare is heavily subsidised in India, this change also signifies a reduction in out-of-pocket expenses for ST women seeking ANC. We find no significant impact of PESA on the uptake of non-institutional ANC (column 3).

Table 4 examines the impact of PESA on choice of practitioner and facility for child delivery. We find that PESA implementation has a negative differential impact on ST women in SAs having deliveries performed by doctors/nurses (column 1) and positive impact on deliveries performed by untrained professionals. Our results also suggest that PESA implementation has a negative impact on the use of government hospitals for child birth. While this result is surprising, the traditional norms of STs [6] where pregnancy and childbirth are viewed as natural processes that do not require any external [7] intervention (Contractor et al., 2018) may be more conservative with

[6]Some of the traditional norms surrounding child birth in the tribal comminutes include the cutting of the umbilical cord after delivery of the placenta, the application of indigenously made substances on umbilical stump and skin of the baby, bathing baby immediately after birth and vernix removal, late initiation of breastfeeding (Begum et al., 2017; Pati et al., 2014).

[7]Exploratory research by Contractor et al. (2018) found that while the utilisation of health

regard to medically invasive procedures involved in child delivery.

5.1.1 Health Outcomes

While utilisation of health care services is important to analyse in its own right, we also expect some of the improvements in health seeking behaviour among ST women post-PESA implementation to translate into improved health outcomes. Table 5 presents the results for two health outcomes - pregnancy complications (Panel A) and post delivery complications (Panel B). When compared to their counterparts in the non-SAs, we find that the adoption of PESA results in a notable five and six percentage point decrease in minor and major pregnancy complications [8] faced by ST women in SAs, respectively (which is 13% and 43% reduction as compared to average, respectively). Given that many of the positive effects of PESA are concentrated around ANC utilisation, the reduction in pregnancy complications is an encouraging finding, as ANC includes screening for various complications that mothers may face, as well as fetal abnormalities and preventive strategies. While ANC has been shown to reduce both maternal morbidity and mortality (Carroli et al., 2001), our analysis focuses on maternal morbidity (pregnancy complications) and not on maternal mortality as the DLHS dataset lacks information on the latter.

Panel B shows that ST women in SAs post implementation of PESA have a 5% point lower likelihood of facing minor post delivery complications but there is no significant impact on reduction in major deliver complications [9]. Note that ST women in SAs are no more likely to have institutional deliveries or deliveries assisted by trained professionals post-PESA. This can partially contribute to our findings of no impact on reducing major post-delivery complications as institutional deliveries involve the

services for deliveries is not a dominant practice among these tribal communities, there is an understanding about the importance of the health system in case of pregnancy complications and high risk births.

[8] Minor pregnancy complications include swelling of hands and feet, paleness, visual disturbances. Major complication during pregnancy include convulsions, excessive bleeding, malpresentation of the fetus and, weak or no movement of the fetus

[9] While minor complications include fever, pain or headache post delivery, major post-delivery complications include excessive bleeding, convulsions or foul smelling vaginal discharge post delivery.

provision of expert care and emergency intervention in case of any complications with the delivery.

5.2 Parallel Trends

Our key identification assumption in the DID estimation results presented above is that of parallel trends in the utilisation of maternal health care by ST women in SAs and non-SAs prior to the implementation of PESA. We provide a suggestive evidence supporting assumption by estimating the following event study regression equation-

$$y_{mhdst} = \beta_0 + \sum_{j=1}^{7} \beta_j (Leadj)_{st} * SA_d + \sum_{k=1}^{7} \beta_k (Lagk)_{st} * SA_d + \beta_3 X'_{mhdst} + \gamma_d + \delta_t + e_{mhdst} \quad (2)$$

Here, the terms $Leadj_{st}$ and $Lagk_{st}$ signify that a given state s was j periods away or k periods past the implementation of PESA at time t. We expect the interaction terms to be insignificant leading up to the intervention and significant in the years following the intervention.

Figures 1 to 7, which present the coefficients and confidence intervals, show that for most of the outcome variables related to ANC takeup and place for seeking ANC (with the exception of number of IFA tablets consumed), the coefficients of the interaction terms prior to PESA implementation are not significant. We also note that ST women in SAs were less likely to face minor post-delivery complications four years before the reform but more likely to face major pregnancy complications before PESA implementation. While this casts some doubts on the absence of differential trends in pregnancy complications faced by ST women, there is absence of differential

trends for years immediately preceding PESA implementation.

6 Robustness

We ensure that the estimated results presented above are robust to potential confounding factors and estimation methodology used. We present these checks below.

6.1 Robustness to female political representation

It is possible that the improvement in maternal health care utilisation is driven by presence of female legislators in SAs post PESA implementation rather than participation of STs in local decision making. A recent work by (Bhalotra and Clots-Figueras, 2014) shows that election of females to state assemblies results in improved maternal health outcomes and utilisation of mternal health care. We ensure that our results are robust to election of female legislators by using the data on state assembly elections held in the 1995 - 2008 period. The data is released by the Election Commission of India (ECI) which is made available online by the Trivedi Center for Political Data (TCPD). Detailed information is provided on candidates contesting elections in a given constituency-year, including their name, gender, position in the election, vote share and political party they are affiliated to. Table A.3 summarizes the number of election cycles that our sample states went through over the sample period of our analysis and the years in which these elections occurred.

These state elections are contested at the assembly constituency (AC) level and ACs are fully nested within districts. Using the information on the gender of the winning candidate in an AC, we construct the proportion of ACs that have female legislators in a district in an election-year. We then link the proportion of seats won by female leaders in a district-election year to birth cohorts in the following way - for example, female representation in the 1994 election is matched births between 1995-1999, female representation in the year 1999 is matched with births between 2000-2004, and so on. We incorporate this as an additional control variable in our main specification and our results reported in Tables A.4 to A.6 show that all our

main findings remain robust to addition of presence of female legislators.

6.2 Robustness to treatment effects heterogeneity

While the DID methodology has been extensively used in empirical work, a recent literature has highlighted that the methodology may provide misleading estimates of the Average Treatment Effects (ATE) specifically when the introduction of the treatment is staggered and there is heterogeneity in treatment effects across groups and over time [10]. In such cases, it may be difficult to give a causal interpretation to the estimated coefficients even under the assumption of random assignment to treatment (Liu et al., 2024; Baker et al., 2022; Callaway and Sant'Anna, 2021; Goodman-Bacon, 2021; De Chaisemartin and d'Haultfoeuille, 2020). While this casts doubts over our estimates presented in the paper, fortunately, this literature has proposed estimators that are robust to treatment effect heterogeneity in case of staggered introduction of the treatment. We use the estimation procedure proposed by Callaway and Sant'Anna (2021). Specifically, this methodology estimates the group-time average treatment effect on the treated, denoted as $ATT(g,t)$. This parameter captures the average treatment effect in period t for the cohort that first received treatment in period g, thereby allowing for both heterogeneity in treatment effects across cohorts and dynamic effects over time. In case of multiple treatment periods and cohorts, the methodology provides for obtaining a weighted average of these $ATT(g,t)$ that are estimated.

Results obtained using this estimator are presented in Table A.7 to A.11. This procedure not only provides us with the ATT but also the pre-treatment average effects which allow us to test for the parallel trends assumption. We find that the results obtained are consistent with those obtained using the traditional DID set up. These estimates are also larger in magnitude. In certain cases, where the traditional

[10]This issue arises because the DID estimation procedure makes use of all forms of variation by comparing- (i) treated units with untreated units, (ii) treated units with not yet treated units, and (iii) units that newly received the treatment with those already treated. The third form of comparison is forbidden leads to cases where the DID estimator produces an average of treatment effects across all groups and times, with some treatment effects having negative weights.

DID estimates were not significant, we find significant coefficients now, specifically, for ST women going for their first ANC within the first 3 months of their pregnancy, taking IFA supplement, consuming between 90-180 tablets of IFA. In terms of delivery care, we now find ST women in SAs are more likely to go to doctors/nurses for their delivery and less likely to go to *dais*. However, the the estimates do signal the existence of some pre-trends for these variables.

In addition to the estimator proposed by Callaway and SantâAnna (2021), we use the two-stage estimator proposed by (Gardner, 2022) to further bolster our claim that the DID estimates presented in the paper are robust to the treatment effects heterogeneity. This method estimates the treatment effect in two stages wherein the group and period effects are identified in the first stage using the sample of untreated observations. The average treatment effect is then obtained in the second stage by comparing treated and untreated outcomes, after removing these group and time effects estimated in the first stage.

Results obtained using Gardener's two stage DID are presented in Table A.12 to A.17. Encouragingly, the results obtained are consistent with those obtained using the traditional DID model. Infact, the magnitude of the impact is larger in case of most of the outcome variables. We also estimate the event study equation using the two-stage DID estimator and the (Gardner, 2022) results (available on request) also suggest absence of any pre-trends.

6.3 State birth year fixed effects

Public health is a state subject in India, and state governments introduce programs targeted towards improving maternal and child health outcomes. To ensure the robustness of our results to these state level policies, we re-estimate equation (1) by including state-birth year fixed effects. This partials out all the time varying state level unobserved factors (including state-level policies targeted towards women's health care utilisation) that coincide with the timing of PESA implementation and can confound our estimates. Results, presented in Tables A.12 to A.17, suggest that

while the coefficients that were significant earlier continue to remain significant, the magnitude of most of the coefficients falls with the addition of state- birth year fixed effects. This could be because these fixed effects also absorb some of the variation in the degree of implementation of PESA across states and years, apart from other policies. Nevertheless, these results bolster our confidence in the robustness of our findings.

6.4 Anticipation effects

Another potential concern is that impact of PESA on maternal healthcare utilisation could be driven by altered fertility decisions of women. Women in SAs may postpone their decision to have a child due to anticipation of better health care provisioning after the implementation of PESA in their district of residence. We examine if such women are completely driving our results and re-estimate equation (1) using a dummy that takes a value one if the mother m gives birth in year t as the outcome variable. This allows us to test whether fertility decisions of women were systematically different in SAs post-PESA. The results, presented in Table A.18, however present no evidence that child births to ST women are bunched after PESA implementation.

6.5 ASHA workers

The impact of PESA on maternal health seeking and utilisation behaviour could be confounded by other health care programs launched in the country. One such program could be the National Rural Health Mission (NRHM) which was launched nation wide in 2005. The NRHM aimed to strengthen the delivery of health care to rural populations, especially to the vulnerable sections. Among other reforms, the NRHM introduced Accredited Social Health Activist (ASHA) program which involved the appointment of female community health workers who acted as a link between the community and the public health system and also included provisions for incentives to women undergoing institutional deliveries under the Janani Suraksha Yojana (JSY) scheme. While it is unlikely for our results to be completely driven

by NRHM as the program was introduced much later in our sample, nevertheless, to check robustness of our results, we restrict our sample period to births before 2006, that is, periods before the implementation of NRHM. The results (not reported) remain consistent. Further, it is possible that NRHM complemented the PESA program which further improved the effectiveness of PESA in increasing maternal health care utilisation. However, given lack of district level data on NRHM implementation and only three years of data post NRHM in our analysis, we cannot formally test this claim.

6.6 District level controls

To account for potential differences in demographic and socioeconomic changes across SAs and non-SAs that could confound our results, we augment the main specification by adding (time varying) district level controls related to ST and Scheduled Caste (SC) population. In particular, we make use of Census 1991 and 2001 data and add the following variables as additional controls- SC and ST population share, SC and ST work participation share; and SC and ST literacy rate. The inclusion of these controls ensures that the estimated effects of PESA are not merely driven by changing demographic or socio-economic conditions of the district, but because of PESA politically empowering the ST communities. The results obtained are presented in Tables A.19 to A.21 and remain consistent, thereby confirming that the estimated effects are not being driven by demographic or socioeconomic differences across districts.

6.7 Alternate measurement of treatment group

In the main analysis, the impact of PESA on maternal health behavior was estimated using a binary treatment indicator, wherein a district was coded as a SA district irrespective of whether the district was fully or partially covered under the fifth schedule of the constitution. This construction introduces the potential for measurement error, as it treats districts with only some villages/blocks with SA coverage identically to those that are entirely classified as SAs. To address this limitation and to more

accurately capture the intensity of exposure to PESA, we make use of Schedule Areas Sub-District data compiled by Mahajan (2025) which enables identification of the SAs at the subdistrict level (blocks/mandals/tehsils/talukas). We thus replace the binary SA variable with a continuous variable capturing the share of sub-districts within each district that are officially under the fifth schedule of the constitution. The results obtained using this continuous measure are presented in Tables A.22 to A.24 and are qualitatively similar to those from the binary specification, suggesting the findings are robust to alternative definitions of treatment.

7 Mechanisms

In this section, we examine the possible pathways that are driving the improvement in maternal healthcare utilisation of ST women post-PESA implementation. In particular, we examine the following two pathways.

7.1 Development of Health Infrastructure

As mentioned in the introduction before, the improvement in maternal health care seeking of ST women post-PESA may be mediated through an improvement in health infrastructure in the SAs. Decentralized local governments have been shown to improve the delivery of public services (Faguet, 2004; Faguet and Sanchez, 2014; del Granado et al., 2018). By institutionalizing local governance with ST representation, PESA is expected to better align public services with the needs of tribal communities, as local representatives are more aware of the issues that their community faces. Improved political representation for STs may thus have spurred investment in health facilities leading to improved utilisation. To check if this is the channel, we use the population Census of 1991, 2001, and 2011 made available by the SHRUG database (Asher et al., 2019) to check if post-PESA, villages in SAs are more likely to have health infrastructure in comparison to those in non-SAs. We estimate the following regression equation:

$$y_{vdt} = \beta_0 + \beta_1 Post_{st} + \beta_2 Post_{st} * SA_d + \gamma_v + \delta_t + e_{vdt} \quad (3)$$

Here, y_{vdt} takes the value 1 if a health facility is present in village v in district d in census year t. The other variables are the same as before. However, now we have village fixed effects to capture time invariant factors at the village level (γ_v) and census year fixed effects (δ_t).

Table 6 shows that post-PESA, villages in SAs were no more likely to have health facilities in comparison to villages in non-SAs. This result holds across a range of health facilities including hospitals, dispensaries, primary health centers, primary health sub-centers, maternal and child welfare centers, and family welfare centers. Thus, it seems unlikely that the improved health seeking behaviour of women is driven by an improvement in the development of health infrastructure.

We also make use of the village level module of DLHS to test this mechanism. This module provides information on presence of health facilities across villages differentiating between private and public facilities[11]. However, this information is only collected for DLHS 2 and DLHS 3 and DLHS 1 does not have village level data on the presence of health facilities. Using two rounds of repeated cross-section data, we run the same test as we did with the Census data (without village fixed effects) and find that PESA implementation is not associated with improved provisioning of both government and private healthcare facilities (results available on request). This further provides evidence that the improvement in maternal health outcomes post-PESA is unlikely to be driven by a development of health infrastructure.

[11]The type of health facilities covered by DLHS in the village level questionnaire are slightly different from those covered under Census. Along with information collected on the presence of hospitals and dispensaries, DLHS collected information on the presence of Integrated Child Development Service (ICDS) centers, community health centers, and AYUSH centers.

7.2 Perception towards government provided healthcare

As mentioned before, STs have traditionally relied on customary knowledge to treat health ailments. Due to limited usage of modern medicinal practices, STs may have reservations relying on them for ANC. The entry of representatives from their own community into local policy-making could, however, change their perception about government health services which could be the channel driving our results. Since, the majority of PESA's beneficial effects are centered around the use of ANC services, we investigate if this channel is likely to account for the increase in ANC use post-PESA.

The DLHS collects information on reasons stated by women for not utilising ANC. We investigate these reasons to provide suggestive evidence of improved perception towards government health services in SAs post-PESA. Table 8 shows that there is a four percentage point reduction in ST women in SA districts stating ANC as not customary as a reason for not seeking ANC in comparison to their counterparts in non-SAs. While beliefs about what is customary are likely to be rigid, change in tribal women's perceptions demonstrates that having political leaders from their own community can improve the trust they place in opting for ANC at government health centers. Additionally, post-PESA, there is a seven percentage point reduction in ST women in SAs stating high cost of ANC as a reason for not opting for ANC. This could be reflective of increased reliance of ST women on public health facilities which are highly subsidised for their ANC.

7.2.1 Health Awareness

An improvement in ST womenâs perceptions surrounding ANC practices is more likely if, following PESA, ST community leaders actively engage in conducting health awareness programs for the local community. This is the related mechanism that we test in this sub-section. Increase in the frequency of health awareness programmes in SAs after PESA implementation can improve community engagement with public health officials. This may in turn translate into an increase in knowledge of available services, promotion of the utilisation of health facilities, and empowerment of women to make informed decisions surrounding their pregnancies.

We test this by making use of the the Socio-Economic Profiles of Rural Households in India (SEPRI) data of 2014-15 which was collected by the Institute for Rural Management, Anand (IRMA), India, in collaboration with the German Development Institute (DIE) and the World Bank. Our analysis draws on the village level module of the survey, with a particular emphasis on aspects of local governance. Specifically, we examine the functioning of Village Health Committees (VHCs), focusing on a key survey question that records the number of awareness programs conducted by the VHC in each village. These programs provide information on the health services available and the health entitlement of individuals. This information was collected retrospectively for years from 1999 to 2015, although the survey itself was administered in 2014-15. This retrospective reporting allows us to construct a village panel of VHC activity over years [12].

We estimate equation (3) to test this channel and the results are reported in Table A.25. Column 1 shows that the number of health awareness programs in SAs go up by around 41 percentage points in comparison to non-SAs post-PESA. Columns 2 and 3 additionally include state-year fixed effects to account for time-varying unobserved heterogeneity at the state level, as well as state-specific linear time trends to allow for differential trends across states, respectively show that our results remain robust to addition of these controls.

8 Conclusion

This paper examines the impact of PESA - a decentralisation initiative implemented in regions predominantly inhabited by India's indigenous population (STs) - on maternal health seeking behaviour of ST women. PESA introduced political reservation for STs in local policy making and increased the control of local governments over plans and projects for social and economic development. By involving STs into local policymaking, PESA has the potential to address the historical neglect these com-

[12]It is important to note that in Chhattisgarh all sample villages belong to non-SAs and data for Himachal Pradesh was not collected in the survey. Consequently, our analysis is restricted to all the other states covered in our main analysis, excluding these two.

munities have faced, thereby fostering greater trust in utilisation of public services. Additionally, political representation of STs may enhance the provision of healthcare services preferred by ST women, leading to better service utilisation.

Using three rounds of a large reproductive health survey and employing DID methodology, we find that the uptake of ANC services notably increased post-PESA. We also find that more ST women adopted good practices such as taking TT vaccination and IFA supplements during their pregnancies in SAs following the introduction of PESA. This uptake of ANC was effective in ensuring safe pregnancies as we find that lesser women suffered from pregnancy complications in SAs vis-a-vis non-SAs. However, we do not find significant impact of PESA on institutional deliveries or having births assisted by skilled professionals. We attribute this to the traditional views and practices of tribal communities regarding deliveries, which seem to remain unaltered post-PESA.

We rule out development of health infrastructure post-PESA in SAs to be the driver of improved health care seeking and utilisation behaviour. Instead, our findings suggest that fewer women report affordability as a reason for not seeking ANC care following this intervention. This suggests that local representation can improve utilisation of health services by lowering the financial constraints of accessing these health services. We also find a reduction in the proportion of women who report that ANC was not customary. This also suggests that having local representatives from the same community can play an important role in altering perception about utilisation of modern medical practice particularly for a community that has long relied traditional medical treatments.

The results of this study complement the existing literature that has shown positive impact of decentralisation on provision of health services as we show that decentralization initiatives can also be effective in improving health-seeking behaviour and utilisation. Importantly, we show this in the context of a developing country where decentralisation was targeted towards marginalised indigenous groups which have had historically low public service utilsation. The results have important policy implications for other countries struggling with the poor socio-economic outcomes of

marginalised groups. Our results suggest that inclusion of community in local policy making improves the trust that citizens place in government provided services improving their utilisation.

9 Tables and Figures

Table 1: **Summary Statistics: Pre-PESA Differences Across SAs and non-SAs**

	(1) Non Schedule Area (non-SA)	(2) Schedule Area (SA)	(3) Difference (non-SA)-(SA)	(4) t-value
ST Population proportion (1991 Census)	0.06	0.35	-0.28***	-12.91
Went for ANC	0.46	0.44	0.02***	3.56
First ANC Visit: Within First 3 Months	0.19	0.17	0.02***	4.34
First ANC Visit: Within First 6 Months	0.39	0.38	0.02***	2.89
ANC Checks	2.85	2.43	0.42***	6.05
No. of ANC Visits: 3	0.11	0.13	-0.02***	-4.67
No. of ANC Visits: 4	0.05	0.05	0.00***	-3.40
Got TT Shot	0.62	0.60	0.02***	3.11
No. of TT Shots: 2	0.93	0.89	0.04***	3.86
Took IFA	0.56	0.62	-0.06***	-9.87
IFA Tablets Consumed: 90 to 180	0.18	0.21	-0.03***	-3.11
Place for Seeking ANC: Governmental	0.28	0.28	0.00	0.07
Place for Seeking ANC: Private	0.14	0.09	0.06***	15.87
Place for Seeking ANC: Non-Institutional	0.02	0.06	-0.04***	-16.71
Faced Pregnancy Complications	0.09	0.11	-0.02***	-5.48
Delivery Conducted by: Doctor/Nurse	0.11	0.09	0.02**	2.32
Delivery Conducted by: Dai	0.45	0.61	-0.17***	-10.17
Delivery Conducted by: Untrained	0.44	0.30	0.14***	9.20
Place of Delivery: Governmental	0.23	0.13	0.09***	19.84
Place of Delivery: Private	0.05	0.04	0.01***	5.29
Place of Delivery: Non-Institutional	0.73	0.83	-0.11***	-20.92
Sought Treatment for Post Delivery Complications	0.35	0.22	0.13***	18.53
Place for Treating Post Delivery Complications: Governmental	0.17	0.14	0.03	1.55
Place for Treating Post Delivery Complications: Private	0.29	0.16	0.12***	6.45

Table 2: **Impact of PESA on Antenatal Care utilisation**

Panel (A): Impact of PESA on Antenatal Care					
	(1)	(2)	(3)	(4)	(5)
	Received ANC	**Received ANC Within:**		**No. of ANC Visits:**	
		First 3 Months	First 6 Months	3 Visits	4 Visits
Schedule Area×Post	0.073***	0.012	0.054**	0.041***	-0.007
	(0.024)	(0.015)	(0.022)	(0.012)	(0.007)
Controls	Yes	Yes	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	51,147	51,147	51,147	50,565	50,565
R-squared	0.205	0.126	0.211	0.060	0.037
Outcome Mean	0.485	0.197	0.419	0.122	0.048
Panel (B): Impact of PESA on ANC Practices					
		(1)	(2)	(3)	(4)
		Tetanus Toxoid (TT):		**Iron Folic Acid (IFA):**	
		Taken	No. of Injections: 2-4	Taken	No. of Tabs: 90-180
Schedule Area×Post		0.062***	0.051**	0.034	0.010
		(0.024)	(0.024)	(0.023)	(0.023)
Controls		Yes	Yes	Yes	Yes
District Fixed Effects		Yes	Yes	Yes	Yes
Year of Birth Fixed Effects		Yes	Yes	Yes	Yes
Observations		51,147	50,678	51,147	25,669
R-squared		0.134	0.124	0.160	0.112
Outcome Mean		0.602	0.489	0.476	0.172

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. ***Received ANC*** is a dummy variable that takes the value one if a mother received ANC during the course of her pregnancy. ***Received ANC Within****- First 3 Months (6 Months)* is a dummy variable that takes the value one if a woman went for her first ANC visit within the first three months (six months) of her pregnancy. ***No. of ANC Visits****- 3 Visits (4 Visits)* is a dummy variable that takes the value one if a woman went for three (four) ANC visits during her pregnancy. ***Tetatnus Toxoid (TT)****- Taken* is a dummy variable that takes the value one if a woman took the TT vaccine during the course of her pregnancy. *No. of Injections: 2-4* is a dummy variable that takes the value one if a woman got two to four doses of the TT vaccine during her pregnancy. ***Iron Folic Acid (IFA)****- Taken* is a dummy variable that takes the value one if a woman consumed IFA (in tablet forms or in syrup) during her pregnancy. *No. of Tabs: 90-180* is a dummy variable which takes the value one if a woman consumed 90 to 180 IFA tablets during her pregnancy. ***Schedule Area*** is a dummy variable that takes the value one if a district is schedule five. ***Post*** takes the value one for the years after the implementation of PESA in a given state.

Table 3: **Impact of PESA on Place for Seeking Antenatal Care**

	(1)	(2)	(3)
	Place for Seeking Antenatal Care		
	Government	Private	Non-institutional
Schedule Area×Post	0.068***	-0.030**	0.013
	(0.020)	(0.012)	(0.011)
Controls	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes	Yes
Observations	50,820	50,820	50,820
R-squared	0.159	0.171	0.085
Outcome Mean	0.325	0.093	0.045

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. ***Place for Seeking Antenatal Care***- *Government* is a dummy variable that takes the value one if a woman went to a governmental facility for her ANC check up during her pregnancy. *Private* is a dummy variable which takes the value one if a woman went to a private facility for her ANC checkup during pregnancy. *Non-institutional* is a dummy variable which takes the value one if a woman had non-institutional ANC check ups during her pregnancy. ***Schedule Area*** is a dummy variable that takes the value one if a district is schedule five. ***Post*** takes the value one for the years after the implementation of PESA in a given state.

Table 4: **Impact of PESA on Choice of Delivery Care**

	(1)	(2)	(3)	(4)	(5)	(6)
	Delivery Conducted by:			**Place of Delivery:**		
	Nurse/Doctor	Dai (trained and untrained)	Untrained	Government	Private	Non Institutional
Schedule Area×Post	-0.034*	-0.048	0.082***	-0.042*	0.010	0.030
	(0.018)	(0.031)	(0.030)	(0.024)	(0.008)	(0.023)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	19,176	19,176	19,176	44,386	44,386	44,386
R-squared	0.059	0.179	0.198	0.159	0.071	0.182
Outcome Mean	0.072	0.585	0.343	0.180	0.035	0.785

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. Column(1)- Column(3) report results using DLHS-2 and DLHS-3. DLHS-1 does not give complete information on who conducted the delivery. ***Delivery Conducted By****-Nurse/Doctor* is a dummy variable that takes the value one if the delivery is conducted by a trained doctor or nurse. *Dai* is a dummy variable that takes the value one if the delivery is conducted by a trained or untrained dai (midwife). *Untrained* is a dummy variable which takes the value one if the delivery is conducted by an untrained personnel. ***Place of Delivery****-Government* is a dummy variable which takes the value one if the place of delivery is a governmental facility. *Private* is a dummy variable that takes the value one if the place of delivery is a private facility. *Non Institutional* is a dummy variable which takes the value one if the delivery is non-institutional. ***Schedule Area*** is a dummy variable that takes the value one if a district is schedule five. ***Post*** takes the value one for the years after the implementation of PESA in a given state.

Table 5: **Impact of PESA on Pre and Post Delivery Complications**

Panel (A): Impact of PESA on Pregnancy Complications				
	(1)	(2)	(3)	(4)
	Pregnancy Complications:		**Place for Treating Pregnancy Complications:**	
	Minor	Major	Government	Private
Schedule Area×Post	-0.047**	-0.063***	-0.072	0.003
	(0.024)	(0.020)	(0.050)	(0.050)
Controls	Yes	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes	Yes	Yes
Observations	44,955	44,955	4,100	4,100
R-squared	0.051	0.048	0.200	0.222
Outcome Mean	0.360	0.110	0.597	0.352
Panel (A): Impact of PESA on Post Delivery Complications				
	(1)	(2)	(3)	(4)
	Post Delivery Complications:		**Place for Treating Post Delivery Complications:**	
	Minor	Major	Government	Private
Schedule Area×Post	-0.051**	-0.012	0.090*	-0.097
	(0.025)	(0.029)	(0.053)	(0.064)
Controls	Yes	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes	Yes	Yes
Observations	24,042	24,043	3,247	3,247
R-squared	0.056	0.050	0.197	0.196
Outcome Mean	0.307	0.141	0.229	0.184

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. Column (3) and Column (4) of Panel (A) report results using information from DLHS-2 and DLHS-3. DLHS-1 did not collect information on the place for treating pregnancy complications. ***Pregnancy Complications***- *Minor* is a dummy variable which takes the value one if a woman suffered from any of the following pregnancy complications- swelling of hands and feet, paleness, visual disturbances. *Major* is a dummy variable which takes the value one if a woman suffers from any of the following complication during pregnancy- convulsions, excessive bleeding, malpresentation of the fetus and, weak or no movement of the fetus. ***Place for Treating Pregnancy Complications***- *Government* is a dummy variable which takes the value one if a woman sought treatment for pregnancy complications in a governmental facility. *Private* is a dummy variable which takes the value one if a woman sought treatment for pregnancy in a private facility. Column(1) and Column (2) in Panel (B) report results using DLHS-2 and DLHS-3. DLHS-2 and DLHS-3 report information on post delivery complications that women faced in the 6 weeks following the delivery. While DLHS-1 collected some information on post delivery complications, this information is collected for the first week following delivery. Column (3) and Column (4) of Panel (B) report results using information from DLHS-2 and DLHS-3. DLHS-1 did not collect information on the place for treating post pregnancy complications. ***Post Delivery Complications*** - *Minor*is a dummy variable which takes the value one if a woman faced fever, pain or headache post delivery. *Major* is a dummy variable which takes the value one if a woman faced excessive bleeding, convulsions or foul smelling vaginal discharge post delivery. ***Place for Treating Post Delivery Complications***- *Government* is a dummy variable which takes the value one if a woman sought treatment for post delivery complications in a government facility. *Private* is a dummy variable which takes the value one if a woman sought treatment for post delivery complications in a private facility. ***Schedule Area*** is a dummy variable that takes the value one if a district is schedule five. ***Post*** takes the value one for the years after the implementation of PESA in a given state.

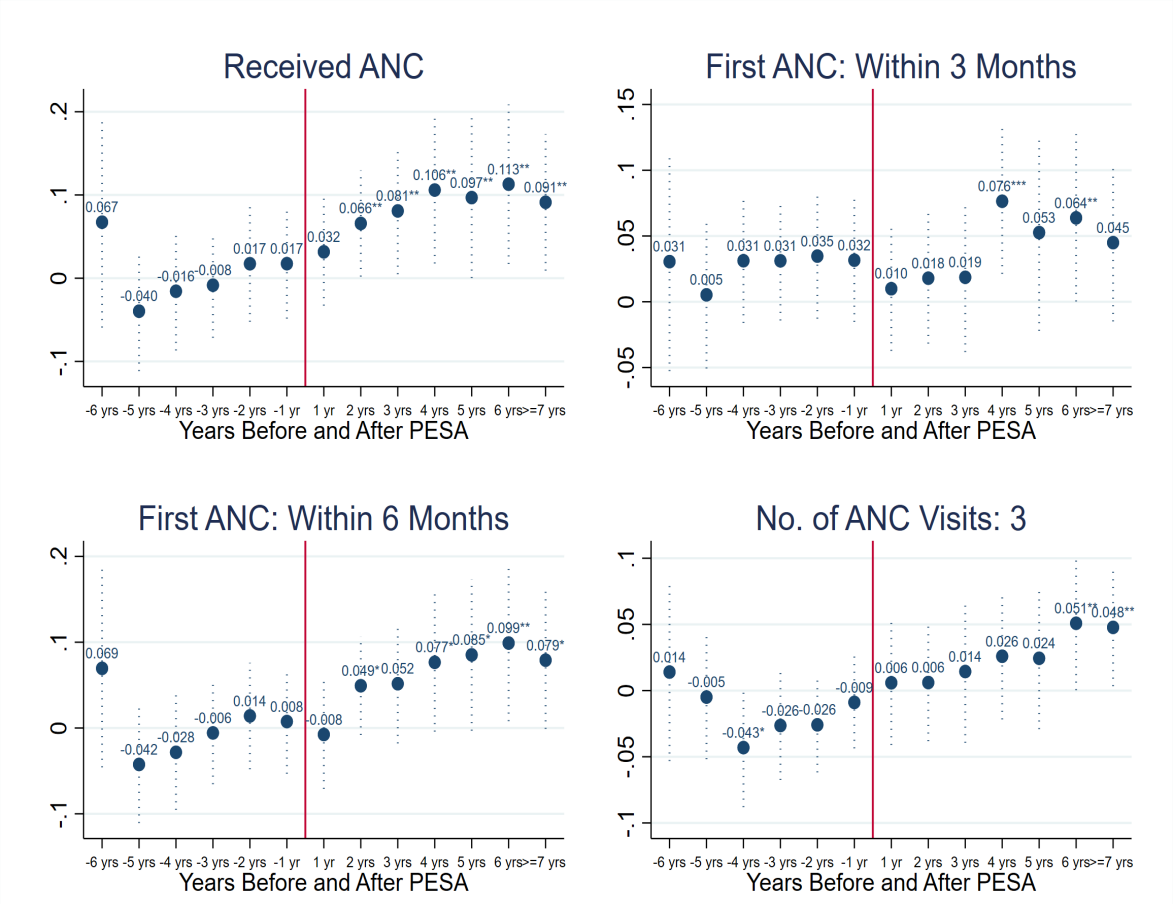

Figure 1: Impact of PESA on: (a) Receiving ANC, (b) Going for First ANC Within First 3 Months of Pregnancy, (c) Going for First ANC Within First 6 Months of Pregnancy and, (d) Going for 3 ANC Visits

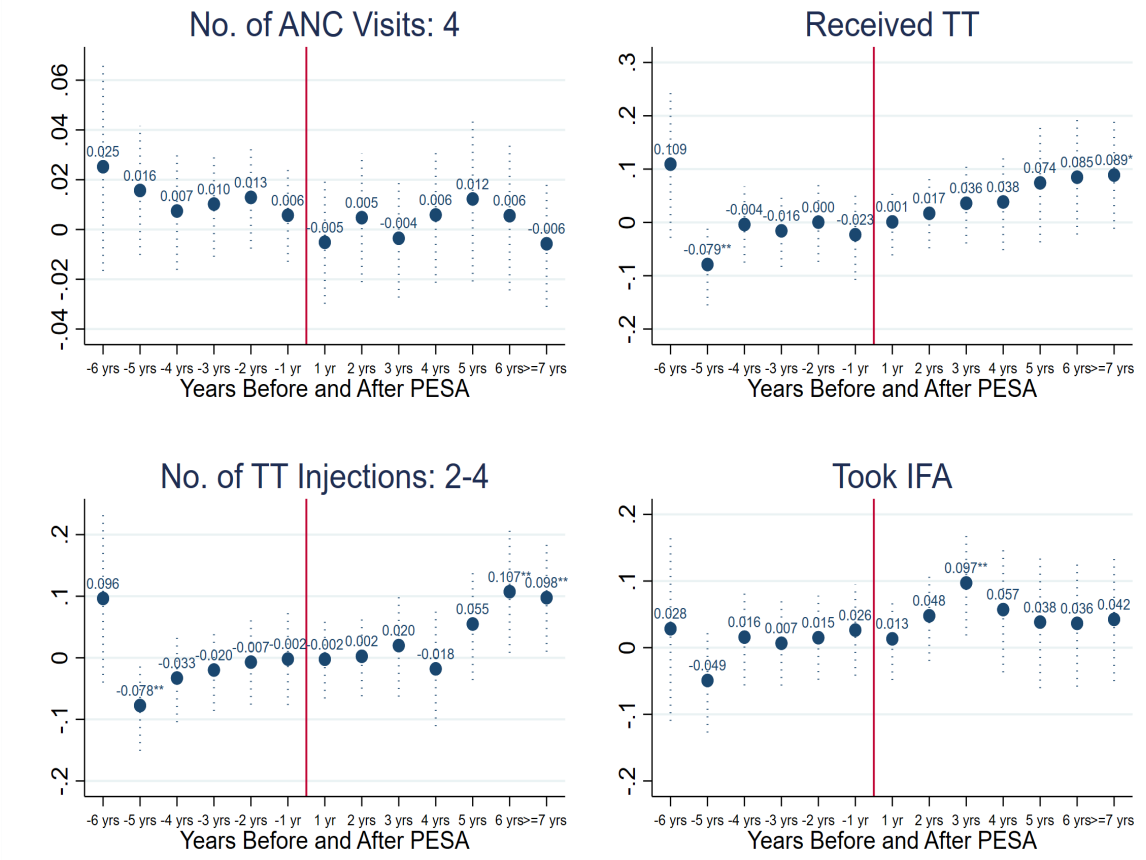

Figure 2: Impact of PESA on: (a) Going for 4 ANC Visits, (b) Taking TT Vaccination, (c) Taking 2-4 Doses of the TT Vaccine and, (d) Taking IFA Supplements

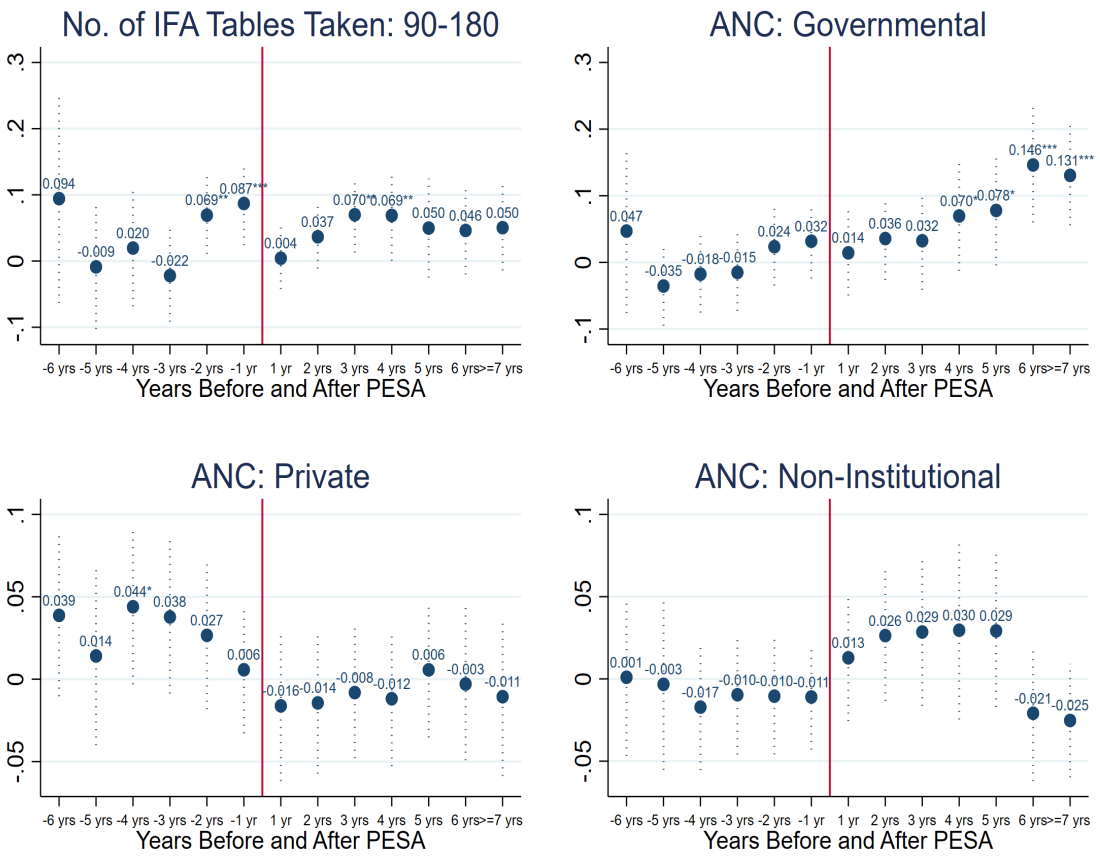

Figure 3: Impact of PESA on: (a) Taking 90-180 IFA Tablets, (b) Place for Seeking ANC: Governmental Facility, (c) Place for Seeking ANC: Private Facility and, (d) Opting for Non-Institutional ANC

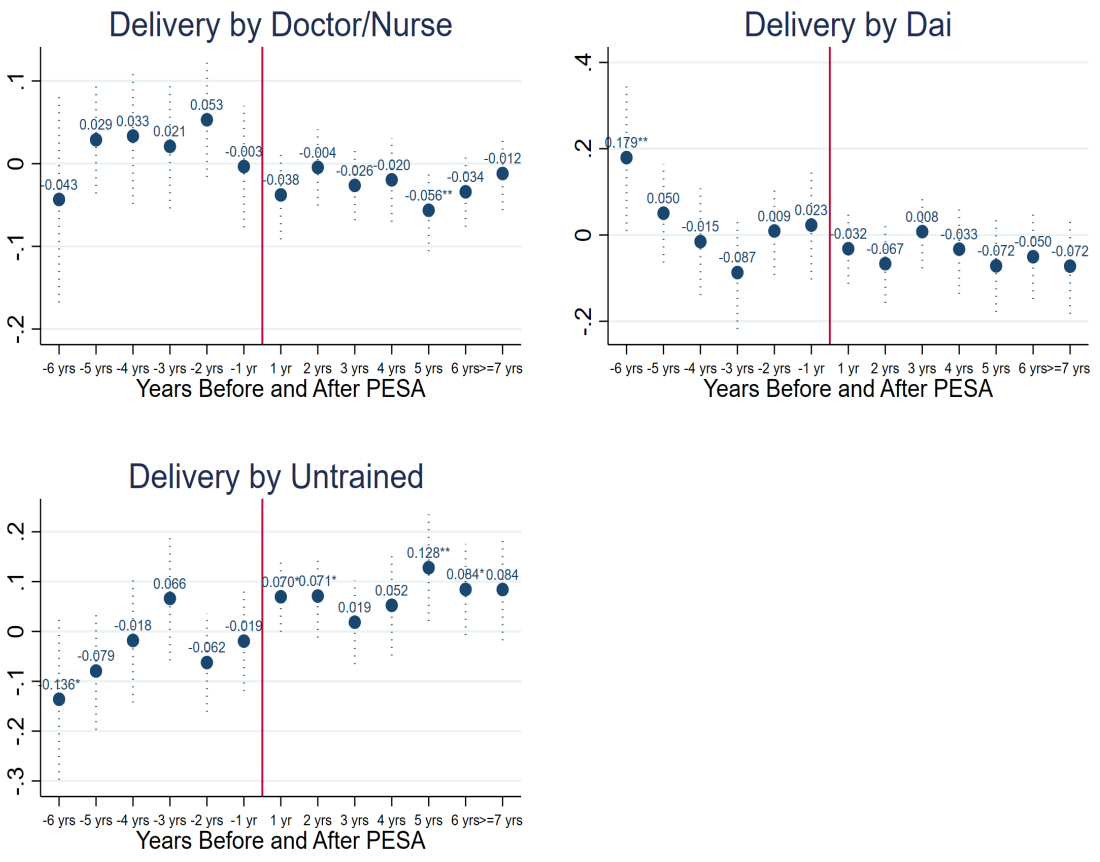

Figure 4: Impact of PESA on: (a) Delivery Conducted by a Doctor/Nurse, (b) Delivery Conducted by a Dai (Midwife) and, (c) Delivery Conducted by an Untrained Personnel

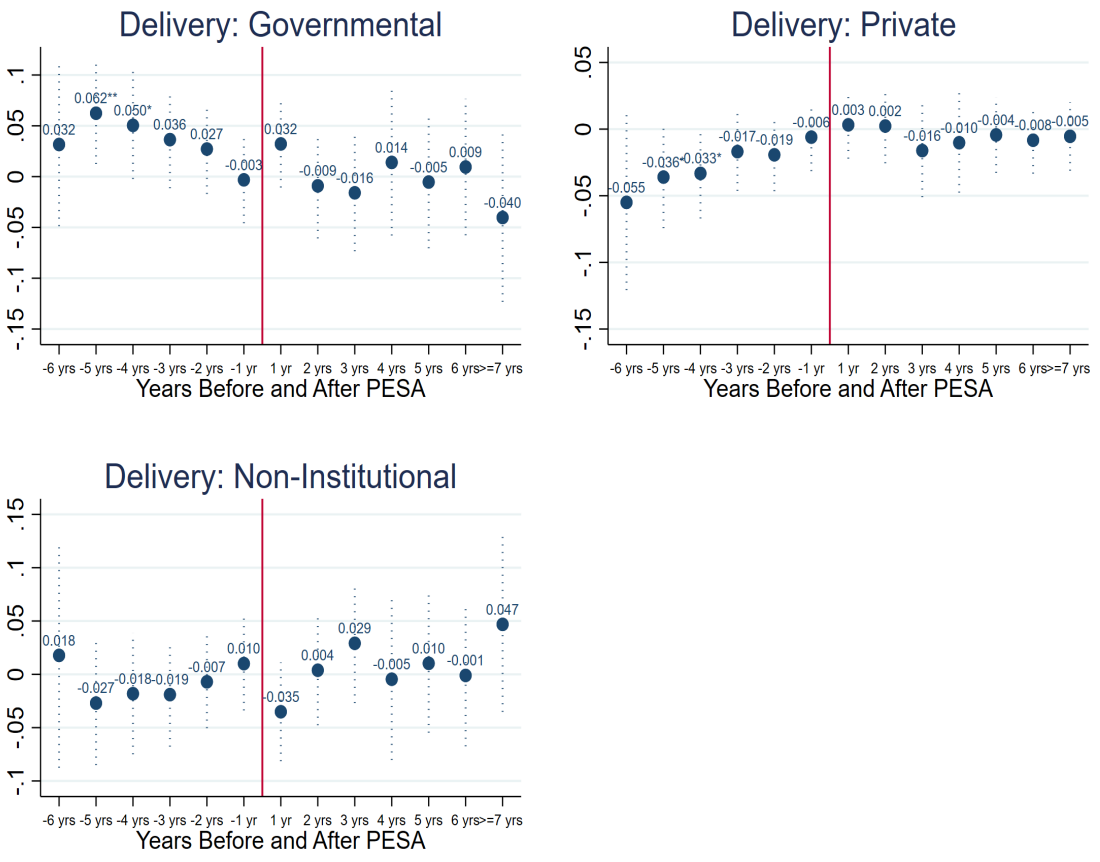

Figure 5: Impact of PESA on: (a) Place of Delivery: Governmental Facility, (b) Place of Delivery: Private Facility and, (c) Place of Delivery: Non-Institutional

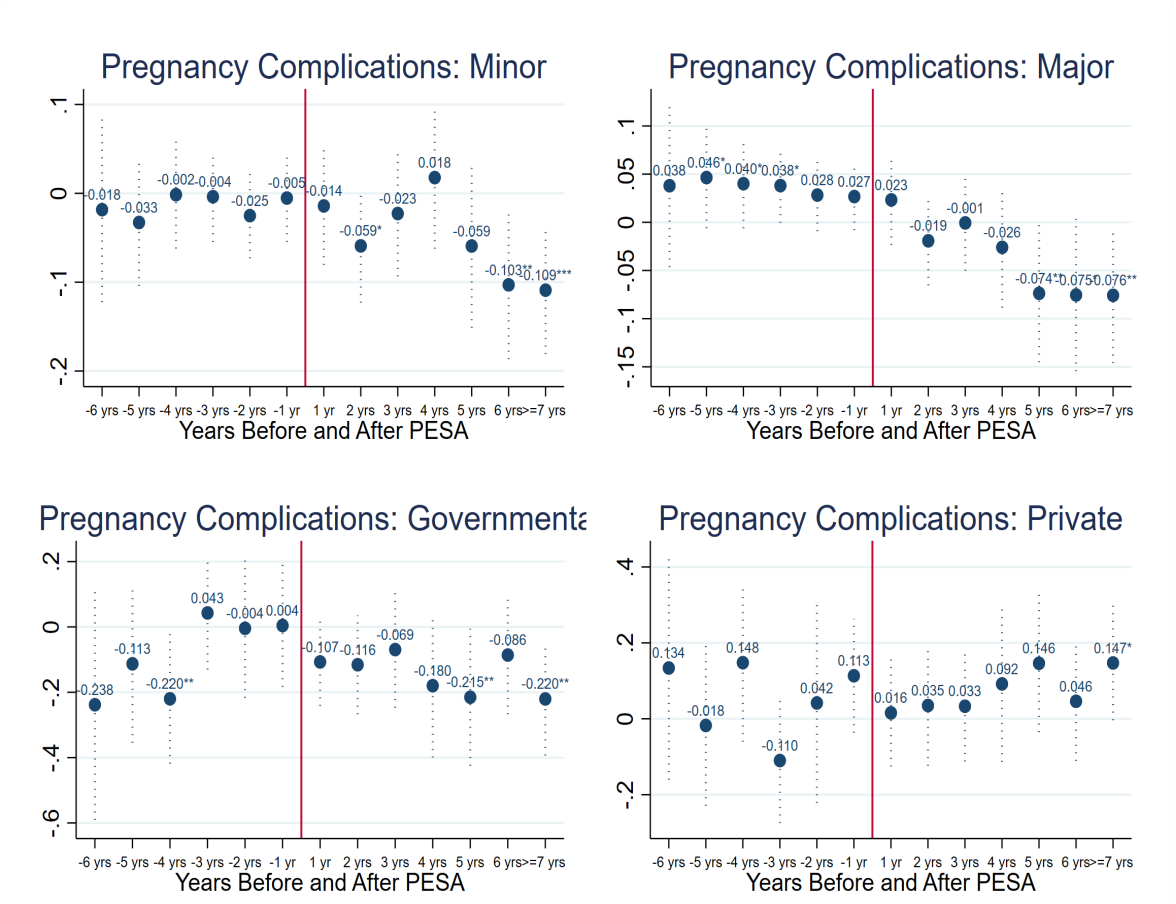

Figure 6: Impact of PESA on: (a) Facing Minor Pregnancy Complications, (b) Facing Major Pregnancy Complications, (c) Place for Seeking Treatment for Pregnancy Complications: Governmental and, (d) Place for Seeking Treatment for Pregnancy Complications: Ptivate

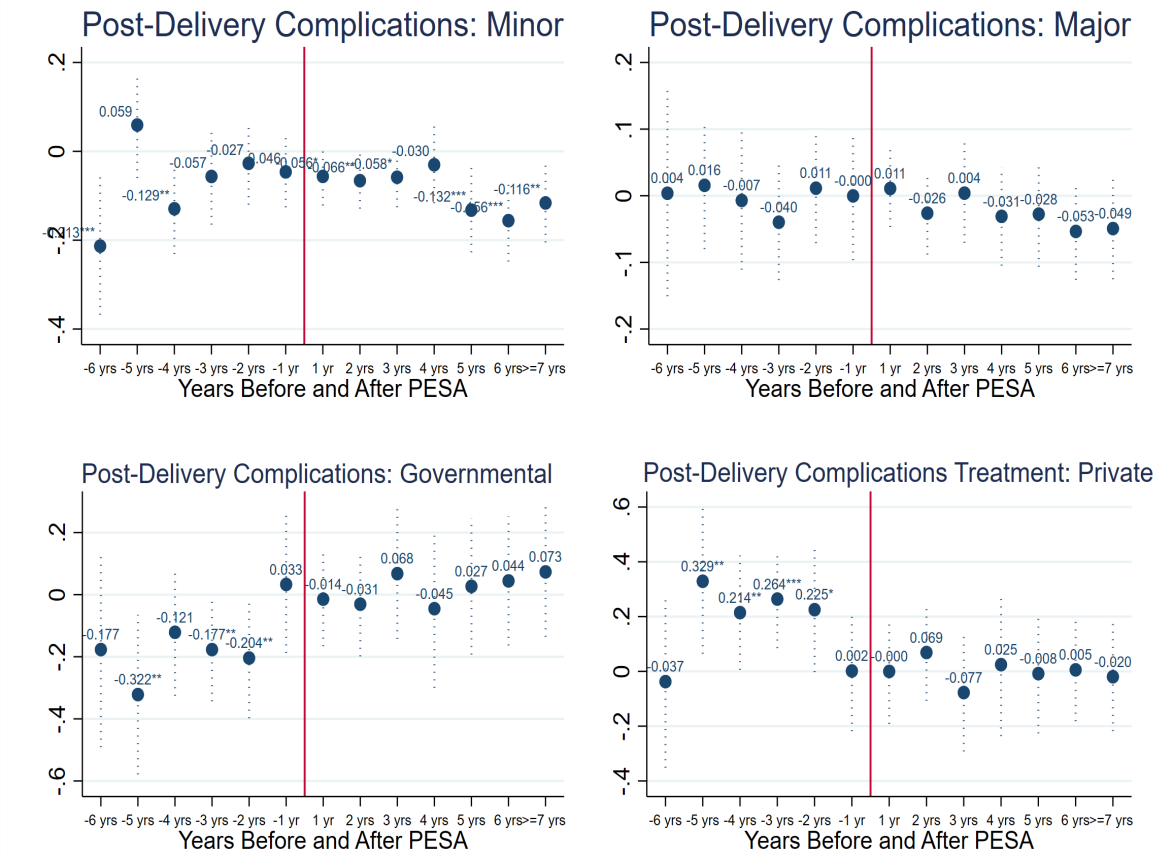

Figure 7: Impact of PESA on: (a) Facing Minor Post-Delivery Complications, (B) Facing Major Post-Delivery Complications, (c) Place for Seeking Treatment for Post-Delivery Complications: Governmental and, (d) Place for Seeking Treatment for Post-Delivery Complications: Private

Table 6: **Impact of PESA on Provision of Health Centers (Census)**

	(1)	(2)	(3)	(4)	(5)	(6)
	Hospital	**Dispensary**	**PHC**	**PHSC**	**MCW**	**FWC**
Schedule Area×Post	-0.001	0.005	0.000	0.024	-0.009	-0.004
	(0.003)	(0.007)	(0.007)	(0.022)	(0.009)	(0.006)
Village Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	705,600	705,697	707,141	712,193	705,439	707,564
R-squared	0.550	0.672	0.734	0.702	0.513	0.599
Outcome Mean	0.023	0.052	0.037	0.165	0.031	0.025

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. ***Hospital*** is a dummy variable which takes the value one if there is a hospital located in the village. ***Dispensary*** is a dummy variable which takes the value one if there is a dispensary located in the village. ***PHC*** is a dummy variable which takes the value one if there is a Primary Health Center located in the village. ***PHSC*** is a dummy variable which takes the value one if there is a Primary Health Sub Centre located in the village. ***MCW*** is a dummy variable which takes the value one if there is a Maternal and Child Welfare Center located in the village. ***FWC*** is a dummy variable which takes the value one if there is a Family Welfare Center located in the village. ***Schedule Area*** is a dummy variable that takes the value one if a district is schedule five. ***Post*** takes the value one for the years after the implementation of PESA in a given state.

Table 7: **Impact of PESA on Provision of Health Centers (DLHS)**

	(1) **ICDS**	(2) **PHC**	(3) **CHC**	(4) **GH**	(5) **GD**	(6) **PH**	(7) **PC**	(8) **AYUSH**
Schedule Area×Post	-0.022	0.035	0.035	0.056	0.040	0.067	0.028	0.096*
	(0.019)	(0.044)	(0.044)	(0.048)	(0.048)	(0.051)	(0.049)	(0.054)
District Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Round Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	11,143	11,144	11,142	11,007	11,144	11,144	11,144	11,144
R-squared	0.061	0.162	0.326	0.351	0.267	0.144	0.361	0.221
Control Mean	0.916	0.153	0.082	0.086	0.122	0.220	0.097	0.150

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. **ICDS**-Integrated Child Development Services, **PHC**- Primary Health Centre, **CHC**-Community Health Centre, **GH**- Government Hospital, **GD**- Government Dispensary, **PH**- Private Hospital, **PC**- Private Clinic. ***Schedule Area*** is a dummy variable that takes the value 1 if a district is schedule five. ***Post*** takes the value 1 for the years after the implementation of PESA in a given state. DLHS reports information on health infrastructure at the village level for only two time periods- 2003 and 2007. The Table reports the results obtained by restricting the sample of analysis to the states that had PESA implemented by 2003 to capture the intensity of treatment.

Table 8: **Reasons for Not Seeking Antenatal Care**

	(1) **Cost**	(2) **Quality**	(3) **Necessary**	(4) **Customary**	(5) **Far**	(6) **Family**	(7) **Knowledge**	(8) **Time**
Schedule Area×Post	-0.071*	0.021	0.020	-0.044*	0.002	0.024	-0.018	0.018
	(0.037)	(0.021)	(0.052)	(0.025)	(0.044)	(0.019)	(0.044)	(0.021)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7,554	7,554	7,553	7,554	7,554	7,521	7,521	7,553
R-squared	0.094	0.039	0.092	0.079	0.090	0.039	0.087	0.056
Outcome Mean	0.156	0.023	0.508	0.097	0.180	0.051	0.208	0.082

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. ***Cost*** is a dummy variable which takes the value one if a woman stated *cost too much* as a reason for not seeking ANC. ***Quality*** is a dummy variable which takes the value one if a woman stated *poor quality service* as reason for not seeking ANC. ***Necessary*** is a dummy variable which takes the value one if a woman stated ANC is *not necessary* as a reason for not seeking it. ***Customary*** is a dummy variable which takes the value one if a woman stated ANC is *not customary* as a reason for not seeking it. ***Far*** is a dummy variable that takes the value one if a woman stated ANC being *too far* or there being *no transport* as a reason for not seeking it. ***Family*** is a dummy variable which takes the value one if a woman's *family did not allow* her to seek ANC services during her pregnancy. ***Knowledge*** is a dummy variable which takes the value one if a woman states *lack of knowledge* as a reason for not seeking ANC. ***Time*** is a dummy variable which takes the value one if a woman stated *no time to go* as a reason for not seeking ANC. ***Schedule Area*** is a dummy variable that takes the value one if a district is schedule five. ***Post*** takes the value one for the years after the implementation of PESA in a given state.

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11 Appendix

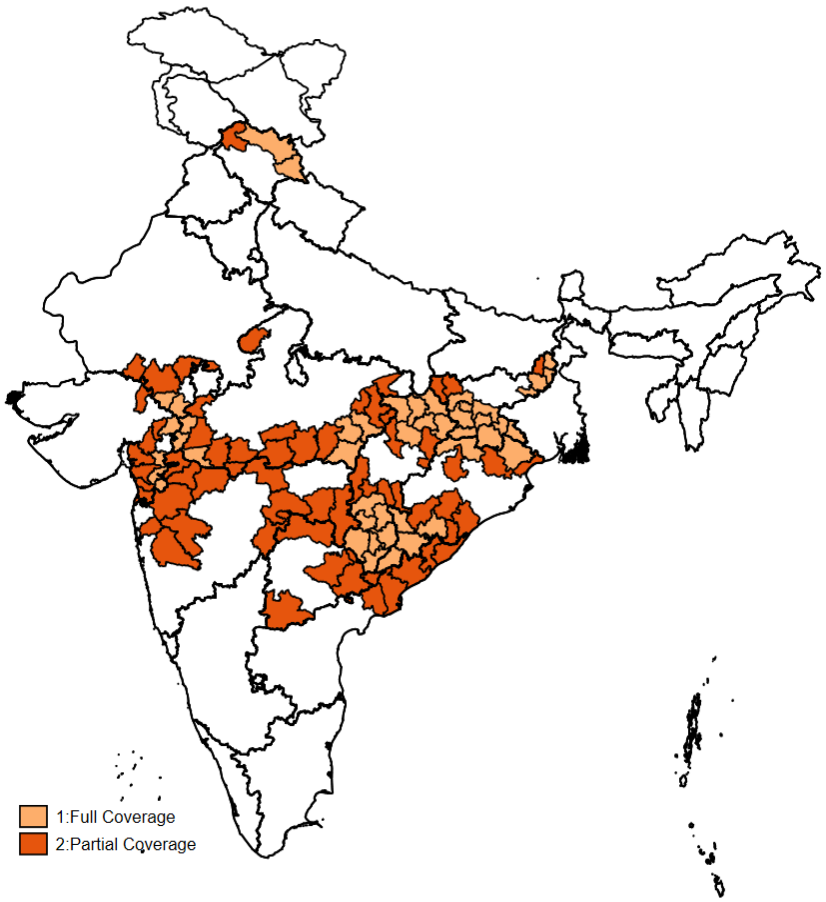

Figure A.8: Schedule Five Districts and PESA Coverage

The white in the map represents those areas with no PESA implementation.
In our analysis, we only use data for the states which have schedule areas in them.

Table A.1: **PESA Implementation across States with Schedule Five Areas**

Schedule Five State	Year of PESA Election
Himachal Pradesh	2000
Madhya Pradesh	2000
Rajasthan	2000
Andhra Pradesh	2001
Gujarat	2001
Orissa	2002
Chhattisgarh	2005
Maharashtra	2007
Jharkhand	2010

Source: Gulzar et al. (2024); Mahajan (2025)

Table A.2: **Summary Statistics: Pre-PESA Differences Across SAs and non-SAs in Health Facilities**

	(1) Non Schedule Area (non-SA)	(2) Schedule Area (SA)	(3) Difference (non-SA)-(SA)	(4) t-value
Hospital	0.02	0.02	0.01***	10.69
Dispensary	0.07	0.05	0.02***	26.14
Primary Health Center	0.03	0.04	0.01***	-2.91
Primary Health Sub Center	0.10	0.09	0.09***	10.09
Maternal and Child Welfare Center	0.01	0.02	-0.01***	-24.62
Family Welfare Center	0.03	0.02	0.01***	4.57

Source: Census (1991) data obtained from the SHRUG database.
The table reports the proportion of villages that had health facilities across Schedule Areas and Non-Schedule Areas in 1991.

Table A.3: **State Assembly Elections Timing**

State	Number of AC Elections	Election Years
Andhra Pradesh	3	1994
		1999
		2004
Chhattisgarh	1	2003
Gujarat	4	1995
		1998
		2002
		2007
Himachal Pradesh	4	1993
		1998
		2003
		2007
Madhya Pradesh	3	1993
		1998
		2003
Maharashtra	3	1995
		1999
		2004
Orissa	3	1995
		2000
		2004
Rajasthan	3	1993
		1998
		2003

Table A.4: **Robustness to Female Political Representation: Impact on Antenatal Care Utilisation**

	(1) **ANC**	(2) **ANC3M**	(3) **ANC6M**	(4) **ANC3**	(5) **ANC4**	(6) **TT**	(7) **TT2**	(8) **IFA**	(9) **IFA100**	(10) **ANCGVT**	(11) **ANCPVT**	(12) **ANCNOI**
Schedule Area×Post	0.074***	0.012	0.055**	0.041***	-0.007	0.063***	0.052**	0.034	0.012	0.069***	-0.030**	0.013
	(0.024)	(0.015)	(0.021)	(0.012)	(0.007)	(0.023)	(0.024)	(0.023)	(0.023)	(0.020)	(0.012)	(0.011)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year of Birth FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	51,147	51,147	51,147	50,565	50,565	51,147	50,678	51,147	25,669	50,820	50,820	50,820
R-squared	0.206	0.126	0.211	0.060	0.037	0.134	0.124	0.160	0.113	0.159	0.171	0.085

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. **ANC**: Received ANC- A dummy variable which takes the value one if a mother went for and received ANC during the course of her pregnancy, **ANC3M**: First ANC within 3 months- A dummy variable which takes the value one if a woman went for her first ANC visit within the first three months of her pregnancy, **ANC6M**: First ANC within 6 months- A dummy variable which takes the value one if a woman went for her first ANC visit within the first 6 months of her pregnancy, **ANC3**: 3 ANC visits- A dummy variable which takes the value one if a woman went for three ANC visits during her pregnancy, **ANC4**: 4 ANC visits- A dummy variable which takes the value one if a woman went for four ANC visits during her pregnancy, **TT**: Took tetanus toxoid (TT) vaccine- A dummy variable which takes the value one if a woman took the TT vaccine during the course of her pregnancy. **TT2**: Took 2-4 TT shots- A dummy variable which takes the value one if a woman got two to four doses of the TT vaccine during the course of her pregnancy, **IFA**: Took Iron Folic Acid (IFA)- A dummy variable which takes the value one if a woman consumed IFA (in tablet or syrup) during her pregnancy. **IFAN**: IFA tablets consumed (90 to 180)- A dummy variable which takes the value one if a woman consumed between 90 to 180 IFA tablets during pregnancy. **ANCGOVT**: ANC Governmental- A dummy variable which takes the value one if a woman went to a governmental facility for ANC. **ANCPVT**: ANC Private- A dummy variable which takes the value one if a woman went to a private facility for ANC. **ANCNOI**: ANC Non-institutional- A dummy variable which takes the value 1 if a woman received non-institutional ANC.

Table A.5: **Robustness to Female Political Representation: Impact on Delivery Care Utilisation**

	(1) **DN**	(2) **D**	(3) **U**	(4) **PUBH**	(5) **PVTH**	(6) **UNT**
Schedule Area×Post	-0.034*	-0.049	0.083***	-0.042*	0.010	0.030
	(0.018)	(0.031)	(0.030)	(0.024)	(0.008)	(0.023)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Year of Birth FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	19,176	19,176	19,176	44,386	44,386	44,386
R-squared	0.059	0.179	0.199	0.159	0.071	0.182

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. **DN**: Delivery by doctor/nurse- A dummy variable that takes the value one if the delivery is conducted by a trained doctor or nurse , **D**: Delivery by dai- A dummy variable that takes the value one if the delivery is conducted by a trained or untrained dai (midwife), **U**: Delivery by untrained person- A dummy variable that takes the value one if the delivery is conducted by an untrained personnel, **PUBH**: Delivery in a public health facility- A dummy variable that takes the value one if the delivery was conducted in a public health facility, **PVTH**: Delivery in a private health facility- A dummy variable that takes the value one if the delivery was conducted in a private health facility, **UNT**: Non-institutional delivery- A dummy variable that takes the value one if the delivery was non-institutional.

Table A.6: **Robustness to Female Political Representation: Impact on Pregnancy and Post-Delivery Complications**

	(1) **BASPC**	(2) **COMPC**	(3) **PCG**	(4) **PCP**	(5) **BASPDC**	(6) **COMPDC**	(7) **PDCG**	(8) **PDCP**
Schedule Area×Post	-0.046**	-0.063***	-0.074	0.003	-0.051**	-0.012	0.091*	-0.097
	(0.023)	(0.020)	(0.050)	(0.050)	(0.025)	(0.029)	(0.053)	(0.064)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year of Birth FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	44,955	44,955	4,100	4,100	24,042	24,043	3,247	3,247
R-squared	0.052	0.049	0.200	0.222	0.056	0.050	0.199	0.197

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. **BASPC**: Basic Pregnancy Complication- A dummy variable which takes the value one if a woman suffered from any of the following pregnancy complications- swelling of hands and feet, paleness, visual disturbances, **COMPC**: Major Pregnancy Complication- A dummy variable which takes the value one if a woman suffers from any of the following complication during pregnancy- convulsions, excessive bleeding, malpresentation of the fetus and, weak or no movement of the fetus, **PCG**: Governmental treatment of pregnancy complications- A dummy variable which takes the value one if a woman sought treatment for pregnancy complications in a governmental facility, **PCP**: Private treatment of pregnancy complications- A dummy variable which takes the value one if a woman sought treatment for pregnancy complications in a private facility, **BASPDC**: Basic post delivery complications- A dummy variable which takes the value one if a woman faced fever, pain or headache post delivery.**COMPDC**: Major post delivery complications- A dummy variable which takes the value one if a woman faced excessive bleeding, convulsions or foul smelling vaginal discharge post delivery, **PDCG**: Governmental treatment of post delivery complications- A dummy variable which takes the value one if a woman sought treatment for post delivery complications in a governmental facility, **PDCP**: Private treatment of post delivery complications- A dummy variable which takes the value one if a woman sought treatment for post delivery complications in a private facility.

Table A.7: **Robustness to Callaway & Sant'Anna (2021) Estimator: Impact of PESA on Antenatal Care Utilisation**

Panel A: Impact of PESA on Seeking ANC					
	(1)	(2)	(3)	(4)	(5)
	Received ANC	**Received ANC Within:**		**No. of ANC Visits:**	
		First 3 Months	First 6 Months	3 Visits	4 Visits
Post-Average	0.116***	0.042**	0.100***	0.030***	0.012*
	(0.031)	(0.018)	(0.028)	(0.010)	(0.007)
Pre-Average	-0.004	0.015	-0.012	-0.016	0.013*
	(0.028)	(0.017)	(0.025)	(0.013)	(0.007)
Panel B: Imapct of PESA on ANC Practices					
		(1)	(2)	(3)	(4)
		Tetanus Toxoid (TT):		**Iron Folic Acid (IFA):**	
		Taken	No. of Injections: 2-4	Taken	No. of Tabs: 90-180
Post-Average		0.105***	0.099***	0.057*	0.062**
		(0.037)	(0.027)	(0.034)	(0.025)
Pre-Average		-0.048	-0.037	-0.039	-0.031
		(0.031)	(0.025)	(0.029)	(0.022)

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. ***Received ANC*** is a dummy variable that takes the value one if a mother went for and received ANC during the course of her pregnancy. ***Received ANC Within****- First 3 Months (6 Months)* is a dummy variable that takes the value one if a woman went for her first ANC visit within the first three months (six months) of her pregnancy. ***No. of ANC Visits****- 3 Visits (4 Visits)* is a dummy variable that takes the value one if a woman went for three (four) ANC visits during her pregnancy. ***Schedule Area*** is a dummy variable that takes the value one if a district is schedule five. ***Post*** takes the value one for the years after the implementation of PESA in a given state.

Table A.8: **Robustness to Callaway & Sant'Anna (2021) Estimator: Impact of PESA on Place for Seeking Antenatal Care**

	(1)	(2)	(3)
	Place for Seeking Antenatal Care		
	Government	Private	Non-institutional
Post-Average	0.111***	-0.018**	-0.011
	(0.024)	(0.007)	(0.010)
Pre-Average	-0.034	-0.007	0.026*
	(0.022)	(0.012)	(0.014)

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. ***Place for Seeking Antenatal Care***- *Governmental* is a dummy variable that takes the value one if a woman went to a governmental facility for her ANC check up during her pregnancy. *Private* is a dummy variable which takes the value one if a woman went to a private facility for her ANC checkup during pregnancy. *Non-institutional* is a dummy variable which takes the value one if a woman had non-institutional ANC check ups during her pregnancy. ***Schedule Area*** is a dummy variable that takes the value one if a district is schedule five. ***Post*** takes the value one for the years after the implementation of PESA in a given state.

Table A.9: **Robustness to Callaway & Sant'Anna (2021) Estimator: Impact of PESA on Choice of Delivery Care**

	(1)	(2)	(3)	(4)	(5)	(6)
	Delivery Conducted by:			**Place of Delivery:**		
	Nurse/Doctor	Dai (trained and untrained)	Untrained	Governmental	Private	Non Institutional
Post-Average	0.029**	-0.085***	0.056	0.027	0.017**	-0.044**
	(0.011)	(0.031)	(0.034)	(0.016)	(0.008)	(0.017)
Pre-Average	-0.050***	0.123***	-0.073**	0.003	-0.005	0.001
	(0.012)	(0.028)	(0.030)	(0.014)	(0.008)	(0.015)

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. Column(1)- Column(3) report results using DLHS-2 and DLHS-3. DLHS-1 does not give complete information on who conducted the delivery. ***Delivery Conducted By****-Nurse/Doctor* is a dummy variable that takes the value one if the delivery is conducted by a trained doctor or nurse. *Dai* is a dummy variable that takes the value one if the delivery is conducted by a trained or untrained dai (midwife). *Untrained* is a dummy variable which takes the value one if the delivery is conducted by an untrained personnel. ***Place of Delivery****-Governmental* is a dummy variable which takes the value one if the place of delivery is a governmental facility. *Private* is a dummy variable that takes the value one if the place of delivery is a private facility. *Non Institutional* is a dummy variable which takes the value one if the delivery is non-institutional. ***Schedule Area*** is a dummy variable that takes the value one if a district is schedule five. ***Post*** takes the value one for the years after the implementation of PESA in a given state.

Table A.10: **Robustness to Callaway & Sant'Anna (2021) Estimator: Impact of PESA on Pregnancy Complications**

	(1)	(2)	(3)	(4)
	Pregnancy Complications:		**Place for Treating Pregnancy Complications:**	
	Minor	Major	Governmental	Private
Post-Average	-0.040	-0.052**	0.093	-0.176**
	(0.024)	(0.021)	(0.086)	(0.069)
Pre-Average	0.049***	0.012	-0.050	-0.014
	(0.018)	(0.015)	(0.060)	(0.047)

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. Information on the age of the child at death is reported clearly for DLHS-2 and DLHS-3. The variable on whether the child died (column (2) and column (3)) is constructed using these two rounds of DLHS. ***Pregnancy Complications***- *Minor* is a dummy variable which takes the value one if a woman suffered from any of the following pregnancy complications- swelling of hands and feet, paleness, visual disturbances. *Major* is a dummy variable which takes the value one if a woman suffers from any of the following complication during pregnancy- convulsions, excessive bleeding, malpresentation of the fetus and, weak or no movement of the fetus. ***Place for Treating Pregnancy Complications***- *Governmental* is a dummy variable which takes the value one if a woman sought treatment for pregnancy complications in a governmental facility. *Private* is a dummy variable which takes the value one if a woman sought treatment for pregnancy complications in a private facility. ***Schedule Area*** is a dummy variable that takes the value one if a district is schedule five. ***Post*** takes the value one for the years after the implementation of PESA in a given state.

Table A.11: **Robustness to Callaway & Sant'Anna (2021) Estimator: Impact of PESA on Post-Delivery Complications**

	(1)	(2)	(3)	(4)
	Post Delivery Complications:		**Place for Treating Post Delivery Complications:**	
	Minor	Major	Governmental	Private
Post-Average	-0.031	-0.015	0.042	-0.055
	(0.024)	(0.018)	(0.072)	(0.072)
Pre-Average	0.024	-0.047**	-0.055	0.089
	(0.022)	(0.019)	(0.058)	(0.071)

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. Column(1) and Column (2) report results using DLHS-2 and DLHS-3. DLHS-2 and DLHS-3 report information on post delivery complications that women faced in the 6 weeks following the delivery. While DLHS-1 collected some information on post delivery complications, this information is collected for the first week following delivery. Column (3) and Column (4) report results using information from DLHS-2 and DLHS-3. DLHS-1 did not collect information on the place for treating post pregnancy complications and no information is therefore available on this for the initial years which correspond to the first round. ***Post Delivery Complications*** - *Minor*is a dummy variable which takes the value one if a woman faced fever, pain or headache post delivery. *Major* is a dummy variable which takes the value one if a woman faced excessive bleeding, convulsions or foul smelling vaginal discharge post delivery. ***Place for Treating Post Delivery Complications***- *Governmental* is a dummy variable which takes the value one if a woman sought treatment for post delivery complications in a governmental facility. *Private* is a dummy variable which takes the value one if a woman sought treatment for post delivery complications in a private facility. ***Schedule Area*** is a dummy variable that takes the value one if a district is schedule five. ***Post*** takes the value one for the years after the implementation of PESA in a given state.

Table A.12: **Robustness: Impact of PESA on Seeking Antenatal Care**

	(1)	(2)	(3)	(4)	(5)
	Received ANC	**Received ANC Within:**		**No. of ANC Visits:**	
		First 3 Months	First 6 Months	3 Visits	4 Visits
Panel A: Gardner's Two Stage DiD					
Schedule Area×Post	0.097***	0.021	0.082***	0.049***	0.000
	(0.030)	(0.017)	(0.027)	(0.013)	(0.008)
Controls	Yes	Yes	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	51,147	51,147	51,147	50,565	50,565
Panel B: State-Birth Year Fixed Effects					
Schedule Area×Post	0.051*	0.004	0.042*	0.031**	-0.014**
	(0.026)	(0.016)	(0.023)	(0.012)	(0.007)
Controls	Yes	Yes	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes	Yes	Yes	Yes
State×Year of Birth Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	51,147	51,147	51,147	50,565	50,565
R-squared	0.214	0.130	0.219	0.066	0.040

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. ***Received ANC*** is a dummy variable that takes the value one if a mother received ANC during the course of her pregnancy. ***Received ANC Within****- First 3 Months (6 Months)* is a dummy variable that takes the value one if a woman went for her first ANC visit within the first three months (six months) of her pregnancy. ***No. of ANC Visits****- 3 Visits (4 Visits)* is a dummy variable that takes the value one if a woman went for three (four) ANC visits during her pregnancy. ***Schedule Area*** is a dummy variable that takes the value one if a district is schedule five. ***Post*** takes the value one for the years after the implementation of PESA in a given state.

Table A.13: **Robustness: Impact of PESA on Antenatal Practices**

	(1)	(2)	(3)	(4)
	Tetanus Toxoid (TT)		**Iron Folic Acid (IFA)**	
	Taken	No. of Injections: 2	Taken	Number of Tabs: 90-180
Panel A: Gardner's Two Stage DiD				
Schedule Area×Post	0.073**	0.046	0.060**	0.056**
	(0.035)	(0.030)	(0.030)	(0.025)
Controls	Yes	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes	Yes	Yes
Observations	51,147	50,678	51,147	25,674
Panel B: State-Birth Year Fixed Effects				
Schedule Area×Post	0.040*	0.034	0.020	-0.011
	(0.023)	(0.025)	(0.022)	(0.021)
Controls	Yes	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes	Yes	Yes
State×Year of Birth Fixed Effects	Yes	Yes	Yes	Yes
Observations	51,147	50,678	51,147	25,669
R-squared	0.142	0.130	0.168	0.125

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. ***Tetanus Toxoid (TT)-Taken*** is a dummy variable that takes the value one if a woman took the TT vaccine during the course of her pregnancy. *No. of Injections: 2* is a dummy variable that takes the value one if a woman got two doses of the TT vaccine during her pregnancy. ***Iron Folic Acid (IFA)-Taken*** is a dummy variable that takes the value one if a woman consumed IFA (in tablet forms or in syrup) during her pregnancy. *No. of Tabs: 90-120* is a dummy variable which takes the value one if a woman consumed 90 to 120 IFA tablets during her pregnancy. ***Schedule Area*** is a dummy variable that takes the value one if a district is schedule five. ***Post*** takes the value one for the years after the implementation of PESA in a given state.

Table A.14: **Robustness: Impact of PESA on Place for Seeking Antenatal Care**

	(1)	(2)	(3)
	Place for Seeking Antenatal Care		
	Governmental	Private	Non-institutional
Panel A: Gardner's Two Stage DiD			
Schedule Area×Post	0.074***	-0.028**	0.027*
	(0.025)	(0.012)	(0.015)
Controls	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes	Yes
Observations	50,820	50,820	50,820
Panel B: State-Birth Year Fixed Effects			
Schedule Area×Post	0.052**	-0.024**	0.006
	(0.020)	(0.011)	(0.011)
Controls	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes	Yes
State×Year of Birth Fixed Effects	Yes	Yes	Yes
Observations	50,820	50,820	50,820
R-squared	0.168	0.179	0.104

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. ***Place for Seeking Antenatal Care***- *Governmental* is a dummy variable that takes the value one if a woman went to a governmental facility for her ANC check up during her pregnancy. *Private* is a dummy variable which takes the value one if a woman went to a private facility for her ANC checkup during pregnancy. *Non-institutional* is a dummy variable which takes the value one if a woman had non-institutional ANC check ups during her pregnancy. ***Schedule Area*** is a dummy variable that takes the value one if a district is schedule five. ***Post*** takes the value one for the years after the implementation of PESA in a given state.

Table A.15: **Robustness: Impact of PESA on Choice of Delivery Care**

	(1)	(2)	(3)	(4)	(5)	(6)
	Delivery Conducted by:			**Place of Delivery:**		
	Nurse/Doctor	Dai (trained and untrained)	Untrained	Governmental	Private	Non Institutional
Panel A: Gardner's Two Stage DiD						
Schedule Area×Post	-0.072**	-0.099	0.171**	-0.069***	0.056	0.011
	(0.033)	(0.070)	(0.079)	(0.025)	(0.042)	(0.043)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	19,182	19,182	19,182	44,386	44,386	44,386
Panel B: State-Birth Year Fixed Effects						
Schedule Area×Post	-0.038**	-0.030	0.068**	0.007	0.005	-0.012
	(0.018)	(0.030)	(0.028)	(0.018)	(0.006)	(0.020)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
State×Year of Birth Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	19,176	19,176	19,176	44,386	44,386	44,386
R-squared	0.064	0.184	0.203	0.173	0.079	0.194

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. Column(1)- Column(3) report results using DLHS-2 and DLHS-3. DLHS-1 does not give complete information on who conducted the delivery. ***Delivery Conducted By****-Nurse/Doctor* is a dummy variable that takes the value one if the delivery is conducted by a trained doctor or nurse. *Dai* is a dummy variable that takes the value one if the delivery is conducted by a trained or untrained dai (midwife). *Untrained* is a dummy variable which takes the value one if the delivery is conducted by an untrained personnel. ***Place of Delivery****-Governmental* is a dummy variable which takes the value one if the place of delivery is a governmental facility. *Private* is a dummy variable that takes the value one if the place of delivery is a private facility. *Non Institutional* is a dummy variable which takes the value one if the delivery is non-institutional. ***Schedule Area*** is a dummy variable that takes the value one if a district is schedule five. ***Post*** takes the value one for the years after the implementation of PESA in a given state.

Table A.16: **Robustness: Impact of PESA on Pregnancy Complications**

	(1)	(2)	(3)	(4)
	Pregnancy Complications:		**Place for Treating Post Delivery Complications:**	
	Minor	Major	Governmental	Private
Panel A: Gardner's Two Stage Did				
Schedule Area×Post	-0.046	-0.063***	0.079	-0.126
	(0.042)	(0.021)	(0.110)	(0.106)
District Fixed Effects	Yes	Yes	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes	Yes	Yes
Observations	44,955	44,955	4,118	4,118
Panel B: State-Birth Year Fixed Effects				
Schedule Area×Post	-0.037	-0.060***	-0.086*	0.008
	(0.024)	(0.020)	(0.046)	(0.045)
Controls	Yes	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes	Yes	Yes
State×Year of Birth Fixed Effects	Yes	Yes	Yes	Yes
Observations	44,955	44,955	4,100	4,100
R-squared	0.056	0.053	0.216	0.237

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. Column (3) and Column (4) report results using information from DLHS-2 and DLHS-3. DLHS-1 did not collect information on the place for treating pregnancy complications and no information is therefore available on this for the initial years which correspond to the first round. ***Pregnancy Complications-Minor*** is a dummy variable which takes the value one if a woman suffered from any of the following pregnancy complications- swelling of hands and feet, paleness, visual disturbances. *Major* is a dummy variable which takes the value one if a woman suffers from any of the following complication during pregnancy- convulsions, excessive bleeding, malpresentation of the fetus and, weak or no movement of the fetus. ***Place for Treating Pregnancy Complications-Governmental*** is a dummy variable which takes the value one if a woman sought treatment for pregnancy complications in a governmental facility. *Private* is a dummy variable which takes the value one if a woman sought treatment for pregnancy complications in a private facility. ***Schedule Area*** is a dummy variable that takes the value one if a district is schedule five. ***Post*** takes the value one for the years after the implementation of PESA in a given state.

Table A.17: **Robustness: Impact of PESA on Post Delivery Complications**

	(1)	(2)	(3)	(4)
	Post Delivery Complications:		**Place for Treating Post Delivery Complications:**	
	Minor	Major	Governmental	Private
Panel A: Gardner's Two Stage Did				
Schedule Area×Post	-0.139**	-0.033	-0.065	0.093
	(0.055)	(0.033)	(0.084)	(0.083)
District Fixed Effects	Yes	Yes	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes	Yes	Yes
Observations	24,047	24,048	3,267	3,267
Panel B: State-Birth Year Fixed Effects				
Schedule Area×Post	-0.043*	-0.008	0.096*	-0.094
	(0.025)	(0.027)	(0.051)	(0.062)
Controls	Yes	Yes	Yes	Yes
District Fixed Effects	Yes	Yes	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes	Yes	Yes
State×Year of Birth Fixed Effects	Yes	Yes	Yes	Yes
Observations	24,042	24,043	3,244	3,244
R-squared	0.061	0.058	0.216	0.210

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. Column(1) and Column (2) report results using DLHS-2 and DLHS-3. DLHS-2 and DLHS-3 report information on post delivery complications that women faced in the 6 weeks following the delivery. While DLHS-1 collected some information on post delivery complications, this information is collected for the first week following delivery. Column (3) and Column (4) report results using information from DLHS-2 and DLHS-3. DLHS-1 did not collect information on the place for treating post pregnancy complications and no information is therefore available on this for the initial years which correspond to the first round. ***Post Delivery Complications*** - *Minor*is a dummy variable which takes the value one if a woman faced fever, pain or headache post delivery. *Major* is a dummy variable which takes the value one if a woman faced excessive bleeding, convulsions or foul smelling vaginal discharge post delivery. ***Place for Treating Post Delivery Complications***- *Governmental* is a dummy variable which takes the value one if a woman sought treatment for post delivery complications in a governmental facility. *Private* is a dummy variable which takes the value one if a woman sought treatment for post delivery complications in a private facility. ***Schedule Area*** is a dummy variable that takes the value one if a district is schedule five. ***Post*** takes the value one for the years after the implementation of PESA in a given state.

Table A.18: **Anticipation Effects**

	(1)	(2)
	Child Born in Year 't'	
	Last Birth Reported for the Mother	All Births Reported for the Mother
Schedule Area×PESA Implemented in Year 't-1'	-0.033	-0.032
	(0.027)	(0.021)
Controls	Yes	Yes
District Fixed Effects	Yes	Yes
Year of Birth Fixed Effects	Yes	Yes
Observations	51,147	83,473
R-squared	0.858	0.848

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. ***Schedule Area*** is a dummy variable that takes the value 1 if a district is schedule five. Column (1) reports the results using information on the latest birth of the mother. Column (2) reports the results using information on timing of all births of the mother, including the latest birth.

Table A.19: **Impact of PESA on Antenatal Care Utilisation with District Level Controls**

	(1) **ANC**	(2) **ANC3M**	(3) **ANC6M**	(4) **ANC3**	(5) **ANC4**	(6) **TT**	(7) **TT2**	(8) **IFA**	(9) **IFA100**	(10) **ANCGVT**	(11) **ANCPVT**	(12) **ANCNOI**
Schedule Area×Post	0.047*	-0.002	0.038+	0.033**	-0.010	0.046+	0.032	0.021	0.016	0.057**	-0.031**	0.002
	(0.027)	(0.016)	(0.024)	(0.013)	(0.008)	(0.029)	(0.027)	(0.028)	(0.023)	(0.023)	(0.013)	(0.011)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year of Birth FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	46,864	46,864	46,864	46,304	46,304	46,864	46,407	46,864	24,323	46,551	46,551	46,551
R-squared	0.211	0.130	0.219	0.063	0.039	0.134	0.125	0.164	0.120	0.165	0.178	0.090

*, **, *** and + represent significance at .10, .05, .01, and .15 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. **ANC**: Received ANC- A dummy variable which takes the value one if a mother went for and received ANC during the course of her pregnancy, **ANC3M**: First ANC within 3 months- A dummy variable which takes the value one if a woman went for her first ANC visit within the first three months of her pregnancy, **ANC6M**: First ANC within 6 months- A dummy variable which takes the value one if a woman went for her first ANC visit within the first 6 months of her pregnancy, **ANC3**: 3 ANC visits- A dummy variable which takes the value one if a woman went for three ANC visits during her pregnancy, **ANC4**: 4 ANC visits- A dummy variable which takes the value one if a woman went for four ANC visits during her pregnancy, **TT**: Took tetanus toxoid (TT) vaccine- A dummy variable which takes the value one if a woman took the TT vaccine during the course of her pregnancy. **TT2**: Took 2-4 TT shots- A dummy variable which takes the value one if a woman got two to four doses of the TT vaccine during the course of her pregnancy, **IFA**: Took Iron Folic Acid (IFA)- A dummy variable which takes the value one if a woman consumed IFA (in tablet or syrup) during her pregnancy. **IFAN**: IFA tablets consumed (90 to 180)- A dummy variable which takes the value one if a woman consumed between 90 to 180 IFA tablets during pregnancy. **ANCGOVT**: ANC Governmental- A dummy variable which takes the value one if a woman went to a governmental facility for ANC. **ANCPVT**: ANC Private- A dummy variable which takes the value one if a woman went to a private facility for ANC. **ANCNOI**: ANC Non-institutional- A dummy variable which takes the value 1 if a woman received non-institutional ANC.

Table A.20: **Impact of PESA on Delivery Care Utilisation with District Level Controls**

	(1) **DN**	(2) **D**	(3) **U**	(4) **PUBH**	(5) **PVTH**	(6) **UNT**
Schedule Area×Post	-0.029+	-0.047+	0.076**	-0.015	0.006	0.009
	(0.019)	(0.032)	(0.030)	(0.024)	(0.008)	(0.023)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
District Controls	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Year of Birth FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	18,602	18,602	18,602	41,201	41,201	41,201
R-squared	0.061	0.179	0.201	0.162	0.075	0.185

*, **, *** and + represent significance at .10, .05, .01, and .15 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. **DN**: Delivery by doctor/nurse- A dummy variable that takes the value one if the delivery is conducted by a trained doctor or nurse , **D**: Delivery by dai- A dummy variable that takes the value one if the delivery is conducted by a trained or untrained dai (midwife), **U**: Delivery by untrained person- A dummy variable that takes the value one if the delivery is conducted by an untrained personnel, **PUBH**: Delivery in a public health facility- A dummy variable that takes the value one if the delivery was conducted in a public health facility, **PVTH**: Delivery in a private health facility- A dummy variable that takes the value one if the delivery was conducted in a private health facility, **UNT**: Non-institutional delivery- A dummy variable that takes the value one if the delivery was non-institutional.

Table A.21: **Impact of PESA on Pregnancy and Post-Delivery Complication with District Level Controls**

	(1) **BASPC**	(2) **COMPC**	(3) **PCG**	(4) **PCP**	(5) **BASPDC**	(6) **COMPDC**	(7) **PDCG**	(8) **PDCP**
Schedule Area×Post	-0.034	-0.049**	-0.072+	0.002	-0.048*	-0.015	0.101*	-0.096+
	(0.025)	(0.022)	(0.049)	(0.051)	(0.027)	(0.031)	(0.052)	(0.065)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year of Birth FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	41,767	41,767	4,052	4,052	23,410	23,411	3,194	3,194
R-squared	0.050	0.051	0.204	0.224	0.057	0.051	0.202	0.198

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. **BASPC**: Basic Pregnancy Complication- A dummy variable which takes the value one if a woman suffered from any of the following pregnancy complications- swelling of hands and feet, paleness, visual disturbances, **COMPC**: Major Pregnancy Complication- A dummy variable which takes the value one if a woman suffers from any of the following complication during pregnancy- convulsions, excessive bleeding, malpresentation of the fetus and, weak or no movement of the fetus, **PCG**: Governmental treatment of pregnancy complications- A dummy variable which takes the value one if a woman sought treatment for pregnancy complications in a governmental facility, **PCP**: Private treatment of pregnancy complications- A dummy variable which takes the value one if a woman sought treatment for pregnancy complications in a private facility, **BASPDC**: Basic post delivery complications- A dummy variable which takes the value one if a woman faced fever, pain or headache post delivery.**COMPDC**: Major post delivery complications- A dummy variable which takes the value one if a woman faced excessive bleeding, convulsions or foul smelling vaginal discharge post delivery, **PDCG**: Governmental treatment of post delivery complications- A dummy variable which takes the value one if a woman sought treatment for post delivery complications in a governmental facility, **PDCP**: Private treatment of post delivery complications- A dummy variable which takes the value one if a woman sought treatment for post delivery complications in a private facility.

Table A.22: **Impact of PESA on Antenatal Care Utilisation**

	(1) **ANC**	(2) **ANC3M**	(3) **ANC6M**	(4) **ANC3**	(5) **ANC4**	(6) **TT**	(7) **TT2**	(8) **IFA**	(9) **IFA100**	(10) **ANCGVT**	(11) **ANCPVT**	(12) **ANCNOI**
Sch-5 Sub-Districts×Post	0.074***	0.003	0.059**	0.046***	0.001	0.075***	0.057**	0.039+	0.055*	0.081***	-0.039***	0.002
	(0.027)	(0.017)	(0.025)	(0.013)	(0.008)	(0.028)	(0.027)	(0.027)	(0.029)	(0.023)	(0.014)	(0.013)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year of Birth FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	51,147	51,147	51,147	50,565	50,565	51,147	50,678	51,147	25,669	50,820	50,820	50,820
R-squared	0.205	0.126	0.211	0.060	0.037	0.134	0.124	0.160	0.113	0.159	0.171	0.085

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. **ANC**: Received ANC- A dummy variable which takes the value one if a mother went for and received ANC during the course of her pregnancy, **ANC3M**: First ANC within 3 months- A dummy variable which takes the value one if a woman went for her first ANC visit within the first three months of her pregnancy, **ANC6M**: First ANC within 6 months- A dummy variable which takes the value one if a woman went for her first ANC visit within the first 6 months of her pregnancy, **ANC3**: 3 ANC visits- A dummy variable which takes the value one if a woman went for three ANC visits during her pregnancy, **ANC4**: 4 ANC visits- A dummy variable which takes the value one if a woman went for four ANC visits during her pregnancy, **TT**: Took tetanus toxoid (TT) vaccine- A dummy variable which takes the value one if a woman took the TT vaccine during the course of her pregnancy. **TT2**: Took 2-4 TT shots- A dummy variable which takes the value one if a woman got two to four doses of the TT vaccine during the course of her pregnancy, **IFA**: Took Iron Folic Acid (IFA)- A dummy variable which takes the value one if a woman consumed IFA (in tablet or syrup) during her pregnancy. **IFAN**: IFA tablets consumed (90 to 180)- A dummy variable which takes the value one if a woman consumed between 90 to 180 IFA tablets during pregnancy. **ANCGOVT**: ANC Governmental- A dummy variable which takes the value one if a woman went to a governmental facility for ANC. **ANCPVT**: ANC Private- A dummy variable which takes the value one if a woman went to a private facility for ANC. **ANCNOI**: ANC Non-institutional- A dummy variable which takes the value 1 if a woman received non-institutional ANC. **Sch-5 Sub-Districts** is the proportion of sub-districts within a district that falls under the fifth schedule of the constitution. Mean of this variable is 0.42.

Table A.23: **Impact of PESA on Delivery Care Utilisation**

	(1) **DN**	(2) **D**	(3) **U**	(4) **PUBH**	(5) **PVTH**	(6) **UNT**
Sch-5 Sub-Districts×Post	-0.020	-0.064*	0.084**	-0.059*	0.017**	0.040
	(0.017)	(0.037)	(0.037)	(0.032)	(0.008)	(0.028)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Year of Birth FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	19,176	19,176	19,176	44,386	44,386	44,386
R-squared	0.059	0.179	0.199	0.159	0.071	0.182

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. **DN**: Delivery by doctor/nurse- A dummy variable that takes the value one if the delivery is conducted by a trained doctor or nurse , **D**: Delivery by dai- A dummy variable that takes the value one if the delivery is conducted by a trained or untrained dai (midwife), **U**: Delivery by untrained person- A dummy variable that takes the value one if the delivery is conducted by an untrained personnel, **PUBH**: Delivery in a public health facility- A dummy variable that takes the value one if the delivery was conducted in a public health facility, **PVTH**: Delivery in a private health facility- A dummy variable that takes the value one if the delivery was conducted in a private health facility, **UNT**: Non-institutional delivery- A dummy variable that takes the value one if the delivery was non-institutional. **Sch-5 Sub-Districts** is the proportion of sub-districts within a district that falls under the fifth schedule of the constitution. Mean of this variable is 0.42.

Table A.24: **Impact of PESA on Pregnancy and Post-Delivery Complication**

	(1) **BASPC**	(2) **COMPC**	(3) **PCG**	(4) **PCP**	(5) **BASPDC**	(6) **COMPDC**	(7) **PDCG**	(8) **PDCP**
Sch-5 Sub-Districts×Post	-0.056*	-0.049**	-0.001	-0.062	-0.050*	-0.012	0.068	-0.102
	(0.029)	(0.024)	(0.061)	(0.056)	(0.028)	(0.034)	(0.065)	(0.072)
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year of Birth FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	44,955	44,955	4,100	4,100	24,042	24,043	3,247	3,247
R-squared	0.050	0.047	0.199	0.222	0.056	0.050	0.197	0.196

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level. **BASPC**: Basic Pregnancy Complication- A dummy variable which takes the value one if a woman suffered from any of the following pregnancy complications- swelling of hands and feet, paleness, visual disturbances, **COMPC**: Major Pregnancy Complication- A dummy variable which takes the value one if a woman suffers from any of the following complication during pregnancy- convulsions, excessive bleeding, malpresentation of the fetus and, weak or no movement of the fetus, **PCG**: Governmental treatment of pregnancy complications- A dummy variable which takes the value one if a woman sought treatment for pregnancy complications in a governmental facility, **PCP**: Private treatment of pregnancy complications- A dummy variable which takes the value one if a woman sought treatment for pregnancy complications in a private facility, **BASPDC**: Basic post delivery complications- A dummy variable which takes the value one if a woman faced fever, pain or headache post delivery.**COMPDC**: Major post delivery complications- A dummy variable which takes the value one if a woman faced excessive bleeding, convulsions or foul smelling vaginal discharge post delivery, **PDCG**: Governmental treatment of post delivery complications- A dummy variable which takes the value one if a woman sought treatment for post delivery complications in a governmental facility, **PDCP**: Private treatment of post delivery complications- A dummy variable which takes the value one if a woman sought treatment for post delivery complications in a private facility. **Sch-5 Sub-Districts** is the proportion of sub-districts within a district that falls under the fifth schedule of the constitution. Mean of this variable is 0.42.

Table A.25: **Impact of PESA on Working of the Village Health Committee (VHC)**

	(1)	(2)	(3)
	Awareness Programmes Conducted by VHC (No.)		
Schedule Area×Post	0.432**	0.405***	0.423***
	(0.178)	(0.125)	(0.147)
Village Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
State- Year Time Trend	No	Yes	No
State- Year Fixed Effects	No	No	Yes
Observations	1,061	1,061	1,054
R-squared	0.527	0.570	0.609
Outcome Mean	0.963	0.963	0.963

*, ** and *** represent significance at .10, .05 and .01 level respectively. Robust standard errors are reported in parentheses and are clustered at the district level.