From Reservation to Transformation: The Socioeconomic Impact of Political Quotas

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Abstract

This study examines the impact of political quotas for Scheduled Castes (SCs) on key socio-economic outcomes in India, using the 2008 delimitation exercise as a natural experiment. We analyze how SC reservations affect education, entrepreneurship, and economic development at the village level. Our findings reveal that political quotas lead to a substantial increase in SC student enrollment, particularly in prestigious schools, and stimulate entrepreneurial activity within SC communities, marked by both a rise in the number and size of SC-owned firms. Additionally, quotas facilitate SCs' entry into higher-status occupations, helping to break down long-standing caste-based occupational barriers. We also observe improvements in village-level infrastructure, including road construction, electrification, and economic activity, as measured by nighttime light intensity. Importantly, these gains persist even when villages lose reserved status, suggesting a lasting positive effect of the reservation policy. This study adds to the global debate on the effectiveness of affirmative action, showing that, when well-implemented and complemented by other initiatives, political quotas can drive meaningful social and economic mobility. Furthermore, with India's next delimitation scheduled after 2026, this research offers critical insights for future policy adjustments, with implications for other countries grappling with similar challenges of inequality and social stratification.

JEL codes: D72, F5, P16, P48
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It is not enough to be electors only. It is necessary to be law-makers; otherwise, those who can be law-makers will be the masters of those who can only be electors.

- **Dr. Bhim Rao Ambedkar**, Writings and Speeches, Volume 1 (Page 251)

1 Introduction

Caste-based disparities in India remain pronounced across several socioeconomic indicators, highlighting systemic inequalities that persist despite legislative protections and affirmative action policies. According to the 2011 Census of India, the literacy rate among Scheduled Castes (SCs) stands at 66%, compared to 74% among upper castes—a notable gap of 8%. This disparity in educational attainment extends to other critical outcomes, including health and employment. In 2016, life expectancy at birth for SC women was 4.4 years lower than for women from higher castes, while for SC men, it was 6.1 years lower compared to their high-caste counterparts. These differences in life expectancy underscore the health inequalities that continue to affect marginalized communities.

Labour market disparities are similarly stark. The Government of India's Labour Force Participation Survey (2021-22) reports that only 20% of SC workers hold regular salaried positions, compared to 30% among upper-caste individuals. In contrast, 38% of SCs are employed as casual labourers, while this share is only 11% among upper castes, illustrating limited access to stable, higher-quality employment for the SC population. Income inequality further compounds these differences: according to the 2018 World Inequality Database, the average household income for Brahmins and other upper-caste groups is 47% above the national average, whereas it is 21% below the national average for SC households. The entrenched barriers to economic and social mobility in the corporate sector are even starker. Ajit, Donker and Saxena (2012) indicates that among the boards of the top 1,000 publicly listed firms in India, 92.7% of members belong to upper castes, while only 3.5% are from Scheduled Castes and Scheduled Tribes—a stark contrast given that these groups constitute 25.2% of India's population, according to the 2011 Census. Such disparities in corporate representation reflect deeper systemic exclusion that limits economic opportunities and reinforces caste-based hierarchies across multiple spheres of Indian society.

While caste-based inequality is often associated with South Asia, particularly India, similar forms of social stratification and discrimination based on descent, ethnicity, or inherited status are pervasive globally. Across various societies, marginalized groups experience systemic barriers to education, health, and employment opportunities, resulting in significant disparities in socioeconomic outcomes. In countries like the United States and Brazil, racial and ethnic minorities experience structural disadvantages that manifest in income inequality, reduced life expectancy, and limited rep-

resentation in leadership roles across public and private sectors. These shared experiences highlight the broader, global dimensions of social stratification, underscoring that systemic barriers based on identity remain a significant challenge in developed and developing nations.

The recent affirmative action ban in the United States and the Indian National Congress's (INC) (main opposition party in India) push for 'Jiski jitni sankhya bhari, uski utni bhagidari" (Bigger the number in population, bigger the share in politics and economy) highlight contrasting approaches to representation and equity in diverse societies. The U.S. Supreme Court's decision to ban race-based affirmative action in college admissions has sparked debate over the economic implications of dismantling policies aimed at levelling the playing field for historically marginalized groups.

In India, the demand for expansion of political quotas based on population proportions, particularly for Other Backward Classes (OBCs), signals a push to correct historical imbalances through democratic representation. While the social justice angle strongly justifies political quotas in the Indian context, their economic implications are equally significant. By expanding political representation, quotas can open access to resources, jobs, and decision-making processes for historically marginalized communities, fostering more equitable distribution of public goods and services. This increased access aims to reduce economic disparities and mobilize a more inclusive workforce, potentially enhancing productivity and economic stability. Thus, policies of mandated representation are not merely about equality—they hold substantial economic implications, with broader access to opportunities enhancing a society's economic resilience and potential.

This paper explores caste-based inequality in India and contributes to a broader understanding of how similar systems of social exclusion operate worldwide, reinforcing the need for inclusive policies that address these entrenched disparities across different contexts. In India, the policy of political reservation, specifically for Scheduled Castes (SC), offers a unique institutional response to this challenge. Political quotas reserve legislative seats for these historically marginalized groups, ensuring their representation within India's democratic system. This system of quotas, codified in the Indian Constitution, operates across federal, state, and local governance levels, aiming to address centuries of social exclusion and economic inequality.

This paper primarily contributes to the literature examining the impact of political quotas. Traditional voting models typically assume that politicians are vote-seeking and motivated by career incentives, such as re-election, either for themselves or their political parties (Downs, 1957; Arrow, 1963; Cox, McCubbins et al., 2005). Alternatively, some models posit that politicians act in the interest of their ethnic groups

or as "citizen-candidates," running for election to implement their favoured policies (Horowitz, 2000; Osborne and Slivinski, 1996; Besley and Coate, 1997). Empirical studies exploring the socioeconomic effects of quotas for minorities in India present mixed results. For instance, (Pande, 2003), using a state-level panel dataset, finds that political reservation in Indian states has led to increased resource redistribution for Scheduled Tribes (STs) but no significant effect for Scheduled Castes (SCs). Similarly, (Chin and Prakash, 2011), analyzing data from sixteen major Indian states over the period 1960-2000, shows that increasing the share of seats reserved for STs significantly reduces poverty, whereas increasing the percentage of seats reserved for SCs has no discernible impact on poverty. (Jensenius, 2015) argues that 30 years of quotas did not affect overall development or the redistribution of resources to SCs. (Kaletski and Prakash, 2016) finds that reservation for SCs has increased the number of children working within households. Meanwhile, (Girard, 2018) reports that electoral quotas for SCs reduce caste-based discrimination, though this effect is temporary; once the political quotas end, the discrimination reappears.

A considerable body of literature examines the impact of political and gender-based quotas at the local level of government. (Chattopadhyay and Duflo, 2004) studies 265 Village Councils in West Bengal and Rajasthan, comparing the types of public goods provided in reserved and unreserved councils. The study finds that leaders in reserved councils tend to invest more in infrastructure that directly addresses the needs of their respective genders. At the state legislative assembly level, (Gulzar, Haas and Pasquale, 2020) shows that quotas for Scheduled Tribes (ST) lead to increased participation in NREGA (National Rural Employment Guarantee Act) work specifically for ST communities.

Although often grouped together, the political contexts of Scheduled Castes (SC) and Scheduled Tribes (ST) differ significantly for two main reasons: (1) India follows a first-past-the-post electoral system, which places considerable importance on the demographic composition of constituencies in determining election outcomes, and (2) the ST population is concentrated in specific geographic regions, while the SC population is more dispersed across the country[1] An analysis of the legislative assembly constituencies across 20 Indian states and 2 Union Territories[2] reveals that out of 3,514

[1]There are no Indian states or Union Territories with a Scheduled Caste (SC) population exceeding 50%, as SCs are typically spread across states with smaller percentages. In contrast, some states and Union Territories have a significantly higher percentage of Scheduled Tribe (ST) populations, with a few surpassing 50%. Based on the 2011 Census, these include Arunachal Pradesh (68.8%), Meghalaya (86.1%), Mizoram (94.4%), Nagaland (86.5%), and Lakshadweep (94.8%). The state with the highest SC population share is Punjab at 31.9%.

[2]States and UT are: West Bengal, Uttar Pradesh, Punjab, Himachal Pradesh, Delhi, Tamil Nadu, Karnataka, Tripura, Rajasthan, Bihar, Puducherry, Haryana, Odisha, Andhra Pradesh (Including Telangana), Uttarakhand, Madhya Pradesh, Chhattisgarh, Maharashtra, Kerala, Gujarat, and Goa

constituencies, only 13 have an SC population share exceeding 50%. Of these, 12 are located in West Bengal (0.3%) and 1 in Uttar Pradesh. Looking at the data on Chief Ministers (CMs) from 21 states between 1952 and 2023, out of 471 CMs, only 12 (2.5%) have belonged to the SC community[3], despite SCs constituting 16.2% of the population.

As a consequence of the factors mentioned above, (Bhavnani, 2017) finds that in constituencies that were previously reserved for Scheduled Castes (SC) but are now unreserved, the likelihood of an SC candidate being elected is virtually nonexistent. As Ambedkar famously stated, "It is not enough to be electors only. It is necessary to be law-makers; otherwise, those who can be law-makers will be the masters of those who can only be electors." This paper argues that, in addition to ensuring adequate political representation for SCs, reservation or political quotas positively impact human capital formation, development, and the overall economic well-being of the Scheduled Caste community.

We exploit the delimitation (redistricting) exercise of the assembly constituencies in 2008 to causally identify the impact of reservation (political quotas) on developmental indicators for Scheduled Castes (SCs). The Delimitation Commission, responsible for redrawing constituency boundaries, was led by members from the judiciary, the Election Commission, representatives from federal and state election commissions, members of the federal parliament (MPs), and members of state legislative assemblies (MLAs). The Commission held 130 public sittings across 24 states in India, where approximately 7,200 individuals presented suggestions and objections, and around 122,000 people attended these public meetings in various cities. There are two primary motivations for the delimitation exercise. First, the 2008 delimitation, the first since 1976, occurred after more than three decades. Between the 1971 and 2001 Censuses, India's population grew by over 87%, and migration to urban areas introduced substantial variation in constituency voter sizes. The main goal of the 2008 delimitation was to standardize the population size across constituencies as far as practicable. Second, the SC population as a percentage of the total population rose from 14.6% in 1971 to 16.2% in 2001. This increase in the SC share necessitated adjustments in the seats reserved for SCs. We provides evidence—covering all of India—that no gerrymandering was involved in the delimitation process.

We employ a panel dataset of 1.3 million schools offering primary and middle school education (Classes 1 to 8), with enrollment data covering the academic years 2005-06 to 2017-18, to examine the impact of reservation policies on school enrollment.

[3]https://www.hindustantimes.com/india-news/a-caste-wise-analysis-of-all-chief-ministers-in-india-101692210646783.html

To analyze entrepreneurial activity among Scheduled Castes (SCs), we use data on 121 million firms from three rounds of the Economic Census (1998, 2005, and 2013-14). Additionally, we assess village-level development indicators to study the effects of political reservations on various development variables: (1) nighttime light density, serving as a proxy for economic development, (2) rural electrification under the Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY), and (3) road construction under the Pradhan Mantri Gram Sadak Yojana (PMGSY). To further investigate mechanisms, we use both available data and newly digitized archival records of politicians' affidavits, which provide insights into politicians' characteristics, including political experience, criminal background, and financial status.

Our findings indicate that the introduction of quotas led to a 1.1 percentage point increase in school enrollment among Scheduled Castes (SCs). This effect is particularly pronounced in villages with low SC populations. In these villages, where SCs face higher discrimination and a greater fear of violence or retaliation, quotas appear to empower the SC community by providing an authority figure who can advocate for their rights and ensure they are upheld. Additionally, we observe a 5.1 percentage point increase in SC enrollment in elite, federally-run central schools, generally known for offering higher-quality education, better-trained teachers, and superior infrastructure. This suggests that political reservation policies not only improve access to education for SC students but also enhance their opportunities to attend institutions with better educational resources. Regarding entrepreneurial activity, we find that the number of SC-owned firms increases by one additional firm in villages that are newly treated by quotas, while the average size of SC-owned firms (measured by the number of workers) increases by two additional workers. Historically, caste has largely determined occupation, creating a rigid social hierarchy that persists across generations. Despite legal measures against caste-based discrimination, this occupational segregation continues to affect employment patterns and economic mobility in modern India. Professions traditionally considered low-status, such as sweeping and leather work, remain predominantly occupied by SCs, especially by those with historical ties to these roles. Our findings suggest that political quotas are helping SCs break through caste barriers, increasing their representation in sectors like restaurant and bar services—industries involving public handling of food and drink, which were once taboo for SC individuals due to social stigma and untouchability practices. Additionally, SCs are increasingly entering more skilled and higher-status fields, such as textiles and Business Process Outsourcing (BPO). These shifts highlight how political quotas not only facilitate economic mobility within SC communities but also contribute to dismantling deeply entrenched caste-based barriers.

To investigate the mechanisms behind these effects, we find that delimitation and the introduction of quotas in previously unreserved areas have led to the election of younger, less experienced SC politicians with fewer criminal records than their non-SC counterparts. The influx of these new SC politicians, often less embedded in traditional power structures, may strongly emphasise policies that promote social welfare, such as expanding educational access and fostering economic empowerment within SC communities. The Economic Census provides data on funding sources for firms across its three rounds. Our findings indicate that exposure to reservation policy significantly improves SC-owned firms' access to formal financial institutions, thereby reducing reliance on predatory moneylenders. Additionally, a marked increase in self-financing among SC entrepreneurs suggests greater economic stability and capacity for self-funding. We also find that political reservation enhances various development indicators at the village level. For example, nighttime light data—used as a proxy for economic activity—shows a noticeable increase in income following the implementation of quotas. Furthermore, new road construction improves access to educational institutions and markets, facilitating entrepreneurial opportunities and reflecting a complementary relationship between infrastructure development and economic mobility.

Importantly, we find no negative effects on villages that are no longer under reservation, which is not surprising given the long-standing nature of the reservation policy for over 30 years. Our results suggest that the effects of reservation status have remained persistent over time, indicating that the quota system continues to exert influence, at least in the short term.

An important aspect of our study is the timeline, spanning 2000-2017, across different datasets and using highly disaggregated data, which may help explain why we can causally identify such robust results. This period corresponds with India's highest economic growth phase and the implementation of landmark federal programs aimed at expanding access to education and infrastructure. For instance, the Sarva Shiksha Abhiyan (Education for All campaign) and the Right to Education Act of 2009 aimed to provide free and compulsory education to children aged 6 to 14. In 2000, the Pradhan Mantri Gram Sadak Yojana (PMGSY) was introduced to establish reliable, all-weather road connectivity to previously unconnected villages, while in 2005, the Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) launched to provide electricity to rural areas.

These initiatives likely interact with reservation policies in significant ways, and our disaggregated analysis is able to capture these effects more accurately than aggregate-level studies, which may overlook such detailed impacts. While aggregate data might show minimal overall change, a more granular analysis can reveal significant improvements in SC enrollment or entrepreneurial activity in villages newly subject to reservation policies. Additionally, interactions between federal initiatives—such as Sarva

Shiksha Abhiyan or PMGSY—and reservation effects are often localized and contingent upon regional implementation. These interactions may contribute substantially to development outcomes in ways that are not captured when data is averaged across broader regions.

The paper will proceed as follows. Section 2 offers the institutional background and setting. Section 3 offers the empirical strategy; section 4 presents the data. Section 5 presents the main result and section 6 discusses the mechanism. Section 7 shows additional result and section 8 concludes.

2 Background and Setting

India is a federal parliamentary constitutional republic comprising 28 states and eight union territories, comprising 36 entities.

2.1 Elections in India

The federal government of India, also called the Central Government, is elected through a parliamentary election held every five years. The lower house, known as the Lok Sabha, currently has 543 seats, each filled by an elected member representing a single parliamentary constituency through a first-past-the-post voting system.

In addition to the Lok Sabha, each of the 28 states has its legislative assembly. Each assembly constituency within a state elects a single member through the first-past-the-post system, which is the primary focus of this paper. The National Capital Territory of Delhi and the Union Territory of Puducherry also have legislative assemblies, while the remaining six union territories are governed directly by the federal government.[4]

This study centres on state legislative assembly elections, in which voters elect a local representative, the Member of the Legislative Assembly (MLA). Each constituency is a single-member constituency, with candidates typically nominated by political parties, though independent candidates are also permitted to contest. The election follows the first-past-the-post system, where the candidate receiving the most votes is elected to the legislative assembly.

[4]See the Jammu and Kashmir Reorganisation Act, 2019, under which Jammu and Kashmir were reorganized into two union territories—Jammu & Kashmir and Ladakh. This act also abolished the Legislative Assembly of Jammu and Kashmir.
Source: `http://egazette.nic.in/WriteReadData/2019/210407.pdf` (Accessed March 28, 2020).

2.2 Reservation in India

Reservation in India is an affirmative action policy that provides proportional representation for historically and currently disadvantaged minority groups in education, employment, and politics. Articles 15 and 16 of the Indian Constitution allow the government to establish quotas to ensure representation for "socially and educationally backward classes of citizens" in public life.

Political reservations for minority communities existed in India well before its independence from Great Britain in 1947. In 1906, Muslim and Hindu minority communities advocated for fair representation in power-sharing with the British Indian government. As a result, the Bengal Legislative Assembly allocated 117 out of 250 seats to Muslims (Indian Councils Act, 1909). During the 1937 general elections, separate electorates were extended, allowing only Muslims to vote for these 117 reserved seats in Bengal Province.

In the Round Table Conferences of 1930-32, Dr. B. R. Ambedkar introduced the concept of separate electorates for the depressed classes, specifically the Scheduled Castes (SC) and Scheduled Tribes (ST), to ensure their representation in government. This effort culminated in the Poona Pact, which established that among seats reserved for Hindu minorities, a portion would be set aside for the depressed classes in provincial legislatures across Madras, Bombay with Sindh, Punjab, Bihar and Orissa, Central Provinces, Assam, Bengal, and the United Provinces. Additionally, in the Central Legislature, 18% of the seats allocated to the general electorate in British India were reserved for the depressed classes.[5]

Since the adoption of the Constitution in 1950, independent India has maintained political reservations for SCs and STs proportional to their population share at federal, state, and local (municipal and gram panchayat) levels of governance. The definitions of SCs and STs are provided below.

Legal Identification of Scheduled Castes and Scheduled Tribes[6]

Selection Criteria for Scheduled Castes (SC)
1. Cannot be served by clean Brahmins.

[5]See the Poona Pact (1932) at `http://www.ambedkar.org/impdocs/poonapact.htm` (Accessed March 29, 2020).

[6]The criteria for selecting "scheduled caste" and "scheduled tribe" minorities are outlined in the Constitutional (Scheduled Caste and Scheduled Tribe) Orders of 1950.

2. Cannot be served by barbers, water carriers, tailors, etc., who serve upper-caste Hindus.
3. Pollutes a high-caste Hindu by contact or proximity.
4. Is someone from whose hands a caste Hindu cannot take water.
5. Is debarred from using public amenities such as roads, ferries, wells, or schools.
6. Will not be treated equally by high-caste individuals of similar educational qualifications in social settings.
7. Is disadvantaged due to occupation, which otherwise would not entail social stigma.

Selection Criteria for Scheduled Tribes (ST)

1. Tribal origin.
2. Primitive ways of life and residence in remote or less accessible areas.
3. General backwardness in all respects.

Though seats are reserved for Scheduled Castes and Scheduled Tribes, they are elected by all voters in a constituency, without any separate electorate. Members of Scheduled Castes and Scheduled Tribes may also contest non-reserved, general seats. The electoral quota system was introduced in the Indian Constitution in 1950 for ten years. However, it has been extended through various constitutional amendments. Under the 104th Amendment to the Constitution of India, the reservation is set to continue until 2030.[7]

2.3 Delimitation in India

The Government of India establishes the Delimitation Commission under the provisions of the Delimitation Commission Act. Based on the latest census data, the commission's primary task is to redraw the boundaries of the various state legislative assembly and Lok Sabha constituencies. Delimitation commissions have been set up four times: in 1952, 1963, 1973, and 2002, under the respective Delimitation Commission Acts of 1952, 1962, 1972, and 2002. Following the 1974 delimitation, the federal government suspended further delimitation until after the 2001 census to ensure that states' family planning programs would not affect their political representation in the Lok Sabha.

[7]The Constitution (104th Amendment) Act, 2019. `http://egazette.nic.in/WriteReadData/2020/215637.pdf` (Accessed March 29, 2020).

Two primary motivations drove the delimitation exercise of 2008: (i) As the last delimitation had taken place in 1976, by 2001, there was substantial variation in the voter size across constituencies, with the largest constituency having over three million electors and the smallest fewer than 50,000. (ii) Along with these discrepancies, the population share of Scheduled Castes (SCs) had increased from 14.6% in the 1971 census to 16.2% in the 2001 census, and the Scheduled Tribes (STs) share rose from 6.9% to 8.2% over the same period. These population changes led the Delimitation Commission to increase the seats reserved for SCs in the Lok Sabha from 79 to 84 and STs from 41 to 47 out of 543 Lok Sabha constituencies. The representation of each state, however, remained unchanged. At the legislative assembly level, the number of seats reserved for SC and ST minorities was updated per the 2001 census. The current delimitation of constituencies is based on the 2001 census under the Delimitation Act, 2002. As with the 1974 delimitation, the federal government has frozen further delimitation until after the census conducted in 2026.

Table A1 presents the changes in seats reserved for SCs and STs, showing increases of 43 and 22 seats, respectively. These changes reflect the increase in the SC population share from 14.8% in 1971 to 16.2% in 2001. However, the total number of seats in each state assembly remains unchanged. The reserved seats for SC and ST communities are close to their population shares, which are 16.6% and 8.6%, respectively. This approximate parity is because the average constituency voter size is not uniform across states, meaning SC constituencies are relatively larger than ST constituencies. The delimitation exercise was deferred in Assam, Manipur, Nagaland, Arunachal Pradesh, and Jharkhand. Additionally, no changes were made in Meghalaya, Mizoram, Tripura, and Sikkim for ST (and BL for Sikkim) constituencies, as specified by Section 7 (1C) of the Representation of the People Act, 1950. Due to special constitutional provisions, the delimitation exercise did not occur in the former state of Jammu and Kashmir. We will examine the impact of delimitation in detail in Section 3, which focuses on the empirical strategy.[8]

This paper specifically focuses on delimitating constituencies reserved for the Scheduled Castes. Figure A7 shows the district-level concentration of SC and ST populations according to the 2011 Census. The left panel illustrates the SC percentage at the district level, with some districts showing SC populations as high as 51%. The SC population is dispersed throughout the country. In contrast, the right panel displays the ST population, which is concentrated in specific regions of India, with some districts having nearly 100% of the ST population. Given the first-past-the-post electoral

[8]https://www.outlookindia.com/newswire/story/govt-defers-delimitation-exercise-in-4-ne-states-jharkhand/534077 (Accessed March 31, 2020).

system, the dispersed SC population makes constituency reservation crucial for their representation.

2.4 Delimitation Exercise: An example

The Process of Delimitation can be explained with an example of Adilabad district in the state of Andhra Pradesh:[9]

Step 1: ENTITLEMENT OF SEATS FOR A DISTRICT

Total assembly seats in Andhra Pradesh[10] =294
Population of Andhra Pradesh = 76,210,007
Population of Adilabad District = 2,488,003
Number of constituency in Adilabad district = $\frac{\text{Population of Adilabad District}}{\text{Population of the State}}$ x 294
= 9.6

So, Adilabad district is entitled to 10 out of 294 assembly constituency seats.

Step 2: DISTRIBUTION OF SEATS FOR SCHEDULED CASTES

Proportion of SCs in Andhra Pradesh = 16.19%
Total Assembly Seats = 294
Number of SCs reserved constituency in the state assembly = 0.1619x 294 = 47.59 = 48

So, Andhra Pradesh is entitled to 48 seats reserved for SCs out of 294 assembly constituency seats.

Step 3: SELECTION OF SCHEDULED CASTES CONSTITUENCY

Population of SC in A.P = 12,339,496 or 16.19%
The population of SC in Adilabad District = 461,214
Seats for SCs in Adilabad District = $\frac{\text{Population of SCs in Adilabad District}}{\text{Population of SCs in the State}}$ x 48
Seats for SCs in Adilabad District = 1.79 $\Rightarrow$ 2 SC seat.

In Figure 2, two assembly constituencies, Chennur and Bellampalle from the district of Adilabad, which have the highest and second-highest proportion of SC minority, have been reserved for SC.

[9] Changing Face of Electoral India: Delimitation 2008, Volume - I
[10] Including Telangana

Even though the delimitation exercise was completed in 2008, it did not take effect until the next election, when the newly delimited assembly constituencies were used. State legislative assembly elections in Indian states are not held simultaneously; therefore, the effective treatment starts only after the election following the 2008 delimitation exercise. For instance, although the boundaries and reservation status for the 403 legislative assembly seats of Uttar Pradesh were redefined in 2008, the state's 2007 legislative assembly election used the old constituency boundaries. Five years later, the new delimited maps were implemented in the 2012 assembly election. Thus, the effective treatment begins only after an election using the new delimited maps. Figure A6 and Table A2 show the onset of effective treatment by state.

Additionally, we code the treatment year based on the election timing within the calendar year. If the election occurs in the first half of a year (e.g., April 2010), the effective treatment begins in that year (2010). Conversely, if the election is held in the latter half (e.g., November 2010), the effective treatment begins the following year (2011). For example, the first legislative election with the new maps in Karnataka occurred in May 2008, so all years following 2007 are considered treated. See Table A2 for the effective treatment status across Indian states.

3 Empirical Strategy

3.1 Specification

Exogenous variation is illustrated in Figure 1. Figure 1(a) shows the electoral constituency before the 2008 delimitation exercise, where red lines represent constituency boundaries and blue-shaded areas are reserved for SCs. Figure 1(b) shows the same location after delimitation, with SC-reserved constituencies shaded in orange. In Figure 1(c), the pre-and post-delimitation maps are combined, revealing substantial variation in boundaries and SC-reserved areas. Finally, in Figure 1(d), villages are added to this map, showing variation at the village level.

Our analysis focuses solely on political reservations for SCs. We thus limit our sample to villages with either SC (reserved for Scheduled Castes) or GEN (open to all) status before and after delimitation. Consequently, a village can have one of four statuses: (1) villages previously in reserved constituencies but no longer (blue); (2) villages newly included in reserved constituencies (orange); (3) villages consistently reserved (brown); and (4) villages never reserved (white).

Table A12 displays the distribution of schools/villages by changes in their political status across datasets. For education data, 81.52% of schools retain their status before and after delimitation—70.84% (GEN $\Rightarrow$ GEN) and 10.68% (SC $\Rightarrow$ SC). Mean-

while, 10.27% of schools transition from general to reserved constituencies (GEN $\Rightarrow$ SC), and 8.2% transition from reserved to general (SC $\Rightarrow$ GEN). Similarly, in the Economic Census data, 81.10% of villages retain their status—70.04% (GEN $\Rightarrow$ GEN) and 11.06% (SC $\Rightarrow$ SC). Additionally, 10.50% of villages move to reserved constituencies from general ones (GEN $\Rightarrow$ SC), while 8.39% shift from reserved to general (SC $\Rightarrow$ GEN). Other datasets also reflect these patterns, including Nightlights, Road Construction, Electrification, and Politician Quality.

Our data on education is at the school level, while economic census, nightlights, road construction, electrification, and politician quality data are at the village level. We use 2011 Census shapefiles for rural and urban units (villages and census towns) to align census units with constituency boundaries. Urban units, such as Ahmedabad in Gujarat, sometimes span multiple constituencies, complicating the categorization of urban unit status over time. Given our empirical strategy, we restrict the sample to rural areas, allowing us to track village and school locations consistently before and after delimitation. According to the 2011 Census, urban units are defined as (1) having a minimum population of 5,000, (2) at least 75% of male main workers engaged in non-agricultural activities, and (3) a population density of at least 400 per square km. All units not meeting these criteria are classified as rural (villages).

For the empirical strategy, we employ a baseline difference-in-differences model. For villages entering reservation, we define the treatment group as those with a status change from GEN to SC (GEN $\Rightarrow$ SC), with the control group being villages with consistent general status (GEN $\Rightarrow$ GEN).

Entering Reservation:

Treatment: GEN $\Rightarrow$ SC, Control: GEN $\Rightarrow$ GEN

$$Y_{it} = \alpha + \beta \mathbb{1}(\text{GEN} \Rightarrow \text{SC})_i \times \text{post}_t + \mathbf{X}_{it} + V_i + T_t + \epsilon_{it} \tag{1}$$

Leaving Reservation:

For villages leaving reservation, we define treatment as a village of type (SC $\Rightarrow$ GEN), where the control group consists of (SC $\Rightarrow$ SC) villages.

Treatment: SC $\Rightarrow$ GEN, Control: SC $\Rightarrow$ SC

$$Y_{it} = \alpha + \beta \mathbb{1}(\text{SC} \Rightarrow \text{GEN})_i \times \text{post}_t + \mathbf{X}_{it} + V_i + T_t + \epsilon_{it} \tag{2}$$

where $i \in \{$*school* for education and *village* for other datasets$\}$, and t represents the year. The indicator variables (GEN $\Rightarrow$ SC) and (SC $\Rightarrow$ GEN) are equal to 1 if the village transitions from GEN to SC and from SC to GEN, respectively. The variable `Post` is a dummy variable that equals 1 for the years when the effective treatment begins (i.e., the first election with the delimited constituency). V_i denotes the village fixed effect, and T_t represents the year fixed effect. $\mathbf{X}_{it}$ includes village-level controls (total population, literacy rate, share of SC in the village, and share of ST in the village) from the 2001 and 2011 census data. Additionally, state-year linear trends are included to account for state-specific factors that evolve linearly over time. As the treatment is staggered, we perform robustness checks using (Sun and Abraham, 2021; De Chaisemartin and d'Haultfoeuille, 2020; Callaway and Sant'Anna, 2021; Borusyak, Jaravel and Spiess, 2024).

3.2 No Evidence of Gerrymandering

One concern with redrawing electoral constituencies is the potential for politicians to manipulate the process to their electoral advantage. Iyer and Reddy (2013) provides evidence that no such manipulation occurred during the delimitation of state legislative assembly constituencies in Andhra Pradesh and Rajasthan. Similarly, Kjelsrud, Moene and Vandewalle (2020) found no evidence of gerrymandering in the delimitation of Lok Sabha (federal parliament) constituencies. In this study, I extend this analysis by examining the absence of gerrymandering across all Indian state legislative assemblies.

The primary goal of delimitation is to equalize voter population sizes within states. In Figure 3, I show the variation in the number of voters from the state average before and after redistricting. The figure indicates that the main objective was largely achieved, as the deviation from the mean number of voters decreased significantly after redrawing the boundaries. While these findings suggest that redistricting was largely effective, they do not fully address the potential for manipulation, prompting me to investigate further.

The Delimitation Commission, which is responsible for demarcating constituency boundaries, was headed by Justice Kuldip Singh, a retired judge of the Supreme Court. The Chief Election Commissioner, or an election commissioner nominated by the Chief Election Commissioner, served as an ex-officio member. The State Election Commissioner of the concerned State or Union Territory was also part of the Commission. Alongside these three core members, five MPs (Members of the federal parliament, Lok Sabha) and five MLAs (Members of the State Legislative Assembly) from each State were nominated as associate members of the Commission. These associate members were nominated by the Speaker of the Lok Sabha for MPs and by the speakers of

respective legislative assemblies for MLAs. However, associate members (MPs and MLAs) did not have voting rights or the ability to sign any Commission orders.

In my analysis, I focus on the MLAs nominated as associate members of the Delimitation Commission. First, I assess whether these politicians differ from other politicians regarding experience and political success. Columns 3-7 of Table 6 show that these politicians are generally more experienced than their peers. Specifically, they have been incumbents in their constituencies for longer, have won elections by larger margins, have a higher vote share, and have contested and won more elections than other non-member politicians. This makes sense, as political parties typically send their senior members to such commissions, as nominated by the Speaker of the House.

Next, I test for evidence of gerrymandering by matching the members with their current pre-delimited constituencies and identifying the child constituency by overlapping pre- and post-delimitation maps. I then calculate the share of the area that overlaps between the child and parent constituencies. In Column 1, I regress the overlapping area for all constituencies on the Member dummy and find no significant difference in the overlapping areas for the constituencies of commission members. I repeated this process for common voters and found that the commission members could not manipulate this either. This suggests that there is no evidence of gerrymandering concerning the constituencies of the commission members.

4 Data

4.1 Education

The District Information System for Education (DISE) is an annual report on primary and middle schools in India, collecting data on student enrollment by community (SCs, STs, OBCs), gender, and school type (private, public—local government, and elite—federal-run central schools). DISE is the result of collaborative efforts by the Ministry of Human Resource Development (now Ministry of Education), the National Institute of Educational Planning and Administration (NIEPA), and UNICEF, aimed at strengthening the Educational Management Information System (EMIS) in India. Since the 2005-06 academic year, DISE has covered the entire country, including all 35 States and Union Territories (UTs) and 604 districts. It has documented data from 1.3 million schools providing elementary education, all collected using a standardized format. The dataset spans the academic years 2005-06 to 2017-18.

DISE data includes a unique 11-digit school code and state, district, block, and village names. To match the DISE dataset with the 2011 Census of Villages, I first ob-

tained the precise geolocation of each school [11]. The DISE data was then merged with School GIS data using the 11-digit UDISE code. Table A11 presents the matching results. Of the schools, 83% were matched using the full 11-digit UDISE code. A further 14% were matched using the last nine digits of the UDISE code, a modification resulting from the split of Andhra Pradesh into two states (Andhra Pradesh and Telangana) in 2014. Another 2.4% were matched through string matching based on combinations of village, district, and state names, and 0.6% were matched using fuzzy string matching for these variables. The remaining 100,000 schools could not be merged.

Our primary outcome variable is the *SC enrollment share*, calculated as the number of SC students divided by the total number of students at each school. Figure 4 displays the raw mean SC student share across four types of villages over the years. The plot shows a rise of approximately three percentage points in the SC student share for villages that became part of a reserved constituency after delimitation.

4.2 Economic Census

The Economic Census in India provides a comprehensive profile of all entrepreneurial units engaged in economic activities, excluding crop production and plantation. Conducted periodically by the Ministry of Statistics and Programme Implementation, the census collects detailed data on establishments across both agricultural (excluding crop production and plantation) and non-agricultural sectors, covering both organized and unorganized segments. The dataset offers disaggregated information on operational and structural characteristics, including geographical distribution, ownership, employment, and other relevant attributes.

For our analysis, we use data from the 4th (1998), 5th (2005), and 6th (2013-14) rounds of the Economic Census, which provide two pre-treatment periods and one post-treatment period for evaluating parallel trends. These rounds cover 30 million, 42 million, and 59 million entrepreneurial units, respectively. To facilitate village-level analysis, we merge village census codes from the Economic Census with 2011 Census village identifiers, collapsing the data to the village level and calculating several key variables: (1) the number of firms by ownership across different social communities, namely Scheduled Castes (SC), Scheduled Tribes (ST), Other Backward Castes (OBC), and upper castes; (2) firm size (measured by the number of workers) by community; and (3) the source of firm funding, categorized as financial institutions, moneylenders, government, NGOs or voluntary organizations, and self-financed.

[11] The school geo-location data is available at: https://schoolgis.nic.in/. Accessed on 8th August 2021

Our empirical approach utilizes a standard difference-in-differences (DiD) framework rather than a staggered DiD, as we do not have an annual panel since the effective treatment years vary across states—from 2008 to 2012 (see Table A2 and Figure A6)—we classify villages into two treatment cohorts: (1) an early cohort treated between 2008 and 2010, and (2) a late cohort treated in or after 2011. Given that our post-treatment data is from 2013-14, the late cohort experienced limited exposure to reservation policies, likely dampening observable impacts.

4.3 Village Level Outcomes

Nightlights

Nightlight luminosity data are sourced from the DMSP-OLS annual measures of nighttime light luminosity, which are recorded at a spatial resolution of 1/120 degree. The data contains three primary variables at the village level: *total_light*, *num_cells*, and *avg_light*. The variable *total_light* represents the total luminosity in the village, ranging from 0 (no light output) to 63 (the highest light output). *num_cells* refers to the number of grid cells within a village, and *avg_light* is the average luminosity of a village, calculated by dividing the village's total nightlight (*total_light*) by the number of cells (*num_cells*). Nightlight data are obtained from (Asher et al., 2019*a*).

I present the average nighttime light density over the years in Figure A8. The figure shows an upward trend in nighttime light density. In 2004, the average nightlight luminosity for villages was 3.43; by 2013, it had increased to 6.175.

The nightlights data span from 1994 to 2013. For this study, I focus on the period from 2004 to 2013 to analyze the impact of reservations as the treatment occurred between these years. (Asher et al., 2021) demonstrates that nighttime light intensity is a significant proxy for key local-level indicators such as population, employment, per capita consumption, and electrification.

Road Construction

In 2000, the central government of India launched the Pradhan Mantri Gram Sadak Yojna (PMGSY), or Rural Road Construction Scheme, intending to connect unconnected villages to the road network by constructing paved roads. The largest number of roads were awarded in 2013 and 2006, with more than 10,000 new roads being granted each year. By 2014, 90,000 villages had been connected to new roads.

The dataset used in this study is sourced from the SHRUG repository, as described in (Asher et al., 2019*a*). The original data is transformed into a panel data structure, covering the period from 2000 to 2015. For each village or town, 15 rows (one for each

year) are created. If a village is awarded a road on 16th October 2008, the dummy variable "Road Award" takes a value of 0 for 2000 to 2008 and 1 for 2009 and all subsequent years until 2015. If a road is awarded in the first six months of a given year, the award is coded as occurring in the same year. For example, if a village is awarded a road on 24th April 2010, the "Road Award" dummy takes a value of 0 for 2000-2009 and 1 starting in 2010, remaining 1 for the following years.

Following the approach of (Asher and Novosad, 2020), who worked closely with the National Rural Roads Development Agency to identify state-specific compliance with PMGSY guidelines, we restrict our analysis to six states (Chhattisgarh, Gujarat, Madhya Pradesh, Maharashtra, Odisha, and Rajasthan) that strictly followed the scheme's guidelines. A similar methodology is employed by (Boudot-Reddy and Butler, 2024).

Electrification

The Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY), or Rajiv Gandhi Rural Electrification Scheme, was launched in 2005 with the goal of electrifying villages that had previously lacked electricity. The scheme aimed to reach over 360,000 villages. I matched the village data to the 2011 Indian Villages Census polygons for geographic accuracy. Figure A9 shows that the electrification count peaked in 2010.

The data used in this analysis is sourced from (Eynde and Wren-Lewis, 2021). For my primary measure of electrification, I use the completion date of electrification at the village level. The original data is restructured into a panel data format, covering the period from 2005 to 2015. For each village or town, 11 rows (one for each year) are created. If a village is electrified on 16th October 2008, the dummy variable "electrification" takes a value of 0 from 2005 to 2008 and 1 starting in 2009, remaining 1 for all subsequent years through 2015. If a village is electrified during the first six months of the year, the electrification is coded as occurring in the same year. For example, if a village is electrified on 24th April 2010, the "electrification" dummy takes a value of 0 for 2005-2009 and 1 starting in 2010, remaining 1 for all subsequent years.

Politician Quality

To measure politician quality, we rely on affidavits submitted by politicians during elections. These affidavits provide several key variables: (1) the number of times the politician has contested elections, (2) the politician's age at the time of contesting, (3) the number of criminal charges against the politician, (4) a standardized education score (ranging from 0 to 20), and (5) the log of wealth (assets minus liabilities) declared by the politician at the time of contesting the election.

The data comes from three different sources: the Association for Democratic Reforms, Vaishnav (2017), and affidavits I digitized for three states. Our analysis focuses only on the winning politicians immediately before and after the delimitation process, covering two electoral cycles.

5 Main Result

Education

Table 1 reports the β coefficients from specifications 1 and 2. Columns 1-3 present the impact of a village entering reservation status on the SC student share. In Column 1, we observe that reservation leads to a 1.1 percentage point increase in the SC student share, which represents a 5% increase from the mean. In Column 2, I add village-level census controls, including the SC share of the population, to ensure that the results are not driven by demographic trends. The results remain similar.

In India, education is a joint responsibility between the central and state governments[12]. To isolate the effect of reservation from any state-specific interventions, Column 3 includes state-year linear trends to account for state-specific factors that evolve linearly over time. The coefficient becomes smaller (indicating a 3% increase in the SC student share from the mean) but remains significant at the 1% level.

Columns 4-6 examine the impact of a village leaving reservation status. We find no significant effect, which is not surprising given the long-standing nature of the reservation policy, which has been in place for over 30 years. The results suggest that the reservation status has persisted over time, and the status quo remains largely unaffected, indicating the continued influence of the quota system, at least in the short term.

Event Study Figures: To test for parallel trends, we estimate an event-study version of specifications 1 and 2.

$$Y_{it} = \alpha_i + \lambda_t + \sum_{k \neq -1} \beta_k \cdot \mathbf{1}\{t = T_i + k\} + X'_{it}\theta + \epsilon_{it} \tag{3}$$

In this equation, Y_{it} represents the SC student share for school i at year t. The term α_i denotes school-fixed effects, while λ_t represents time-fixed effects, which account for common shocks or trends affecting all units at time t. The sum $\sum_{k \neq -1} \beta_k \cdot \mathbf{1}\{t =$

[12]Education was transferred from the State List to the Concurrent List through the 42nd Amendment Act of 1976. www.thehindu.com/news/national/tamil-nadu/transfer-of-education-to-concurrent-list-during-the-emergency-has-upset-indias-federal-structure-tn-govt-tells-hc/article66022410.ece

$T_i + k\}$ represents the **event-time indicators**, where k denotes the number of periods relative to the treatment time T_i. For instance, $k = 0$ indicates the treatment period, $k = 1$ is the first period after treatment, and $k = -1$ (the omitted category) is the period immediately before treatment. The indicator function $\mathbf{1}\{t = T_i + k\}$ takes the value of 1 if time t is k periods relative to treatment for unit i, and 0 otherwise. The coefficients β_k estimate the **dynamic treatment effects**, showing how the treatment effect evolves before and after treatment.

X_{it} represents a vector of village-level control variables that vary across schools and time. Additionally, we include state-year fixed effects to control for time-specific shocks or unobserved variables that are unique to each state in a given year.

Given that our treatment is staggered, we use recently proposed estimators that are robust to treatment effect heterogeneity (Sun and Abraham, 2021; Callaway and Sant'Anna, 2021; Borusyak, Jaravel and Spiess, 2024). These estimators allow us to account for potential variation in treatment effects across time and treated units. Figure 5 presents the event-study estimates supporting the parallel trends assumption. The coefficients for the years before treatment are close to zero, showing no evidence of pre-treatment trends. The top panel indicates that the SC student share starts to rise post-treatment. The bottom panel shows the event-study results for villages leaving reservation status, where, similar to our TWFE results, we observe no significant impact across different estimators.

Heterogeneity by Village Scheduled Caste Population: Table 2 divides the sample into two groups based on the share of Scheduled Caste (SC) population: Low SC, which includes villages with below the median share of SC population, and High SC, consisting of villages with above the median share. Column 1 represents the full sample from Table 1, showing an effect of a 3% increase in SC student share from the mean. Column 2 reports results for Low SC villages, where the SC student share increases by 4.2% from the mean. In contrast, for High SC villages, the effect is smaller, at 1.15%. These results suggest that the effect of reservation policies is more pronounced in villages with a lower SC population share. One possible explanation is that in Low SC villages, the SC population faces higher levels of discrimination in accessing education compared to villages with a higher SC share. Institutional support and political representation may help reduce this discrimination, empowering the SC population to access educational institutions more effectively. Similarly, we do not find any significant impact on villages leaving reservation status (columns 4-6). Additionally, there are no noticeable differences in the heterogeneity of effects by gender (see Table A3).

Heterogeneity by Type of School: Our education data also captures the type of school: private, public (local government), and elite (federally-run) central schools. Table A4

presents the β coefficients, revealing similar results for private (Column 3) and local government (Column 5) schools. However, in Column 7, we observe a considerably larger effect for central schools, where the SC student share increases by 5.1 percentage points (a 27% increase from the mean). These central schools include elite institutions such as Kendriya Vidyalaya Sangathan (KVS) and Jawahar Navodaya Vidyalayas, generally perceived to provide higher-quality education, better-trained teachers, and superior infrastructure. Therefore, it can be argued that the reservation not only increases the chances of SC students receiving an education but also contributes to greater access to quality education. Similar to the previous results, we find no significant impact on villages leaving reservation status in columns 4, 6, and 8.

Economic Census

Table 3 reports coefficient for specification 1 and 2. Column 1 shows that the political quotas leads to an increase of SC owned firms in the village by 1 (an increase of around 20% from the mean). In column 2, we include state-year linear trends, the coefficient reduces to 0.74 and remain significant at 5/%. Out of the 58.50 million establishments surveyed in 2013-14, approximately 52.29 million were proprietary establishments (89.39% of 58.50 million). 41.97 million (71.74%) were classified as Own Account Establishments, meaning they had no hired workers and were run solely by the proprietor. So to see if our result is completely driven by single-owner proprietary, in column 3, we look at the size of workers employed in SC-owned firms, and we find that reservation leads to an increase of two workers (an increase of around 18-25% from the mean). Similarly, we do not find any impact on the villages leaving the reservation, further strengthening the persistence of the quota mandate. Table 3 presents the result for the full sample. It is important to note that some states were treated very close to when the economic census of 2013-14 was conducted, and they experienced limited exposure to reservation policies, likely dampening observable impacts (See Table A2). For robustness, we define two treatment cohorts: (1) an early cohort treated between 2008 and 2010 and (2) a late cohort treated in or after 2011. In Table A7, I present the same result for different cohorts, and we can see that the overall effect mirrors the effect on early cohorts, and there is no visible impact on later cohorts as they did not have enough exposure.

Economic Census

Table 3 reports the coefficients for specifications 1 and 2. Column 1 shows that villages that enter reservation experience an increase of one more unit of SC-owned economic units, an increase of 20% from the mean. This suggests that reservation policies contribute to greater entrepreneurial activity among the SC population. In Column 2, we

include state-year linear trends to account for time-specific shocks that may differ by state. The coefficient decreases to 0.74 but remains statistically significant at the 5% level.

Of the 58.50 million establishments surveyed in the 2013-14 Economic Census, approximately 52.29 million (89.39%) were proprietary establishments. Among these, 41.97 million (71.74%) were "Own Account Establishments", meaning they had no hired workers and were solely run by the proprietor. To check whether our results are entirely driven by single-owner, proprietor-run businesses, we look at the size of workers employed in SC-owned firms in Column 3. Here, we find that reservation leads to an increase of about 2 workers in SC-owned firms in the village, representing an 18-25% increase from the mean, suggesting that reservation policies not only increase the number of firms but also lead to modest expansion in firm size.

As with the previous results, we do not observe any significant impact in villages leaving reservation status, further reinforcing the persistence of the quota mandate. Table 3 presents the results for the full sample. It is important to note that some states were treated very close to the timing of the 2013-14 census, resulting in limited exposure to reservation policies. This may have dampened observable impacts, as shown in Table A2. For robustness, we define two treatment cohorts: (1) an early cohort treated between 2008 and 2010 and (2) a late cohort treated in or after 2011. I present the results for these different cohorts in Table A7. The overall effect mirrors that of the early cohorts, while the late cohort shows no visible impact, likely due to insufficient exposure to the reservation policy.

Event Study Figures: To test for the parallel trends assumption, we estimate an event-study version analogous to specification 3. We focus on the early cohort to ensure adequate exposure to the treatment. In Figure 6(a), where the dependent variable is the number of SC-owned firms, we observe that the parallel trends assumption holds, as the pre-treatment trends are similar for treated and control villages. Similarly, in Figure 6(b), where the dependent variable is the number of workers employed in SC-owned firms, the parallel trends assumption is also satisfied, and the coefficient is statistically significant at the 10% level. In contrast, Figure A4(a) and (b) show that for villages leaving reservation status, there is no observable impact, further supporting the persistence of the quota mandate over time.

Occupational Segregation: Caste continues to play a pivotal role in determining occupational choices in India. Professions traditionally viewed as 'lowly,' such as sweeping and leather work, remain predominantly occupied by Scheduled Castes (SC), particularly those with historical ties to these occupations. On the other hand, higher-status professions are overwhelmingly dominated by individuals from non-SC

groups.[13] The Economic Census data includes the National Industrial Classification (NIC) Code, which categorizes economic activities based on the goods or services produced. (Asher et al., 2019*b*) provides an overview of various rounds of the Economic Census and standardizes the activities into 90 broad categories.

As shown in Table A10, Scheduled Castes remain concentrated in professions considered 'unclean.' For instance, 55% and 35% of firms involved in footwear and leather manufacturing, respectively, are SC-owned. In contrast, professions like the manufacture of consumer electronics and accounting, which are associated with higher status, are dominated by upper-caste individuals (87% and 86%, respectively).

We investigate whether political quotas can help reduce occupational segregation and challenge the deeply entrenched caste barriers. To explore this, we regress the number of SC-owned firms in each of the 90 industry categories in the Economic Census. Figure 7 presents the coefficients from these 90 regressions. The industries are sorted by the SC share in the industry as of 1998, with industries on the extreme left, such as footwear manufacturing (55% SC), and on the extreme right, such as "Unions, Professional, and Community Services," with only 1% SC.

The results suggest that political quotas have facilitated not only economic advancement within historically marginalized communities but also helped reduce occupational segregation that has persisted for centuries. SC individuals, who were once largely confined to occupations considered "unclean," such as leather work and manual labour, are now increasingly represented in industries previously dominated by higher castes. Notably, we observe SC participation in sectors such as restaurant and bar services—industries. Historically and even today, facing untouchability and social stigma, SC has expanded to these areas, which involve handling food and drink in public spaces, and this represents a significant shift, as these jobs were once considered taboo for SC individuals. In addition to traditional SC-dominated sectors like footwear manufacturing, SC individuals are entering more skilled and higher-status sectors, including textiles and Business Process Outsourcing (BPO). These shifts highlight how political quotas not only promote economic mobility within SC communities but also play a role in dismantling deeply ingrained caste-based barriers, providing SC individuals with broader opportunities and helping to break centuries-old social taboos.

[13] https://timesofindia.indiatimes.com/india/in-21st-century-india-caste-still-decides-what-you-do/articleshow/67201813.cms

6 Mechanism and Discussion

Politician Quality

A critical aspect of caste-based quotas is the change they bring to the pool of politicians contesting elections. In constituencies that are newly reserved for Scheduled Castes (SC), only SC candidates are eligible to run, whereas in constituencies open to all, political parties typically nominate non-SC politicians[14]. This shift in political representation can have profound implications on local governance and policy priorities. Table 5 presents the changes in politician quality, measured at the constituency level, in response to the reservation policy. Columns 1-5 show the impact of a village entering reservation status, while Columns 6-10 examine the effects when a village exits reservation.

The results in Columns 1-5 indicate that newly elected SC politicians tend to be less experienced, younger, and have fewer criminal backgrounds compared to their non-SC counterparts. Specifically, SC politicians are, on average, 2.5 years younger and exhibit lower levels of criminal involvement. Additionally, SC politicians have lower levels of education and wealth, which is consistent with the general educational and economic disparities SC populations face. However, it is important to note that, despite being less educated, the standardized education score of SC politicians has increased by 0.28 points after the delimitation, rising from 13.71 to 13.43. In comparison, general caste politicians saw a smaller increase of 0.19 points, from 14.08 to 13.89. On the other hand, for villages losing quotas status, there is no significant effect on politician age or experience, but there is an increase in criminal backgrounds, educational attainment, and wealth among politicians.

The influx of new, younger, less corrupt SC politicians into reserved constituencies could explain part of the mechanism driving improvements in education and entrepreneurship among SC communities. These new politicians, often less entrenched in the traditional power structures, may prioritize policies that promote social welfare, such as expanding access to education and encouraging economic empowerment within their communities. This shift in the political landscape may be one of the key factors contributing to the observed positive effects of reservation policies on SC populations, as these politicians are more likely to champion policies that directly benefit their constituencies.

[14]https://www.thehindu.com/news/national/parties-confine-sc-candidates-to-reserved-seats/article6625736.ece

Institutional Access

The Economic Census records the sources of funding for all firms across its three rounds. Table 4 presents the number of SC-owned firms financed by various sources. Our analysis reveals that exposure to the reservation policy significantly improves SC-owned firms' access to formal financial institutions, reducing their reliance on predatory moneylenders. Notably, SC firms are increasingly funded through more formal and structured sources, such as banks and other financial institutions, while receiving support from NGOs and voluntary organizations. Moreover, there is a noticeable increase in self-financing by SC entrepreneurs, suggesting an improvement in their economic standing and ability to fund their own ventures.

This change in funding sources can be attributed, in part, to the role of newly elected SC representatives in reserved constituencies. These representatives, being part of the same community, are likely to advocate for policies that promote the economic well-being of SC populations. They help raise awareness of available funding programs and provide guidance on navigating formal financial channels. Additionally, having a representative from within the community can reduce institutional apathy, as these politicians are more attuned to the specific needs and challenges faced by their constituents. By safeguarding the economic interests of SC communities, newly elected SC politicians can help create a more supportive environment for entrepreneurship and business growth, further enhancing access to institutional financial resources.

Other Mechanisms

We present additional insights in Table 7, where we show that reservation improves various development indicators at the village level. For example, nightlight data suggests a noticeable increase in income following the implementation of reservation, while new roads improve accessibility to both educational institutions and markets, thus facilitating entrepreneurial opportunities.

The observed results can also be explained through two key dynamics:

1. **Role Model Effect:** In newly reserved villages, the SC community may feel empowered by having a local leader from their community or sharing similar identities. The presence of a leader who has risen to a position of authority despite the community's historical deprivation can serve as a powerful motivator. This visibility may inspire individuals within the SC community, particularly the younger generation, to pursue education and aspire for greater achievements, believing that they, too, can break free from the constraints of poverty and marginalization.

2. **Positive Discrimination:** Newly elected SC politicians may feel a strong duty to uplift their community. Given the relatively low levels of educational attainment and entrepreneurial activity among the SC population compared to higher-caste groups, these politicians are likely to prioritize policies that encourage education and business development. Their policies aim to address the systemic barriers that have historically limited the SC community's access to resources, thus promoting greater socio-economic mobility.

7 Additional Results

Nightlights

Nighttime light density is often used in the literature as a proxy for economic development. This result suggests that reservation policies are associated with higher local economic activity, likely reflecting increased economic opportunities and development in previously underrepresented areas.

In Table 7 Panel (a), Columns 1-2 report the β coefficients for the specification 1. These results show a weakly significant increase in nightlights for villages that enter the reservation treatment. Since our treatment is staggered, we report both the TWFE results in Column 1 and the coefficients from the recent methodology by (Borusyak, Jaravel and Spiess, 2024) in Column 2. We find that nightlights increase by 0.816 points, which represents a 4.1% increase from the mean. Additionally, we observe no significant change in nightlights once a village exits the reserved constituency. This is consistent with the idea that once resources have been allocated, policymakers are unlikely to reduce or withdraw them, suggesting the persistence of the reservation or quota system's effects over time.

We conducted an event study to test the assumption of parallel trends further. The results, presented in Figure A1, show that the pre-treatment trends are flat, with no evidence of any pre-existing differences in nightlights before treatment. The horizontal axis represents the years relative to the treatment, ranging from five years before treatment to four years after. We see that, before treatment, the coefficient is zero, indicating no pre-trends. Following the treatment, there is a significant increase in nighttime light density in the villages that enter the reservation system. However, for villages that lose reservation status, there is no clear evidence of any change in nightlight density.

Electrification

In Table 7 Panel (a), Columns 5-6 report the β coefficients for the specification 1. The results indicate a weak but positive increase in the likelihood of a village being electrified. As before, we present both (1) the TWFE results in Column 5 and (2) the coefficients using the methodology from (Borusyak, Jaravel and Spiess, 2024) in Column 6. We find that the probability of electrification increases by 5.7%. Similar to the nightlight results, we observe no significant effect on the likelihood of electrification for villages that exit the reserved constituency, suggesting that the reservation status has a persistent effect on village infrastructure investments.

To assess the assumption of parallel trends further, we performed an event study. Figure A2 shows that the pre-treatment trends are consistent with the assumption. The horizontal axis represents years relative to the treatment, ranging from five years before to four years after. Before treatment, the coefficient is zero, indicating no pre-existing trends. After treatment, there is a significant increase in the likelihood of electrification for newly reserved villages. However, we find no observable impact for villages that lose reservation status.

Road Construction

In Table 7 Panel (a), Columns 3-4 report the β coefficients for the specification 1. The results show a positive increase in the likelihood of a village receiving a new road. As with previous specifications, we report both (1) the TWFE results in Column 3 and (2) the coefficients using (Borusyak, Jaravel and Spiess, 2024) in Column 4. The probability of new road construction increases by 3.2%. Similar to all other results, the likelihood of new road construction for villages that exit the reserved constituency remains unaffected, as shown in Table 7 Panel (b), Columns 3-4.

To test the assumption of parallel trends, we performed an event study. Figure A3 shows that the pre-treatment trends hold. The horizontal axis represents the years relative to the treatment, from 5 years before to 4 years after. Before treatment, the coefficient is close to zero (except in the TWFE specification), suggesting no pre-trends. After treatment, there is a noticeable increase in new road construction for villages that enter reservations, with a delay in the effect.

It absorbs much of the effect when considering village-level outcomes, including state-year linear trends. While adding linear trends helps control state-specific shocks, it may not be ideal in this context. Including such trends could potentially remove meaningful variation related to the policy, especially since electrification and road construction effects are gradual and may align with state-specific trends. Furthermore, the policy effect varies across villages within a state, and imposing a uniform state-level

trend may mask this heterogeneity. Therefore, by including state-year linear trends, we may inadvertently bias the estimates downward or make detecting the true policy effect more difficult. As a result, excluding these trends is preferable when assessing the impact of treatment at the village level.

8 Conclusion

This study provides robust evidence on the impact of political quotas for Scheduled Castes (SCs) on development outcomes in India. By leveraging exogenous variation from the 2008 delimitation exercise, we examine the effects of SC reservations on various indicators, including educational enrollment, entrepreneurial activity, and village-level development.

Our results demonstrate that political quotas yield significant positive effects on the development of targeted communities. Villages newly assigned to reserved constituencies experience a notable increase in SC student enrollment, particularly in elite schools. Additionally, the quota policy fosters entrepreneurial activity within SC communities, as evidenced by increases in both the number and size of SC-owned firms. Importantly, the reservation policy also facilitates SCs' entry into higher-status occupations, thereby challenging traditional caste-based occupational segregation.

We further observe improvements in infrastructure and economic activity, as measured by nighttime light intensity, road construction, and electrification rates. Notably, these gains are not reversed when villages lose reserved status, indicating the policy's lasting developmental impact.

Political representation policies have the potential to play a transformative role in addressing historical inequalities. They not only provide SCs with access to essential resources but also inspire social mobility and bolster economic resilience within historically marginalized communities. Our findings underscore the potential of political quotas as a tool for inclusive growth, offering valuable lessons that extend beyond India to regions where social stratification impedes equitable development.

The efficiency and long-term impact of reservation policies remain subjects of active debate globally. While such policies are designed to address historical inequalities and offer marginalized communities greater access to resources, education, and political representation, their effectiveness is still contested. Critics argue that reservation policies may fail to generate sustainable improvements or could foster dependency, while proponents highlight their role in reducing entrenched social disparities and promoting economic mobility. This study contributes to the ongoing debate by provid-

ing evidence that reservation policies when implemented thoughtfully and supported by complementary programs, can have measurable positive effects.

Looking ahead, India's next delimitation exercise, scheduled after 2026, presents a critical opportunity to reassess the impact of these policies in a contemporary context. With shifting demographics, urbanization, and evolving socioeconomic conditions, the upcoming delimitation could provide fresh opportunities to determine how reservation policies can be utilized for current needs and whether they continue to benefit SC communities. Our findings, which emphasize the importance of localized impacts, offer valuable lessons on optimizing reservation policies to enhance efficiency and inclusivity, informing similar policy frameworks in other countries.

Tables and Figures

Table 1
Impact of political quotas on SC enrollment in school

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable:	SC student share					
Sample	Entering Reservation			Leaving Reservation		
(GEN $\Rightarrow$ SC)$_i \times$ post$_t$	1.100***	1.113***	0.659***			
	(0.129)	(0.128)	(0.112)			
(SC $\Rightarrow$ GEN)$_i \times$ post$_t$				0.165	0.184	-0.076
				(0.198)	(0.202)	(0.174)
Mean of Dep. Var.	22.18	22.18	22.18	32.23	32.23	32.23
Observation(n)	8,949,395	8,635,032	8,635,032	2,088,593	2,012,232	2,012,232
School(n)	898,792	865,067	865,067	212,268	204,208	204,208
Year FE & School FE	✓	✓	✓	✓	✓	✓
Village Controls	✗	✓	✓	✗	✓	✓
State-Year Linear Trends	✗	✗	✓	✗	✗	✓
Cluster SE	AC	AC	AC	AC	AC	AC
R-Squared	.846	.846	.847	.84	.841	.842

Notes: The dependent variable is the share of students belonging to the SC community in the school. Columns 1-3 report coefficients from a differences-in-differences specification 1, which examines the impact of a village becoming part of an SC-reserved constituency (from a general constituency) at the school level. In Column 1 (and similarly in Column 4), we include school and year fixed effects. In Column 2 (and similarly in Column 5), we control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population, and (4) village literacy rate. In Column 3 (and similarly in Column 6), we add state-year linear trends to account for state-specific factors that change linearly over time. Columns 4-6 report coefficients from a differences-in-differences specification 2, which assesses the impact of a village leaving reserved status and becoming part of a general constituency. Standard errors are clustered at the pre-delimited electoral constituency level. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

Table 2

Impact of political quotas on SC enrollment in school (Heterogeneity: SC Share in the village)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable:	SC student share					
Sample	Entering Reservation			Leaving Reservation		
	All	Low SC	High SC	All	Low SC	High SC
(GEN $\Rightarrow$ SC)$_i \times$ post$_t$	0.654***	0.644***	0.335***			
	(0.112)	(0.139)	(0.121)			
(SC $\Rightarrow$ GEN)$_i \times$ post$_t$				-0.095	0.035	-0.022
				(0.174)	(0.202)	(0.188)
Mean of Dep. Var.	22.09	15.32	29.14	32.20	21.63	37.11
Observation(n)	8,350,804	4,255,355	4,095,449	1,949,463	605,651	1,343,812
School(n)	842,319	429,409	412,911	199,131	61,792	137,340
Year FE & School FE	✓	✓	✓	✓	✓	✓
Village Controls	✓	✓	✓	✓	✓	✓
State-Year Linear Trends	✓	✓	✓	✓	✓	✓
Cluster SE	AC	AC	AC	AC	AC	AC
R-Squared	.849	.822	.845	.844	.82	.837

Notes: The dependent variable is the share of students belonging to the SC community in each school. Columns 1-3 report coefficients from a differences-in-differences specification 1, which examines the impact of a village becoming part of an SC-reserved constituency from a general constituency at the school level. Columns 4-6 report coefficients from a differences-in-differences specification 2, which assesses the impact of a village leaving reserved status and becoming part of a general constituency. Column 1 (and Column 4) include all schools in the sample, Column 2 (and Column 5) include villages with below-median SC share (based on the median SC share at the state level), and Column 3 (and Column 6) includes villages with above-median SC share. All specifications include school and year fixed effects and control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population, and (4) village literacy rate. State-year linear trends are also added to account for state-specific factors that change linearly over time. Standard errors are clustered at the pre-delimited electoral constituency level. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

Table 3

Impact of political quotas on entrepreneurial activity among SC population (Full Sample)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sample	Entering Reservation				Leaving Reservation			
Dependent Variable:	SC Owned Firm		Size SC Firm		SC Owned Firm		Size SC Firm	
$(GEN \Rightarrow SC)_i \times post_t$	1.079***	0.735**	2.028**	1.501**				
	(0.373)	(0.342)	(0.797)	(0.763)				
$(SC \Rightarrow GEN)_i \times post_t$					-1.108*	-0.823	-1.007	-1.001
					(0.632)	(0.618)	(1.068)	(0.989)
Mean of Dep. Var.	5.15	5.15	8.43	8.43	7.08	7.08	11.01	11.01
Observation(n)	950,823	950,672	950,823	950,672	229,067	229,067	229,067	229,067
Village(n)	345,775	345,721	345,775	345,721	83,649	83,649	83,649	83,649
Year FE & Village FE	✓	✓	✓	✓	✓	✓	✓	✓
Village Controls	✓	✓	✓	✓	✓	✓	✓	✓
State-Year Linear Trends	✗	✓	✗	✓	✗	✓	✗	✓
Cluster SE	AC	AC	AC	AC	AC	AC	AC	AC
R-Squared	.647	.656	.499	.504	.682	.691	.567	.573

Notes: The dependent variable is the number of firms owned by the SC community (SC-owned firm) and the size (number of workers) of SC-owned firm (Size SC Firn) in a village. Columns 1-4 report coefficients from a differences-in-differences specification 1, which examines the impact of a village becoming part of an SC-reserved constituency (from a general constituency) at the village level. Columns 4-6 report coefficients from a differences-in-differences specification 2, which assesses the impact of a village leaving reserved status and becoming part of a general constituency. The sample includes a full sample: (1) an Early Cohort Treated before 2011 and (2) a Late Cohort Treated in or after 2011. All specifications include village and year fixed effects and control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population, and (4) village literacy rate. In columns 2,4,6, and 8, we add state-year linear trends are also added to account for state-specific factors that change linearly over time. Standard errors are clustered at the pre-delimited electoral constituency level. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively

Table 4

Impact of political quotas on the source of funding of SC owned firms(Full Sample)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dependent Variable	Souce of Funding for SC owned Firm									
	Financial Inst.		Moneylender		Government		Other Sources		Self-Finance	
(GEN $\Rightarrow$ SC)$_i \times$ post$_t$	0.050*		-0.034**		-0.017		0.092**		0.645**	
	(0.026)		(0.014)		(0.014)		(0.040)		(0.317)	
(SC $\Rightarrow$ GEN)$_i \times$ post$_t$		-0.044*		-0.016		-0.010		-0.147*		-0.606
		(0.023)		(0.027)		(0.021)		(0.076)		(0.566)
Mean of Dep. Var.	0.12	0.13	0.08	0.10	0.12	0.15	0.31	0.37	4.52	6.34
Observation(n)	950,672	229,067	950,672	229,067	950,672	229,067	950,672	229,067	950,672	229,067
Village(n)	345,721	83,649	345,721	83,649	345,721	83,649	345,721	83,649	345,721	83,649
Year FE & Village FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Village Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
State-Year Linear Trends	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cluster SE	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC
R-Squared	.406	.419	.416	.389	.379	.406	.393	.411	.642	.681

Notes: The dependent variable is the number of SC owned firm by different sources of finance. Columns 1,2 are the number of SC-owned firms financed by Financial Institutions; Columns 3,4 is the number of SC-owned firms financed by unofficial sources (Moneylenders); Columns 5,6 are the number of SC-owned firms financed by the government; Columns 7,8 and column 9,10 are the number of SC owned firm financed by other sources and self-financed respectively. Columns 1,3,5,7,9 report coefficients from a differences-in-differences specification 1, which examines the impact of a village becoming part of an SC-reserved constituency (from a general constituency) at the village level. Columns 2,4,6,8,10 report coefficients from a differences-in-differences specification 2, which assesses the impact of a village leaving reserved status and becoming part of a general constituency. The sample includes both **Early and Late Cohort** (See Table A8 for early cohort). All specifications include village and year fixed effects and control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population, and (4) village literacy rate. State-year linear trends are also added to account for state-specific factors that change linearly over time. Standard errors are clustered at the pre-delimited electoral constituency level. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively

Table 5

Impact of political quotas on the quality of elected politician

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Effect of Political Quotas on Political Class									
Sample	Entering Reservation					Leaving Reservation				
Dependent Variable:	Contest(N)	Age	No. of Crimes	Education	Log Wealth	Contest(N)	Age	No. of Crimes	Education	Log Wealth
(GEN $\Rightarrow$ SC)$_i \times$ post$_t$	-0.5326**	-2.4409**	-1.0543***	-0.8701**	-0.7638***					
	(0.2312)	(1.1332)	(0.2152)	(0.4078)	(0.1430)					
(SC $\Rightarrow$ GEN)$_i \times$ post$_t$						-0.4608	0.4069	0.8516***	0.9458**	1.1762***
						(0.2811)	(1.3622)	(0.2703)	(0.4419)	(0.1919)
Mean of Dep. Var.	2.65775	48.96144	0.98639	13.94217	15.30331	2.52496	48.26026	0.50781	13.52827	14.34072
Observation(n)	745,510	677,800	735,862	690,972	672,836	183,422	166,588	182,544	165,984	165,588
Village(n)	372,756	338,901	367,932	345,487	336,419	91,712	83,295	91,273	82,993	82,795
Year FE & Village FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Village Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
State-Year Linear Trends	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cluster SE	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC
R-Squared	.78	.758	.819	.78	.87	.786	.741	.604	.802	.904

Notes: The dependent variables are the characteristics of the politician (winner from the constituency) representing the villages both before and after delimitation. Column 1,6 is the number of times the politician has contested elections; Column 2,7 is the age of the politician at the time of contesting the elections; Column 3,8 is the number of crimes committed by the politician; Column 4,9 is the standardized education score (0 to 20) of the politician; and column 5,10 is the log wealth (Assets - liabilities)declared by the politician at the time of contesting the elections. Columns 1-5 report coefficients from a differences-in-differences specification 1, which examines the impact of a village becoming part of an SC-reserved constituency (from a general constituency) at the village level. Columns 6-10 report coefficients from a differences-in-differences specification 2, which assesses the impact of a village leaving reserved status and becoming part of a general constituency. The data here has two periods (one pre- and one post). All specifications include village and year fixed effects and control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population, and (4) village literacy rate. State-year linear trends are also added to account for state-specific factors that change linearly over time. Standard errors are clustered at the pre-delimited electoral constituency level. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively

Table 6

Testing for gerrymandering

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Sample	Gerrymendering		Who are the Delimitation Commission members?				
	Common Area	Common Voters	Incumbent	Margin of Winning	Vote Share	N (Elected)	N(Contested)
1(Member)$_i$	1.716	13079	0.123**	2.198*	1.794**	0.727***	0.885***
	(1.651)	(8579.2)	(0.057)	(1.097)	(0.854)	(0.198)	(0.235)
Mean of Dep. Var.	73.604	131,206	0.358	12.040	47.427	1.989	2.601
Observation(n)	3,546	3,546	3,544	3,021	3,021	3,544	3,544
State FE	✓	✓	✓	✓	✓	✓	✓
Cluster	State	State	State	State	State	State	State
R-Squared	0.0318	0.4085	0.1119	0.1301	0.2342	0.0836	0.1012

Notes: The dataset includes sitting members of the pre-delimited assembly constituencies of Indian states; a selected group of senior members from ruling and opposition political parties are part of the delimitation committee. The independent variable, "Member," is a dummy variable indicating whether the MLA is part of the delimitation committee. Columns 3-7 examine if members of the delimitation committee differ in their current and past electoral performance. Columns 1-2 test for evidence of gerrymandering by committee members. Column 1, the dependent variable, measures the extent of land overlap between the parent (pre-delimitation) constituency and the child (post-delimitation) constituency. Column 2 does the same for common voters between the parent and child constituencies. State-fixed effects are included, and standard errors are clustered at the state level. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

Table 7

Village level outcomes: local area development

(a) Panel A: Entering Reservation

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable:	Nightlights		New Road		Electrification	
Method:	TWFE	Borusyak	TWFE	Borusyak	TWFE	Borusyak
(GEN ⇒ SC)$_i$ × post$_t$	0.133	0.186*	0.026*	0.032***	0.041*	0.057**
	(0.098)	(0.102)	(0.013)	(0.011)	(0.022)	(0.023)
Mean of Dep. Var.	4.53	4.53	0.12	0.12	0.28	0.28
Observation(n)	3,343,207	3,343,207	1,347,088	1,347,088	2,448,402	2,448,402
Village(n)	334,322	359,814	84,194	85,276	222,583	224,481
Year FE & Village FE	✓	✓	✓	✓	✓	✓
Control	✓	✓	✓	✓	✓	✓
Cluster	AC	AC	AC	AC	AC	AC
R-Squared	.89		.642		.634	

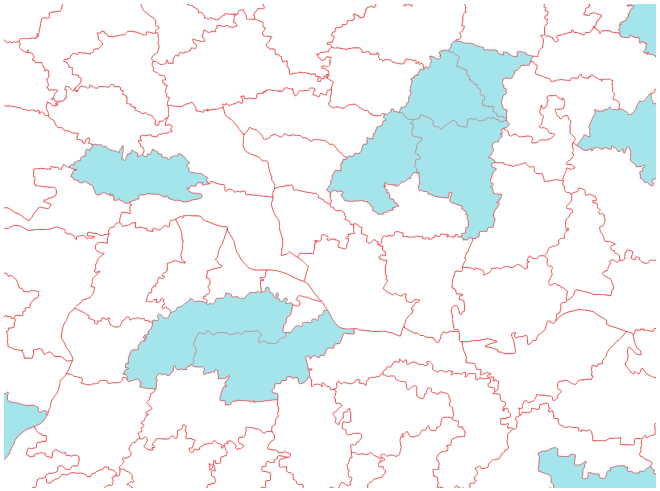
(b) Panel B: Leaving Reservation

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable:	Nightlights		New Road		Electrification	
Method:	TWFE	Borusyak	TWFE	Borusyak	TWFE	Borusyak
(SC ⇒ GEN)$_i$ × post$_t$	0.039	0.088	0.010	0.018	-0.012	0.014
	(0.127)	(0.136)	(0.018)	(0.016)	(0.029)	(0.029)
Mean of Dep. Var.	4.67	4.67	0.15	0.15	0.30	0.30
Observation(n)	816,770	816,770	242,832	242,832	558,844	558,844
Village(n)	81,678	88,013	15,178	15,366	50,805	51,176
Year FE & Village FE	✓	✓	✓	✓	✓	✓
Control	✓	✓	✓	✓	✓	✓
Cluster	AC	AC	AC	AC	AC	AC
R-Squared	.886		.631		.641	

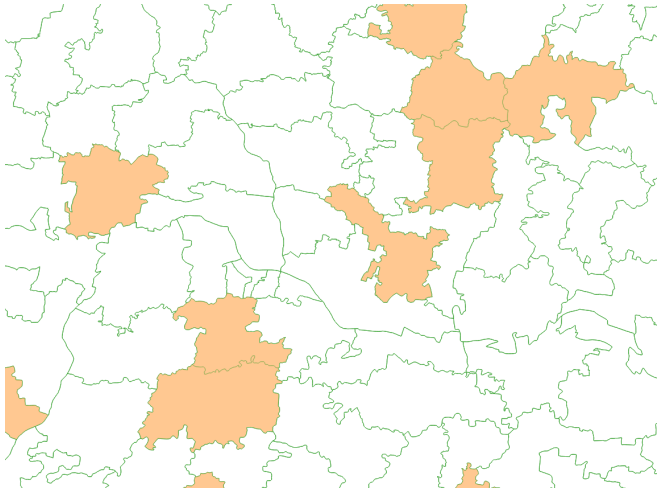
Notes: The dependent variables are the village level economic/development indicator - nightlights (ranges from 0 to 64), New Road - dummy equals to 1 in the year when a new road is awarded to the village under PMGSY, Electrification is a dummy equals to 1 in the year when the village got electrified under RGGVY. In Panel A, we present the coefficients from a differences-in-differences specification 1, which examines the impact of a village becoming part of an SC-reserved constituency (from a general constituency) at the village level. We present DID coef. from TWFE and Borusyak et. al. 2024. TWFE (Borusyak) specification includes village and year(not in Borusyak) fixed effects and control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population and (4) village literacy rate. Similarly, Panel B reports coefficients from a differences-in-differences specification 2, which assesses the impact of a village leaving reserved status and becoming part of a general constituency. Standard errors are clustered at the pre-delimited electoral constituency level. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively

Figure 1
Illustration of Empirical Strategy

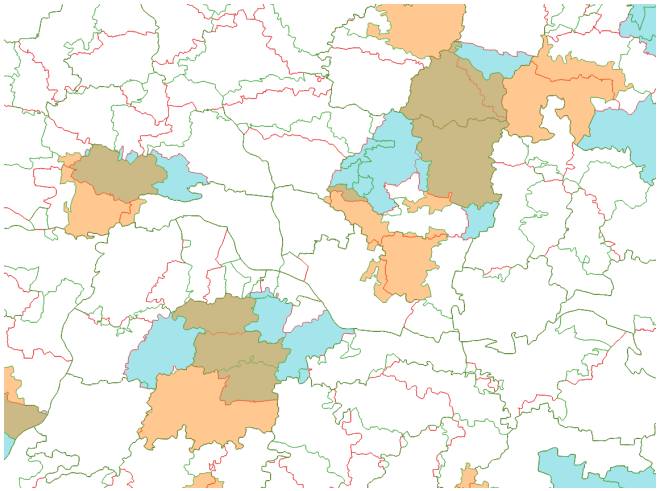
A. Pre-delimitation constituencies



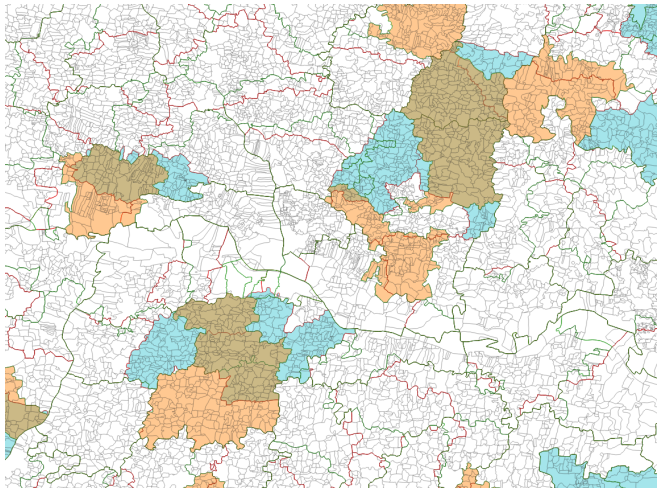
B. Post-delimitation constituencies



C. Pre and Post delimitation constituencies



D. Constituencies with villages



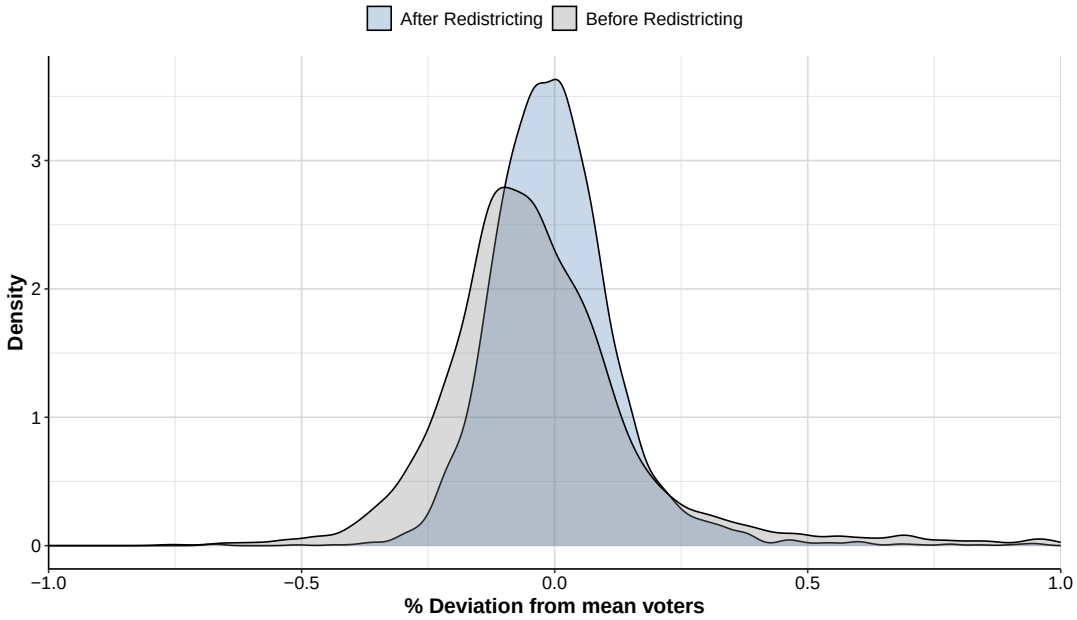
Notes: Figure 1(a) shows the electoral constituency before the delimitation exercise of 2008. The red line represents the constituency boundary, with blue-shaded constituency regions reserved for SCs. Figure 1(b) shows the electoral constituency after the delimitation, with constituencies shaded as orange reserved for SC. In Figure 1(c), we combine the pre and post-delimited map and can see considerable variation with the boundary and the area reserved for SC. Finally, in Figure 1(d), we include the villages so that we can now visualize the variation at the village level. Zoomed at the state of Bihar.

Figure 2
Constituencies selected in Adilabad district to be reserved

Sl. No.	No. & Name of Assembly Constituency	2001 CENSUS POPULATION TOTAL	SCs	% of SCs	SC Seats
	ADILABAD	2488003	461214	18.54	TWO
1	2 Chennur (SC)	251989	72911	28.93	1
2	3 Bellampalle (SC)	223283	60161	26.94	2
3	1 Sirpur	251427	52008	20.69	
4	4 Mancherial	276425	51904	18.78	
5	6 Khanapur (ST)	245833	43413	17.66	
6	10 Mudhole	259141	43847	16.92	
7	8 Boath (ST)	227205	36861	16.22	
8	5 Asifabad (ST)	245803	33842	13.77	
9	9 Nirmal	259032	34738	13.41	
10	7 Adilabad	247865	31529	12.72	

Notes: Source: Changing Face of Electoral India: Delimitation 2008, Volume- I, Page- 64

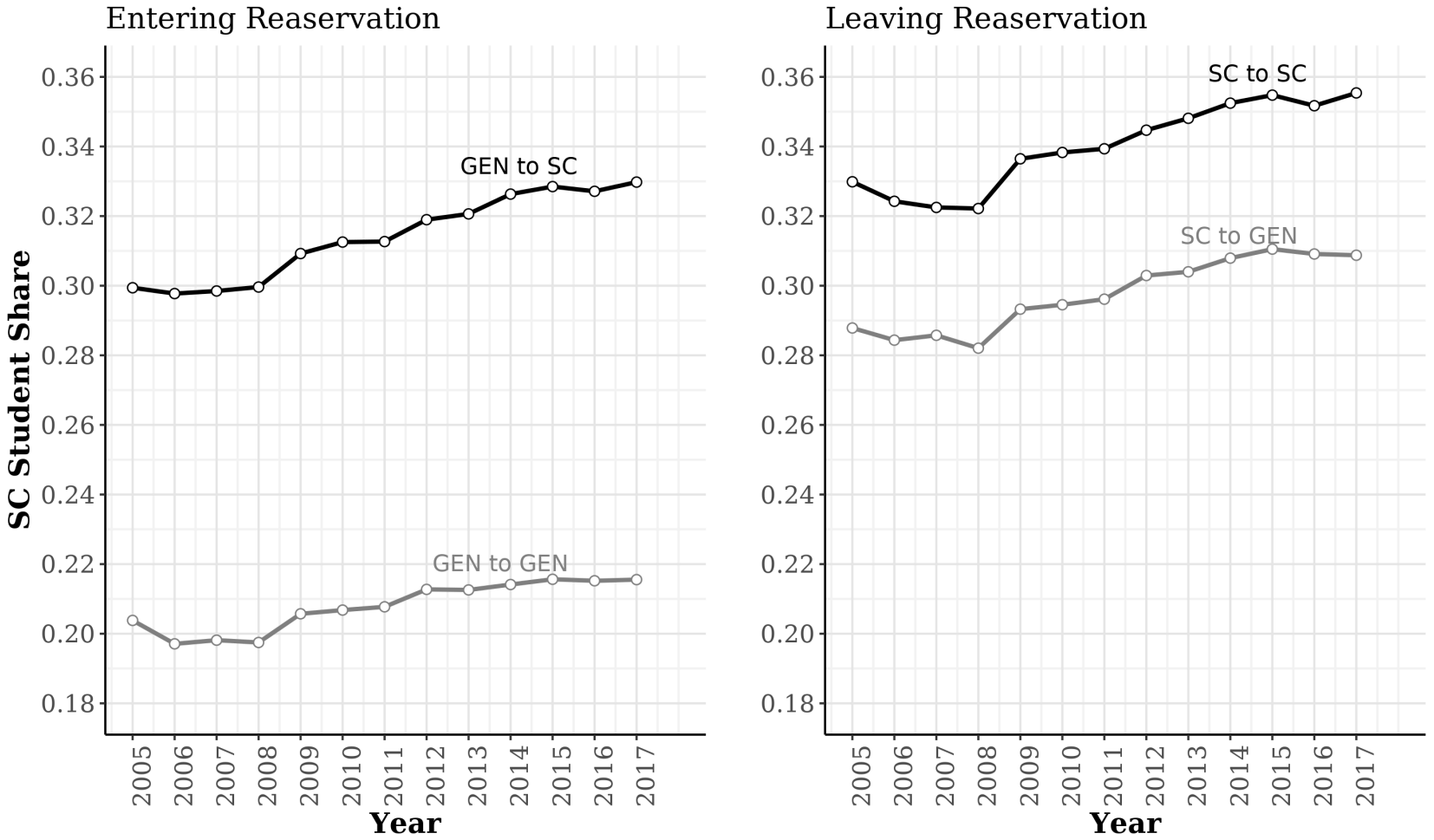
Figure 3
Size of constituencies (voters) before and after delimitation (redistricting)



Notes: In this figure, we plot the variation from mean numbers of voters within a state before and after redistricting. The figure suggests that the main objective of redistricting was achieved as we see that the deviation from mean voters decreases considerably after redrawing. After redistricting, we see a relatively more uniform distribution with less variation in the voter size of the constituency. The deviation is calculated as follows:

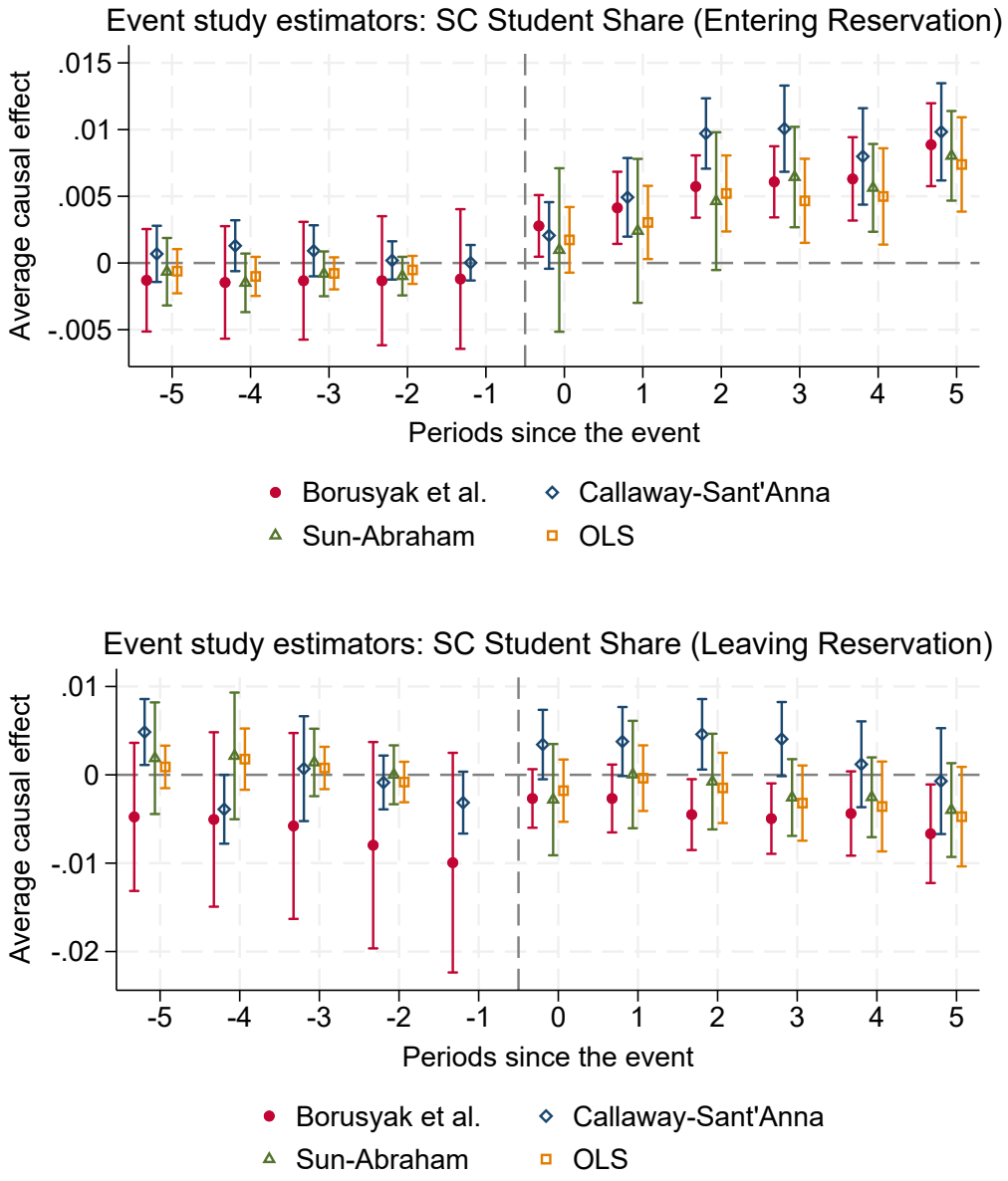
$$\text{deviation} = \frac{\text{voters} - \text{mean_voter_state}}{\text{mean_voter_state}}$$

Figure 4
Raw mean plot of SC student share



Notes: In the left panel we plot the share of SC students in school for the group which changes their status from GEN to SC and which does not changes their status and remain GEN throughout. In the right panel, we plot the share of SC students in school for the group that changes their status from SC to GEN and the SC students share in the school that does not change their status and remains SC throughout.

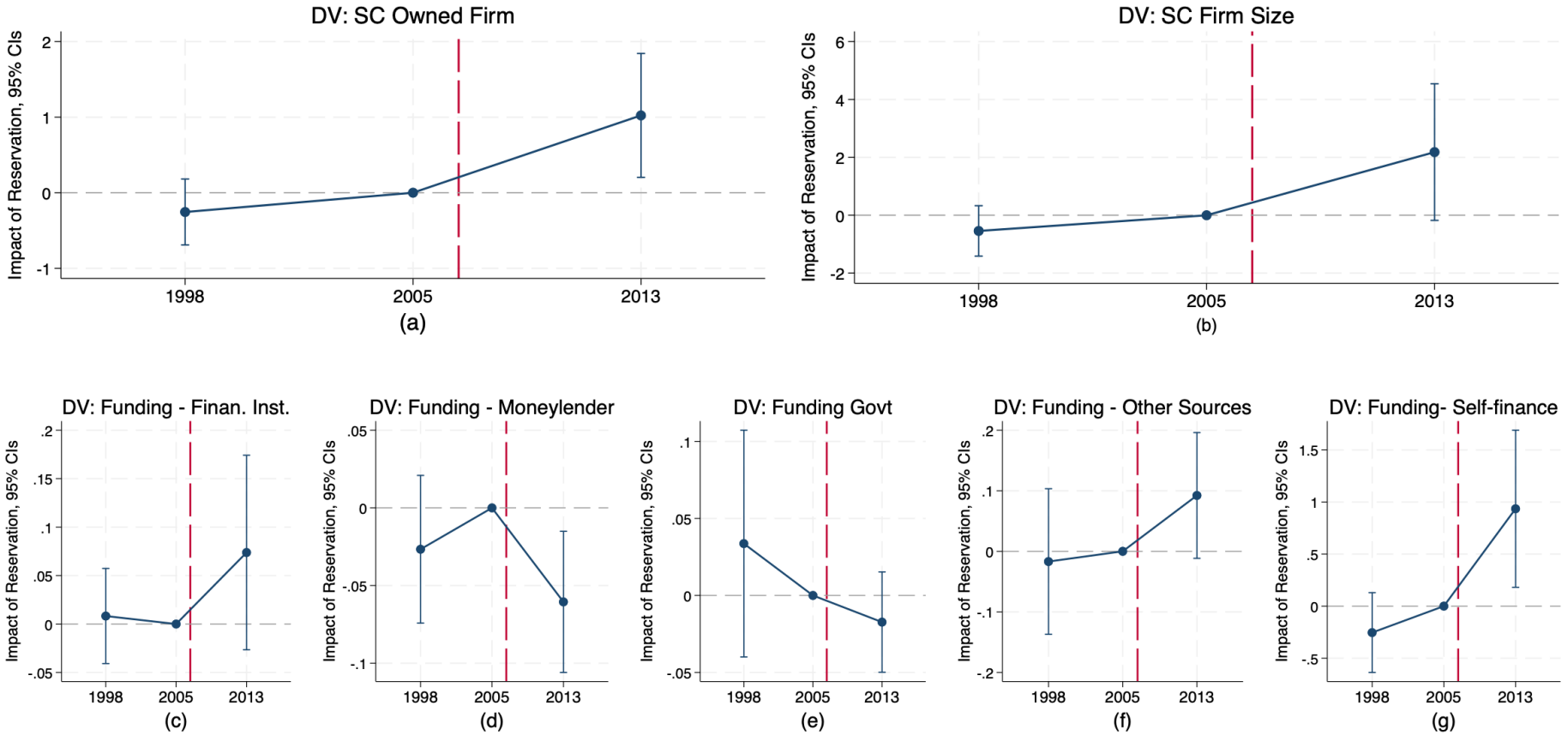
Figure 5
Event Study - SC student share



Notes: The dependent variable is the share of students belonging to the SC community in the school. As we have staggered roll-out, we do robustness using appropriate new methodology to plot the dynamic effects. We include fixed effects for school and year(only in TWFE) in all specifications. We control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population, and (4) village literacy rate. In addition, we add state-year fixed effects, allowing us to control for any time-specific shocks or unobserved variables unique to each state in a given year. The top panel reports the dynamic coefficients from a differences-in-differences specification 1, which examines the impact of a village becoming part of an SC-reserved constituency (from a general constituency) at the school level where the control schools are GEN to GEN. The bottom panel shows the dynamic effects from a differences-in-differences specification 2, which assesses the impact of a village leaving reserved status and becoming part of a general constituency.

Figure 6

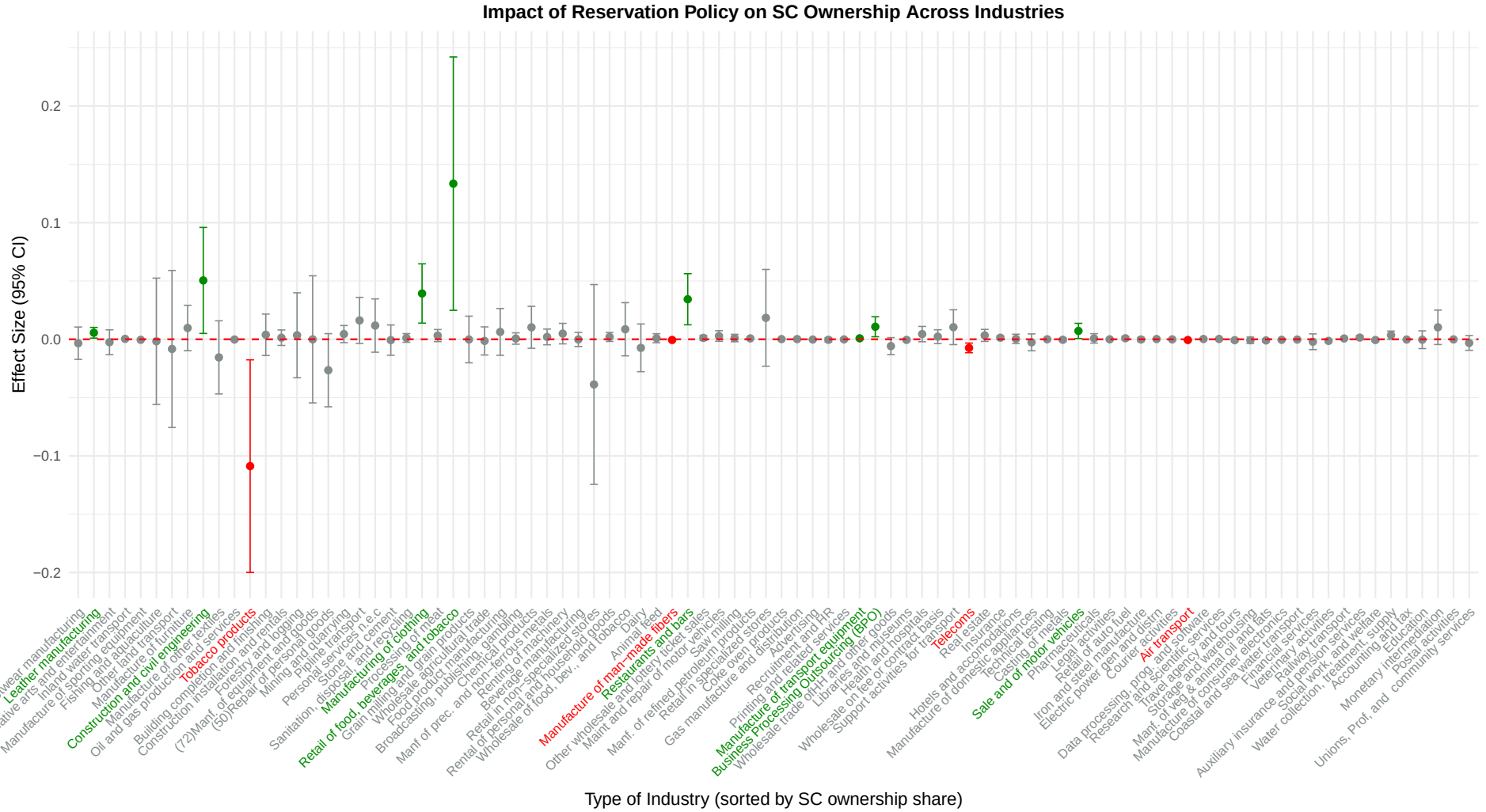
Event Study: Firms related outcome - Entering Reservation



Notes: All seven figures present a TWFE event study for outcomes derived from the Economic Census of India. Each specification includes school and year-fixed effects. We control for time-varying village-level characteristics: (1) SC population share, (2) ST population share, (3) total village population, and (4) village literacy rate. Additionally, state-year linear trends are incorporated to account for state-specific factors that evolve linearly over time. The figures report dynamic coefficients from a differences-in-differences specification (Equation 1), examining the impact of a village transitioning from a general to an SC-reserved constituency. The control group consisted of villages that remained in general constituencies. The dependent variables in each sub-figure are as follows: (a) number of SC-owned firms in the village, (b) firm size (number of workers) in SC-owned firms, (c) number of SC-owned firms financed by financial institutions, (d) number of SC-owned firms financed by informal lenders, (e) number of SC-owned firms financed by the government, (f) number of SC-owned firms funded by NGO's or voluntary organizations, and (g) number of self-financed SC-owned firms.

Figure 7

Impact of political quotas on SC owned firm by industry



Notes: The dependent variable is the number of firms owned by the SC community (SC-owned firm) in a village. We report coefficients from a differences-in-differences specification 1, which examines the impact of a village becoming part of an SC-reserved constituency (from a general constituency) at the village level. We classify the industry using India's National Industrial Classification (NIC), a standardized system for classifying business establishments and other economic activities. We sort the figure by the share of firms owned by SC, i.e. SC has the highest share in the "footwear manufacturing industry" and the least in "unions, professions, and community services". All specifications include village and year fixed effects and control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population, and (4) village literacy rate. State-year linear trends are also added to account for state-specific factors that change linearly over time. Standard errors are clustered at the pre-delimited electoral constituency level.

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A Appendix Tables and Figures

Table A1

Composition of state assembly constituency before and after delimitation

STATE	Pre-Delimitation			Post-Delimitation			Change	
	Total	SC	ST	Total	SC	ST	SC	ST
Andhra Pradesh *(Including Telangana)*	294	39	15	294	48	19	9	4
Arunachal Pradesh**	60	0	59	60	0	59	0	0
Assam**	126	8	16	126	8	16	0	0
Bihar	243	39	0	243	38	2	-1	2
Chhattisgarh	90	10	34	90	10	29	0	-5
Goa	40	1	0	40	1	0	0	0
Gujarat	182	13	26	182	13	27	0	1
Haryana	90	17	0	90	17	0	0	0
Himachal Pradesh	68	16	3	68	17	3	1	0
Jharkhand**	81	9	28	81	9	28	0	0
Karnataka	224	33	2	224	36	15	3	13
Kerala	140	13	1	140	14	2	1	1
Madhya Pradesh	230	34	41	230	35	47	1	6
Maharashtra	288	18	22	288	29	25	11	3
Manipur**	60	1	20	60	1	20	0	0
Meghalaya***	60	0	55	60	0	55	0	0
Mizoram***	40	0	39	40	0	39	0	0
Nagaland**	60	0	59	60	0	59	0	0
NCT of Delhi	70	13	0	70	12	0	-1	0
Odisha	147	22	34	147	24	33	2	-1
Puducherry	30	5	0	30	5	0	0	0
Punjab	117	29	0	117	34	0	5	0
Rajasthan	200	33	24	200	34	25	1	1
Sikkim*	31	2	12*	31	2	12*	0	0
Tamil Nadu	234	42	3	234	44	2	2	-1
Tripura***	60	7	20	60	10	20	3	0
Uttarakhand	70	12	3	70	13	2	1	-1
Uttar Pradesh	403	89	0	403	85	0	-4	0
West Bengal	294	59	17	294	68	16	9	-1
Total	3645	564	521	4032	607	543	43	22

Notes: The table shows the changes in the composition of the State Legislative Assembly of Indian States due to the Delimitation of 2008. The delimitation process did not affect the total number of seats in the state legislative assemblies. Still, the seats for different minorities like Scheduled Castes (SCs) and Scheduled Tribes (STs) were adjusted based on their share in the local population.

*: 12 seats are reserved for Sikkimese of Bhutia-Lepcha (BL) origin under Section 7 (1C) of the Representation of the People Act, 1950.

**: Delimitation exercise is not implemented in Assam, Manipur, Nagaland, Arunachal Pradesh and Jharkhand.

***: No changes were made in the states of Meghalaya, Mizoram, Tripura and Sikkim for ST (BL for Sikkim) constituency as per Section 7 (1C) of the Representation of the People Act,1950.

Table A2

Treatment Status on the basis of Election

State	Election Date	Effective treatment begins..
Andhra Pradesh *(Including Telangana)*	April 2009	2009
Assam**	April 2011	2011
Bihar	November 2010	2011
Chhattisgarh	December 2008	2009
Goa	March 2012	2012
Gujarat	December 2012	2013
Haryana	October 2009	2010
Himachal Pradesh	November 2012	2013
Jharkhand**	December 2008	2009
Karnataka	May 2008	2008
Kerala	April 2011	2011
Madhya Pradesh	December 2008	2009
Maharashtra	October 2009	2010
Manipur**	March 2012	2012
Meghalaya***	March 2008	2008
Mizoram***	December 2008	2009
Nagaland**	March 2008	2008
NCT of Delhi	November 2008	2009
Odisha	April 2009	2009
Puducherry	April 2011	2011
Punjab	January 2012	2012
Rajasthan	December 2008	2009
Sikkim***	May 2009	2009
Tamil Nadu	April 2011	2011
Tripura***	March 2008	2008
Uttarakhand	January 2012	2012
Uttar Pradesh	March 2012	2012
West Bengal	April 2011	2011

Notes: This table shows when effective treatment begins in different states. The delimitation process was finished in 2008, but the new constituency with renewed political status only came into effect when there was an election to elect the state's government. The election is not held simultaneously in all the states, so there is heterogeneity regarding the beginning of the treatment. Additionally, if the election takes place during the first six months of the year, that year is considered treated, and if the election takes in the second half of the year, then the treatment begins the next year.

Table A3

Impact of political quotas on SC enrollment in school (By Gender)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable:	Entering Reservation			Leaving Reservation		
SC student share	SC All	SC Boys	SC Girls	SC All	SC Boys	SC Girls
$(\text{GEN} \Rightarrow \text{SC})_i \times \text{post}_t$	0.654***	0.620***	0.682***			
	(0.112)	(0.114)	(0.115)			
$(\text{SC} \Rightarrow \text{GEN})_i \times \text{post}_t$				-0.095	-0.083	-0.125
				(0.174)	(0.175)	(0.179)
Mean of Dep. Var.	22.09	22.51	21.70	32.20	32.75	31.68
Observation(n)	8,350,804	8,350,804	8,350,804	1,949,463	1,949,463	1,949,463
School(n)	842,319	842,319	842,319	199,131	199,131	199,131
Year FE & School FE	✓	✓	✓	✓	✓	✓
Village Controls	✓	✓	✓	✓	✓	✓
State-Year Linear Trends	✓	✓	✓	✓	✓	✓
Cluster SE	AC	AC	AC	AC	AC	AC
R-Squared	.849	.828	.827	.844	.823	.825

Notes: The dependent variable is the share of students belonging to the SC community in the school. Columns 1-3 report coefficients from a differences-in-differences specification 1, which examines the impact of a village becoming part of an SC-reserved constituency (from a general constituency) at the school level. Columns 4-6 report coefficients from a differences-in-differences specification 2, which assesses the impact of a village leaving reserved status and becoming part of a general constituency. In all specifications, we include school and year-fixed effects. We control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population, and (4) village literacy rate. Additionally, we add state-year linear trends to account for state-specific factors that change linearly over time. Standard errors are clustered at the pre-delimited electoral constituency level. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

Table A4

Impact of political quotas on SC enrollment in school (By type of school)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent Variable:	SC student share							
	All		Pvt. School		Local Govt. School		Central Govt. School	
(GEN $\Rightarrow$ SC)$_i \times$ post$_t$	0.654***		0.534**		0.657***		5.109**	
	(0.113)		(0.210)		(0.118)		(2.484)	
(SC $\Rightarrow$ GEN)$_i \times$ post$_t$		-0.083		-0.021		-0.093		2.876
		(0.177)		(0.398)		(0.174)		(2.165)
Mean of Dep. Var.	22.36	32.46	17.30	22.37	23.46	34.58	19.06	22.14
Observation(n)	8,114,538	1,898,497	1,405,169	317,362	6,691,156	1,577,086	4,006	804
School(n)	816,723	193,960	193,118	44,206	634,371	151,972	929	188
Year FE & School FE	✓	✓	✓	✓	✓	✓	✓	✓
Village Controls	✓	✓	✓	✓	✓	✓	✓	✓
State-Year Linear Trends	✓	✓	✓	✓	✓	✓	✓	✓
Cluster SE	AC	AC	AC	AC	AC	AC	AC	AC
R-Squared	.85	.844	.711	.688	.865	.857	.8	.764

Notes: The dependent variable is the share of students belonging to the SC community in each school. Columns 1-3 report coefficients from a differences-in-differences specification 1, which examines the impact of a village becoming part of an SC-reserved constituency from a general constituency at the school level. Columns 4-6 report coefficients from a differences-in-differences specification 2, which assesses the impact of a village leaving reserved status and becoming part of a general constituency. Column 1 (and Column 4) include all schools in the sample, Column 2 (and Column 5) include villages with below-median SC share (based on the median SC share at India level), and Column 3 (and Column 6) includes villages with above-median SC share. All specifications include school and year fixed effects and control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population, and (4) village literacy rate. State-year linear trends are also added to account for state-specific factors that change linearly over time. Standard errors are clustered at the pre-delimited electoral constituency level. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

Table A5

Impact of political quotas on SC enrollment in school (Heterogeneity: SC Share in the village)

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable:	SC student share					
Sample	Entering Reservation			Leaving Reservation		
	All	Low SC	High SC	All	Low SC	High SC
$(\text{GEN} \Rightarrow \text{SC})_i \times \text{post}_t$	0.654***	0.626***	0.358***			
	(0.113)	(0.109)	(0.131)			
$(\text{SC} \Rightarrow \text{GEN})_i \times \text{post}_t$				-0.083	-0.022	0.013
				(0.177)	(0.206)	(0.194)
Mean of Dep. Var.	22.36	13.79	31.05	32.46	19.54	37.72
Observation(n)	8,114,538	4,078,468	4,036,070	1,898,497	538,562	1,359,935
School(n)	816,723	410,823	405,901	193,960	54,898	139,063
Year FE & School FE	✓	✓	✓	✓	✓	✓
Village Controls	✓	✓	✓	✓	✓	✓
State-Year Linear Trends	✓	✓	✓	✓	✓	✓
Cluster SE	AC	AC	AC	AC	AC	AC
R-Squared	.85	.822	.833	.844	.824	.831

Notes: The dependent variables represent village-level economic and development indicators: *Nightlights*, which range from 0 to 64; *New Road*, a dummy variable equal to 1 in the year a new road is awarded to the village under PMGSY; and *Electrification*, a dummy variable equal to 1 in the year the village receives electrification under RGGVY. In Panel A, we present coefficients from a differences-in-differences specification 1, examining the impact of a village becoming part of an SC-reserved constituency (from a general constituency) at the village level. DID coefficients are reported from both TWFE and Borusyak et al. (2024). The TWFE (Borusyak) specifications include village and year (not included in Borusyak) fixed effects and control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population, and (4) village literacy rate. Similarly, Panel B reports coefficients from a differences-in-differences specification 2, which assesses the impact of a village leaving reserved status and becoming part of a general constituency. Standard errors are clustered at the pre-delimited electoral constituency level. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

Table A6

Impact of political quotas on log of student enrolled by different communities

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent Variable:	Log(Students)							
	Entering Reservation				Leaving Reservation			
	All	OBC	SC	ST	All	OBC	SC	ST
(GEN $\Rightarrow$ SC)$_i \times$ post$_t$	-0.009	-0.031**	-0.006	-0.011*				
	(0.006)	(0.012)	(0.008)	(0.007)				
(SC $\Rightarrow$ GEN)$_i \times$ post$_t$					0.018**	0.027	0.021*	0.002
					(0.008)	(0.020)	(0.011)	(0.009)
Mean of Dep. Var.	4.48	3.12	2.34	0.80	4.52	3.01	2.86	0.66
Observation(n)	8,114,538	8,040,020	8,114,538	8,108,310	1,898,497	1,885,407	1,898,497	1,897,689
School(n)	816,723	815,742	816,723	816,671	193,960	193,821	193,960	193,954
Year FE & School FE	✓	✓	✓	✓	✓	✓	✓	✓
Village Controls	✓	✓	✓	✓	✓	✓	✓	✓
State-Year Linear Trends	✓	✓	✓	✓	✓	✓	✓	✓
Cluster SE	AC	AC	AC	AC	AC	AC	AC	AC
R-Squared	.87	.808	.84	.849	.851	.805	.805	.847

Notes: The dependent variable is the log of students enrolled belonging to the different communities (SC, OBC and ST) in the school. Columns 1-4 report coefficients from a differences-in-differences specification 1, which examines the impact of a village becoming part of an SC-reserved constituency (from a general constituency) at the school level. Columns 5-8 report coefficients from a differences-in-differences specification 2, which assesses the impact of a village leaving reserved status and becoming part of a general constituency. In all specifications, we include school and year-fixed effects. We control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population, and (4) village literacy rate. Additionally, we add state-year linear trends to account for state-specific factors that change linearly over time. Standard errors are clustered at the pre-delimited electoral constituency level. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively.

Table A7

Impact of political quotas on entrepreneurial activity among SC population

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Sample	Entering Reservation				Leaving Reservation			
Cohort	Early	Late	Early	Late	Early	Late	Early	Late
Dependent Variable:	SC Owned Firm		Size SC Firm		SC Owned Firm		Size SC Firm	
(GEN $\Rightarrow$ SC)$_i \times$ post$_t$	1.138***	0.377	2.427**	0.684				
	(0.423)	(0.532)	(1.224)	(0.927)				
(SC $\Rightarrow$ GEN)$_i \times$ post$_t$					-0.552	-1.065	0.019	-1.675
					(0.749)	(0.881)	(1.287)	(1.378)
Mean of Dep. Var.	5.15	5.15	8.43	8.43	7.08	7.08	11.01	11.01
Observation(n)	424,826	446,983	424,826	446,983	82,264	134,902	82,264	134,902
Village(n)	151,250	163,095	151,250	163,095	29,475	49,328	29,475	49,328
Year FE & Village FE	✓	✓	✓	✓	✓	✓	✓	✓
Village Controls	✓	✓	✓	✓	✓	✓	✓	✓
State-Year Linear Trends	✓	✓	✓	✓	✓	✓	✓	✓
Cluster SE	AC	AC	AC	AC	AC	AC	AC	AC
R-Squared	.611	.686	.441	.561	.639	.701	.451	.633

Notes: The dependent variable is the number of firms owned by the SC community (SC-owned firm) and the size (number of workers) of SC-owned firm (Size SC Firn) in a village. Columns 1-4 report coefficients from a differences-in-differences specification 1, which examines the impact of a village becoming part of an SC-reserved constituency (from a general constituency) at the village level. Columns 4-6 report coefficients from a differences-in-differences specification 2, which assesses the impact of a village leaving reserved status and becoming part of a general constituency. The sample is divided into (1) Early Cohort: Treated before 2011 and (2) Late Cohort: Treated in or after 2011. All specifications include village and year fixed effects and control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population, and (4) village literacy rate. State-year linear trends are also added to account for state-specific factors that change linearly over time. Standard errors are clustered at the pre-delimited electoral constituency level. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively

Table A8

Impact of political quotas on the source of funding of SC-owned firms (Early Cohort)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dependent Variable	Souce of Funding for SC owned Firm - Early Cohort									
	Financial Inst.		Moneylender		Government		Other Sources		Self-Finance	
(GEN $\Rightarrow$ SC)$_i \times$ post$_t$	0.070		-0.049***		-0.032		0.100**		1.049***	
	(0.050)		(0.017)		(0.023)		(0.050)		(0.388)	
(SC $\Rightarrow$ GEN)$_i \times$ post$_t$		-0.050		-0.042		0.007		-0.086		-0.381
		(0.036)		(0.037)		(0.026)		(0.086)		(0.704)
Mean of Dep. Var.	0.17	0.15	0.08	0.09	0.13	0.14	0.32	0.31	4.31	4.95
Observation(n)	424,826	82,264	424,826	82,264	424,826	82,264	424,826	82,264	424,826	82,264
Village(n)	151,250	29,475	151,250	29,475	151,250	29,475	151,250	29,475	151,250	29,475
Year FE & Village FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Village Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
State-Year Linear Trends	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cluster SE	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC
R-Squared	.39	.41	.439	.395	.376	.377	.389	.398	.593	.622

Notes: The dependent variable is the number of SC owned firm by different sources of finance. Columns 1,2 are the number of SC-owned firms financed by Financial Institutions; Columns 3,4 is the number of SC-owned firms financed by unofficial sources (Moneylenders); Columns 5,6 are the number of SC-owned firms financed by the government; Columns 7,8 and column 9,10 are the number of SC owned firm financed by other sources and self-financed respectively. Columns 1,3,5,7,9 report coefficients from a differences-in-differences specification 1, which examines the impact of a village becoming part of an SC-reserved constituency (from a general constituency) at the village level. Columns 2,4,6,8,10 report coefficients from a differences-in-differences specification 2, which assesses the impact of a village leaving reserved status and becoming part of a general constituency. The sample here is only **Early Cohort**: Treated in or after 2011 (the result is robust when using full sample, See Table 4). All specifications include village and year fixed effects and control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population, and (4) village literacy rate. State-year linear trends are also added to account for state-specific factors that change linearly over time. Standard errors are clustered at the pre-delimited electoral constituency level. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively

Table A9

Impact of political quotas on entrepreneurial activity among SC population (Late Cohort)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dependent Variable	Souce of Funding for SC owned Firm - Late Cohort									
	Financial Inst.		Moneylender		Government		Other Sources		Self-Finance	
(GEN $\Rightarrow$ SC)$_i \times$ post$_t$	0.032*		-0.019		-0.012		0.061		0.315	
	(0.019)		(0.023)		(0.016)		(0.061)		(0.495)	
(SC $\Rightarrow$ GEN)$_i \times$ post$_t$		-0.041		-0.001		-0.024		-0.205*		-0.794
		(0.030)		(0.038)		(0.030)		(0.110)		(0.799)
Mean of Dep. Var.	0.09	0.12	0.08	0.11	0.13	0.17	0.34	0.43	5.08	7.48
Observation(n)	446,983	134,902	446,983	134,902	446,983	134,902	446,983	134,902	446,983	134,902
Village(n)	163,095	49,328	163,095	49,328	163,095	49,328	163,095	49,328	163,095	49,328
Year FE & Village FE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Village Controls	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
State-Year Linear Trends	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cluster SE	AC	AC	AC	AC	AC	AC	AC	AC	AC	AC
R-Squared	.435	.425	.4	.387	.38	.416	.397	.415	.672	.691

Notes: The dependent variable is the number of SC owned firm by different sources of finance. Columns 1,2 are the number of SC-owned firms financed by Financial Institutions; Columns 3,4 is the number of SC-owned firms financed by unofficial sources (Moneylenders); Columns 5,6 are the number of SC-owned firms financed by the government; Columns 7,8 and column 9,10 are the number of SC owned firm financed by other sources and self-financed respectively. Columns 1,3,5,7,9 report coefficients from a differences-in-differences specification 1, which examines the impact of a village becoming part of an SC-reserved constituency (from a general constituency) at the village level. Columns 2,4,6,8,10 report coefficients from a differences-in-differences specification 2, which assesses the impact of a village leaving reserved status and becoming part of a general constituency. The sample includes only **Late Cohort** (See Table A8 for the early cohort and Table 4 for both cohorts). All specifications include village and year fixed effects and control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population, and (4) village literacy rate. State-year linear trends are also added to account for state-specific factors that change linearly over time. Standard errors are clustered at the pre-delimited electoral constituency level. Statistical significance at the 1%, 5%, and 10% levels is indicated by ***, **, and *, respectively

Table A10

Share of Ownership by Caste Category(in percentages)

Shric	Industry Description	Ownership Percentages				
		Government	OBC	SC	ST	Upper Caste
1	Forestry and logging	1.63	15.09	11.83	64.72	6.72
2	Fishing and aquaculture	1.57	48.54	20.16	6.21	23.51
3	Oil and gas production and services	12.43	33.14	13.61	1.48	39.35
4	Mining and quarrying	4.91	38.77	10.47	7.24	38.61
5	Processing of meat	1.12	50.82	8.59	3.07	36.40
6	Manf. of veg & animal oil and fats	1.11	40.06	2.72	1.59	54.51
7	Dairy	3.48	39.77	6.16	2.69	47.91
8	Grain milling and grain products	0.74	34.64	8.04	4.74	51.84
9	Animal feed	1.70	30.03	6.12	2.36	59.79
10	Food product manufacturing	0.72	32.12	7.67	3.47	56.02
11	Beverage manufacturing	3.10	66.13	6.74	4.06	19.96
12	Tobacco products	0.61	48.94	12.85	4.73	32.86
13	Manufacture of other textiles	1.03	31.23	13.85	6.05	47.85
14	Manufacturing of clothing	0.68	39.94	8.78	3.18	47.43
15	Leather manufacturing	0.56	16.06	34.49	5.06	43.84
16	Footwear manufacturing	0.61	11.01	54.52	5.39	28.48
17	Saw milling	0.83	39.94	5.53	2.83	50.87
18	Printing and related services	0.91	24.47	4.72	2.32	67.57
19	Coke oven products	1.26	15.21	5.09	1.06	77.38
20	Manf. of refined petroleum products	1.83	31.42	5.49	2.05	59.22
21	Pharmaceuticals	1.22	28.43	3.24	1.31	65.80
22	Chemical products	1.76	47.85	7.53	2.08	40.78
23	Manufacture of man-made fibers	0.93	9.35	6.07	2.10	81.54
24	Stone and cement	0.66	59.52	9.10	3.29	27.42
25	Iron and steel manufacture	1.72	29.07	3.13	2.34	63.74
26	Manf. of prec. and non-ferrous metals	0.45	28.41	7.25	1.35	62.55
27	Casting of metals	0.76	22.51	3.40	1.37	71.96
28	Manufacture of domestic appliances	0.73	16.45	3.55	1.43	77.85
29	Manufacture of consumer electronics	1.10	8.76	2.56	1.10	86.49
30	Manufacture of transport equipment	0.45	26.29	4.71	1.29	67.27
31	Manufacture of furniture	0.49	38.75	15.41	7.16	38.19
32	Manufacture of sporting equipment	0.47	14.62	22.67	1.00	61.23
33	Electric power gen and distrn.	60.44	10.29	3.11	0.76	25.40
34	Gas manufacture and distribution	15.62	20.80	4.82	1.74	57.02
35	Water collection, treatment, supply	77.35	6.74	1.31	0.77	13.83
36	Construction and civil engineering	1.46	32.64	14.17	5.34	46.38
37	Building completion and finishing	0.55	41.12	12.82	6.53	38.97
38	Construction installation and rentals	1.61	31.08	11.92	4.51	50.89
39	Maint. and repair of motor vehicles	0.85	32.52	5.55	2.14	58.95
40	Sale and of motor vehicles	0.51	24.72	3.39	1.58	69.80
41	Retail of auto fuel	2.40	26.07	3.13	2.15	66.26
42	Wholesale on fee or contract basis	1.63	21.61	4.12	2.41	70.24
43	Wholesale agricultural trade	0.86	22.70	7.95	2.51	65.98
44	Wholesale of food, bev., and tobacco	5.56	29.12	6.48	2.60	56.25
45	Wholesale trade ofHH and other goods	1.15	21.27	4.52	2.08	70.99
46	Other wholesale and lottery ticket sales	7.43	37.56	5.56	1.66	47.79
47	Retail of food, beverages, and tobacco	0.87	35.54	8.38	3.83	51.38
48	Retail in specialized stores	0.90	27.70	5.43	2.39	63.59
49	Retail in non-specialized stores	5.50	29.67	6.66	3.59	54.58
50	(50)Repair of personal goods	1.31	44.62	11.12	2.51	40.43
51	Hotels and accommodations	10.41	30.02	3.64	2.93	53.00
52	Restaurants and bars	0.99	38.19	5.96	3.33	51.54
53	Railway transport	79.78	5.00	2.09	0.99	12.14
54	Other land transport	0.86	25.50	15.90	5.01	52.73
55	Pipeline transport	4.56	30.29	10.19	4.02	50.94
56	Coastal and sea water transport	9.75	43.49	2.34	1.31	43.11
57	Inland water transport	3.04	17.97	26.53	2.93	49.54
58	Air transport	24.40	16.78	2.96	1.97	53.88
59	Storage and warehousing	12.08	18.95	2.79	1.58	64.60
60	Travel agency and tours	0.92	16.69	2.92	1.09	78.38
61	Support activities for transport	3.83	21.00	4.03	2.21	68.93
62	Postal activities	86.58	3.93	1.12	0.36	8.02
63	Courier activities	7.56	19.79	3.06	1.69	67.91
64	Telecoms	8.14	26.92	3.77	1.89	59.27
65	Monetary intermediation	82.94	3.87	1.16	0.34	11.69
66	Insurance	24.08	15.91	3.70	1.67	54.65
67	Financial services	18.00	31.65	2.27	1.81	46.27
68	Auxiliary insurance and pension services	26.60	15.16	1.33	1.86	55.05
69	Real estate	1.93	16.26	3.74	1.23	76.85
70	Renting of machinery	0.98	42.16	7.16	4.44	45.26
71	Rental of personal and household goods	0.91	29.54	6.63	2.25	60.68
72	(72)Manf. of equipment and goods	0.68	35.95	11.42	8.59	43.35
73	Data processing, prog. and software	2.38	19.33	2.96	1.40	73.94
74	Research and scientific services	32.23	17.29	2.94	1.17	46.38
75	Legal activities	2.09	17.10	3.15	2.31	75.34
76	Accounting and tax	1.94	9.70	1.18	0.78	86.40
77	Technical testing	6.73	25.30	3.47	1.74	62.76
78	Advertising	2.44	17.63	4.78	2.31	72.84
79	Recruitment and HR	2.37	16.14	4.75	1.61	75.12
80	Education	80.04	4.82	1.18	0.64	13.33
81	Health and hospitals	15.75	20.17	4.17	1.62	58.29
82	Veterinary activities	75.08	7.96	2.24	0.76	13.96
83	Social work, and welfare	78.08	5.91	1.33	0.72	13.97
84	Sanitation, disposal, and recycling	30.64	11.21	8.97	2.60	46.58
85	Unions, Prof, and community services	76.22	5.87	1.03	0.74	16.14
86	Creative arts and entertainment	3.03	24.58	27.95	4.24	40.20
87	Business Processing Outsourcing (BPO)	1.76	23.45	4.68	2.13	67.98
88	Libraries and museums	24.27	22.98	4.23	1.93	46.59
89	Broadcasting, publishing, gambling	9.08	23.59	7.60	4.29	55.43
90	Personal services n.e.c	1.70	52.29	10.03	2.51	33.47

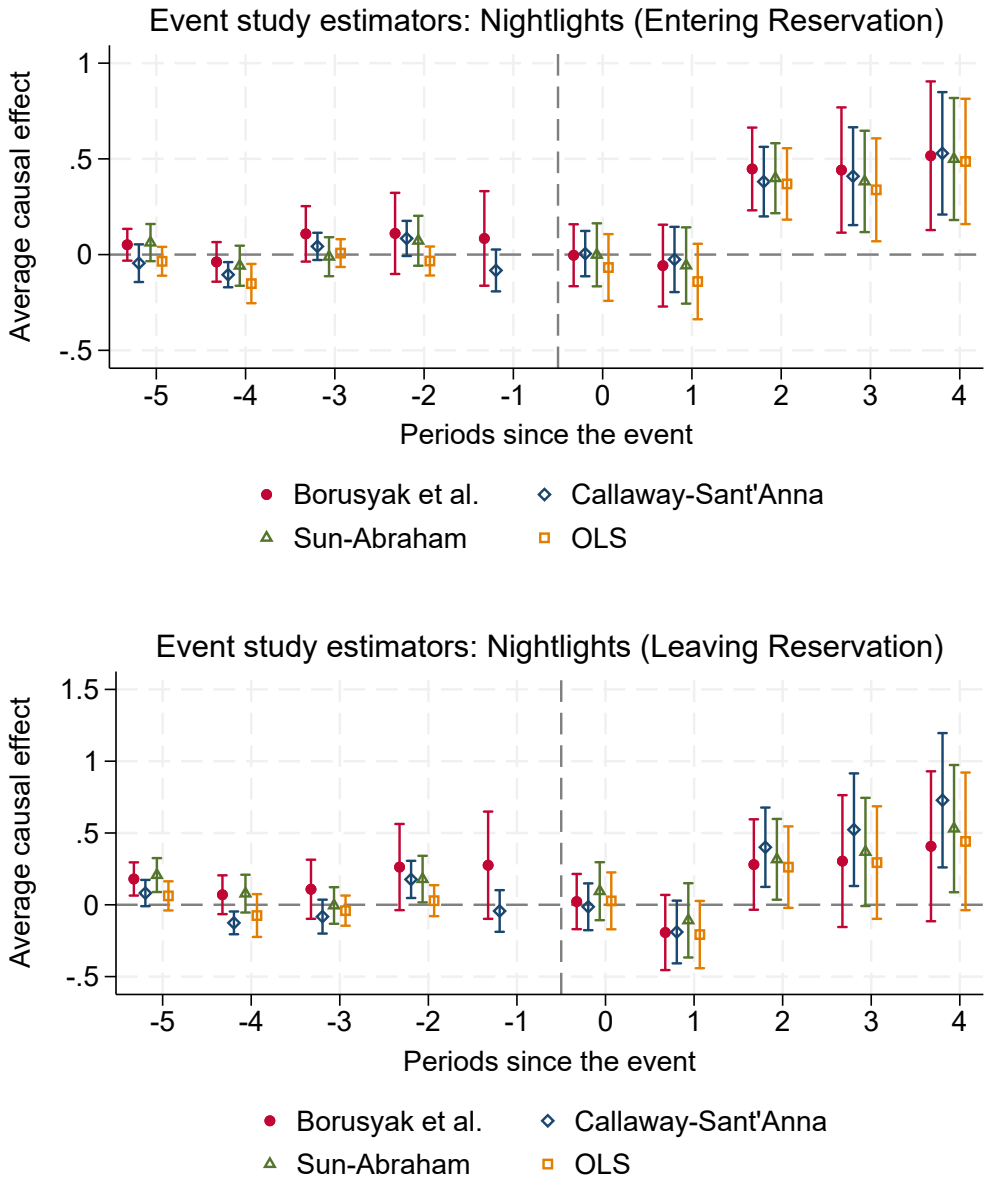
Table A11
Merging of School GIS and DISE data

Merged Using	Number of School	%
UDISE 11	992,000	82.98
UDISE 9	167,711	14.02
String	28,453	2.4
Fuzzy-String	7,256	0.6
Total	1,195,420	100.00

Table A12
Type of Villages for different datasets

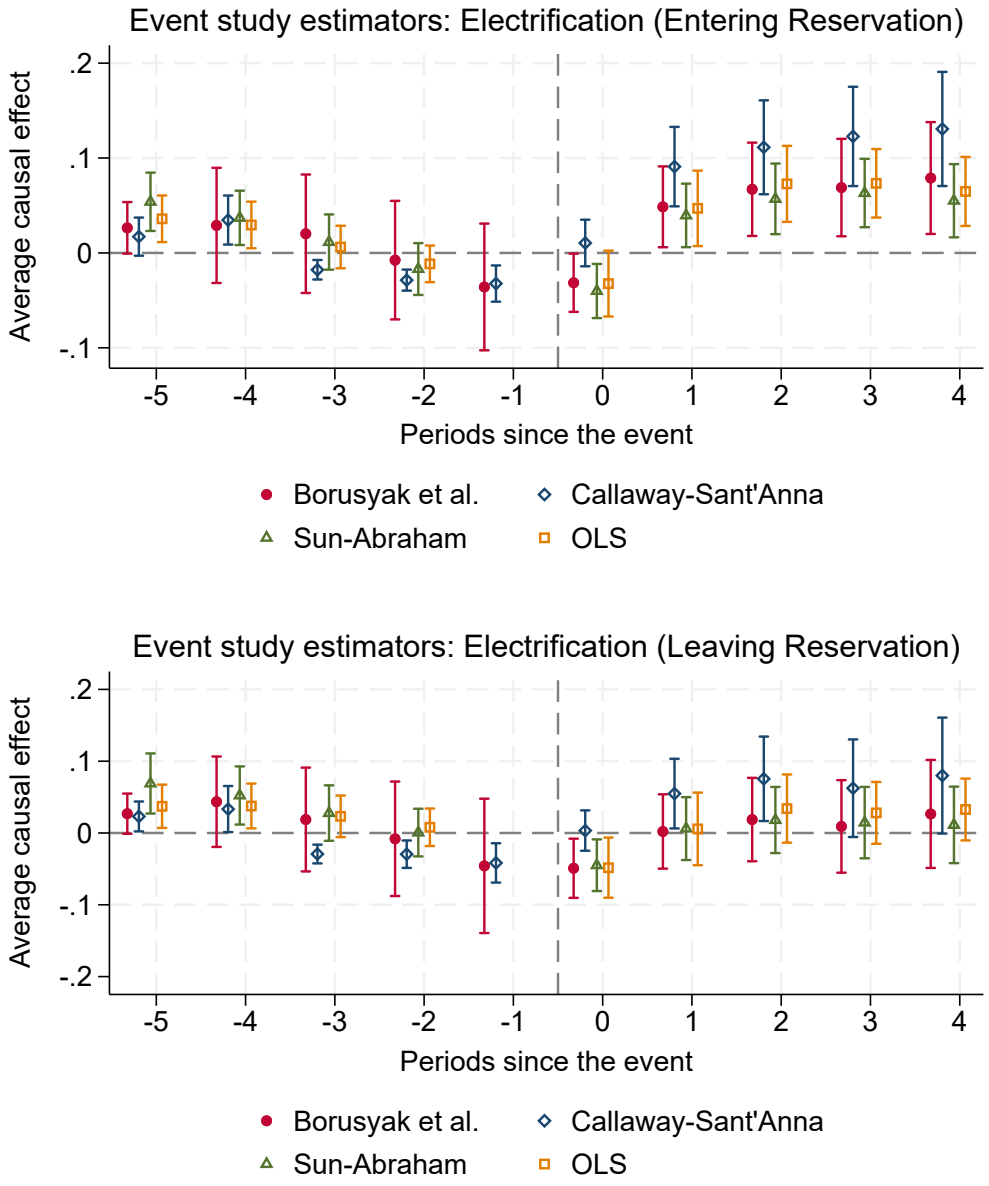
Dataset	GEN ⇒ GEN	GEN ⇒ SC	SC ⇒ GEN	SC ⇒ SC
DISE (Education)	8,100,745	1,174,514	938,094	1,221,388
	(70.84%)	(10.27%)	(8.20%)	(10.68%)
Economic Census	858,453	128,724	102,883	135,560
	(70.04%)	(10.50%)	(8.39%)	(11.06%)
Nightlights	3,123,690	474,450	380,690	499,440
	(69.75%)	(10.59%)	(8.50%)	(11.15%)
Road Construction	1,192,240	172,176	132,032	113,824
	(74.04%)	(10.69%)	(8.20%)	(7.07%)
Electrification	2,154,493	314,798	237,292	325,644
	(71.05%)	(10.38%)	(7.83%)	(10.74%)
Politician Data	654,620	98,898	78,670	106,616
	(69.73%)	(10.53%)	(8.38%)	(11.36%)

Figure A1
Event Study - Nightlights



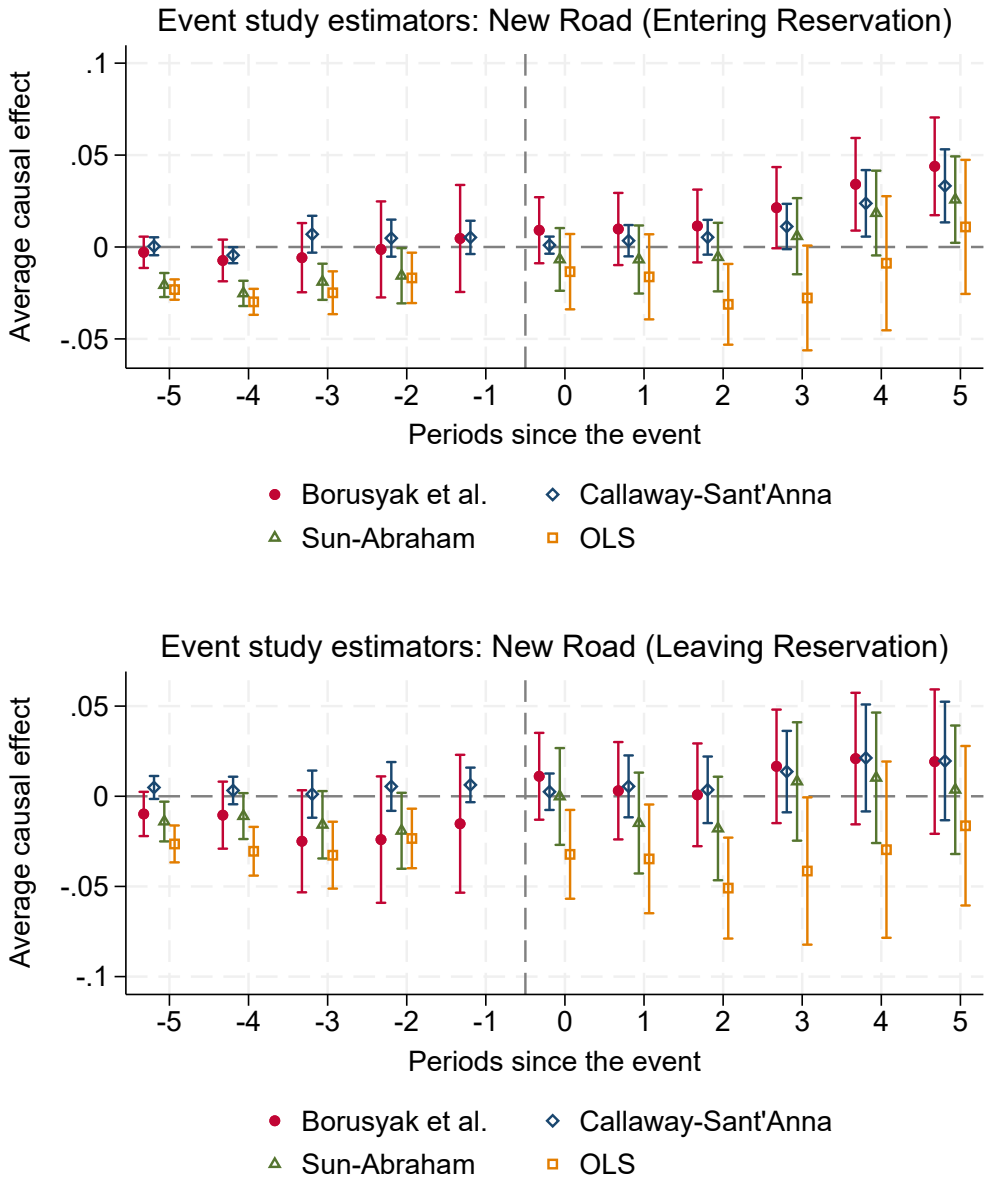
Notes: The dependent variable is the nightlights (ranges from 0 to 64) at the village level. As we have staggered roll-out, we do robustness using appropriate new methodology to plot the dynamic effects. We include fixed effects for school and year(only in TWFE) in all specifications. We control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population, and (4) village literacy rate. The top panel reports the dynamic coefficients from a differences-in-differences specification 1, which examines the impact of a village becoming part of an SC-reserved constituency (from a general constituency) at the school level where the control schools are GEN to GEN. The bottom panel shows the dynamic effects from a differences-in-differences specification 2, which assesses the impact of a village leaving reserved status and becoming part of a general constituency.

Figure A2
Event Study - Electrification



Notes: The dependent variable is the Electrification, which is a dummy equal to 1 in the year when the village got electrified under RGGVY. As we have staggered roll-out, we do robustness using appropriate new methodology to plot the dynamic effects. We include fixed effects for school and year(only in TWFE) in all specifications. We control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population, and (4) village literacy rate. The top panel reports the dynamic coefficients from a differences-in-differences specification 1, which examines the impact of a village becoming part of an SC-reserved constituency (from a general constituency) at the school level where the control schools are GEN to GEN. The bottom panel shows the dynamic effects from a differences-in-differences specification 2, which assesses the impact of a village leaving reserved status and becoming part of a general constituency.

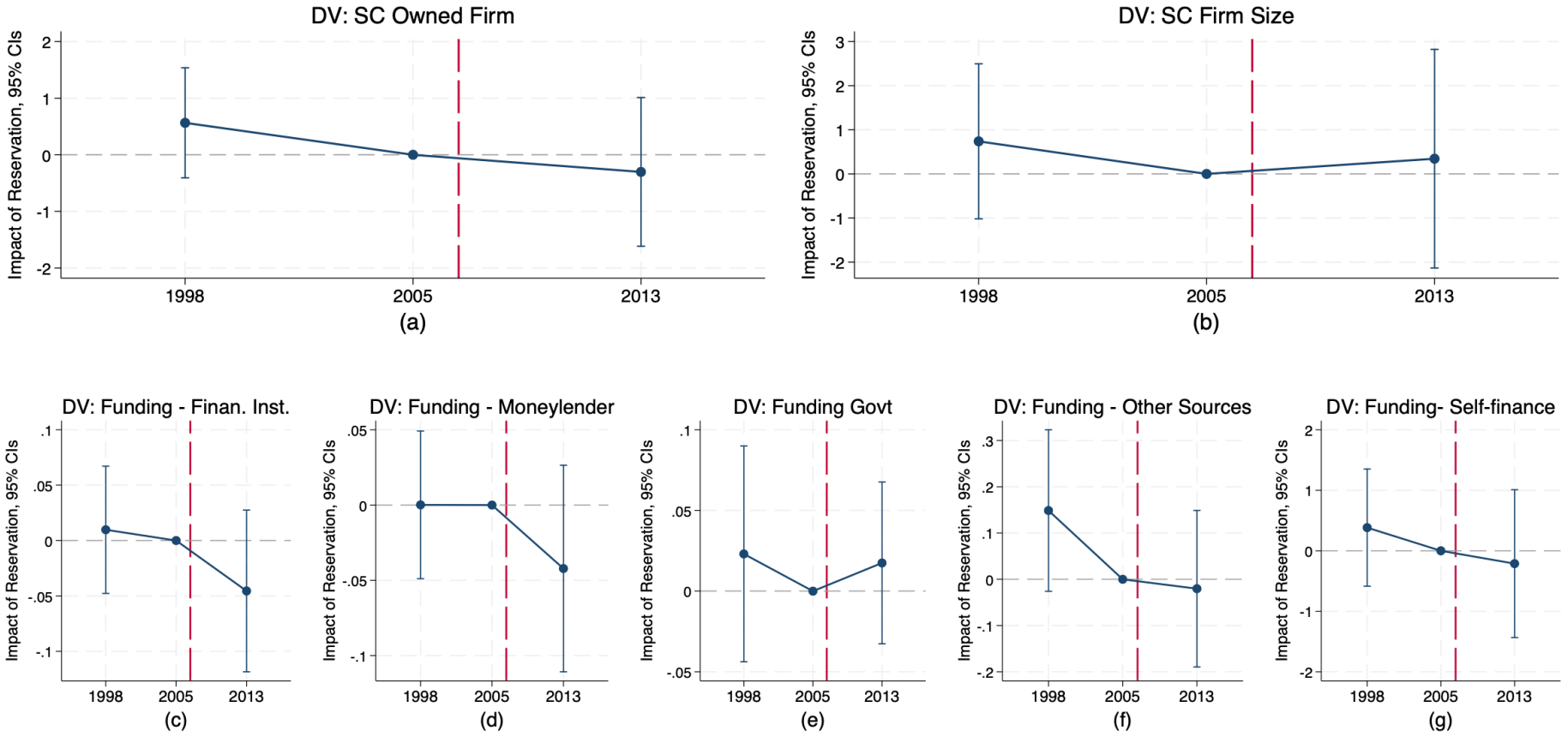
Figure A3
Event Study - New Road Construction



Notes: The dependent variable is the New Road - dummy equals to 1 in the year when a new road is awarded to the village under PMGSY. As we have staggered roll-out, we do robustness using appropriate new methodology to plot the dynamic effects. We include fixed effects for school and year(only in TWFE) in all specifications. We control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population, and (4) village literacy rate. The top panel reports the dynamic coefficients from a differences-in-differences specification 1, which examines the impact of a village becoming part of an SC-reserved constituency (from a general constituency) at the school level where the control schools are GEN to GEN. The bottom panel shows the dynamic effects from a differences-in-differences specification 2, which assesses the impact of a village leaving reserved status and becoming part of a general constituency.

Figure A4

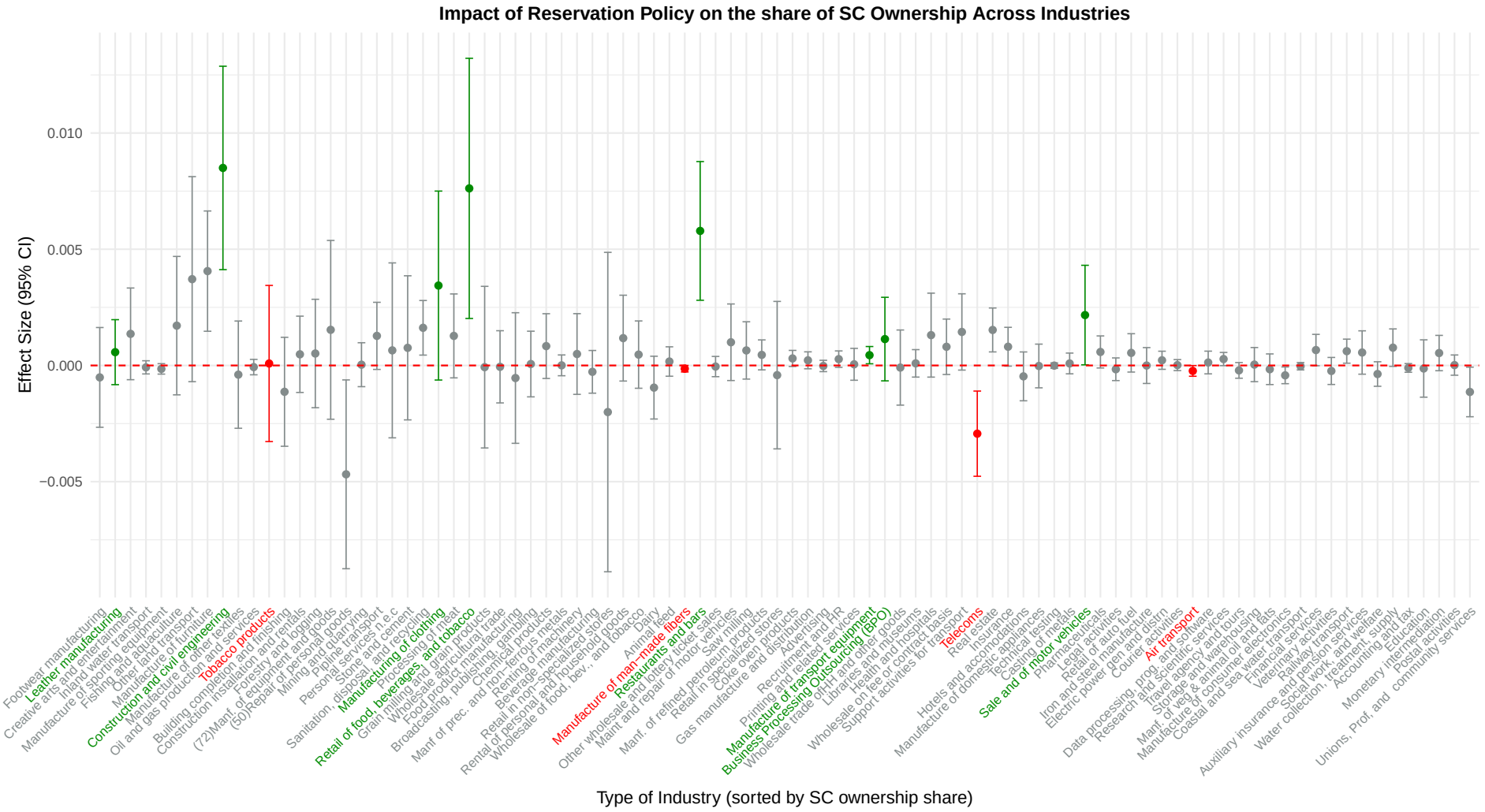
Event Study: Firms related outcome - Leaving Reservation



Notes: All seven figures present a TWFE event study for outcomes derived from the Economic Census of India. Each specification includes school and year-fixed effects. We control for time-varying village-level characteristics: (1) SC population share, (2) ST population share, (3) total village population, and (4) village literacy rate. Additionally, state-year linear trends are incorporated to account for state-specific factors that evolve linearly over time. The figures report dynamic coefficients from a differences-in-differences specification (Equation **??**), examining the impact of a village transitioning from an SC-reserved constituency to a general constituency. The control group consisted of villages that remained reserved for SC. The dependent variables in each sub-figure are as follows: (a) number of SC-owned firms in the village, (b) firm size (number of workers) in SC-owned firms, (c) number of SC-owned firms financed by financial institutions, (d) number of SC-owned firms financed by informal lenders, (e) number of SC-owned firms financed by the government, (f) number of SC-owned firms funded by NGO's or voluntary organizations, and (g) number of self-financed SC-owned firms.

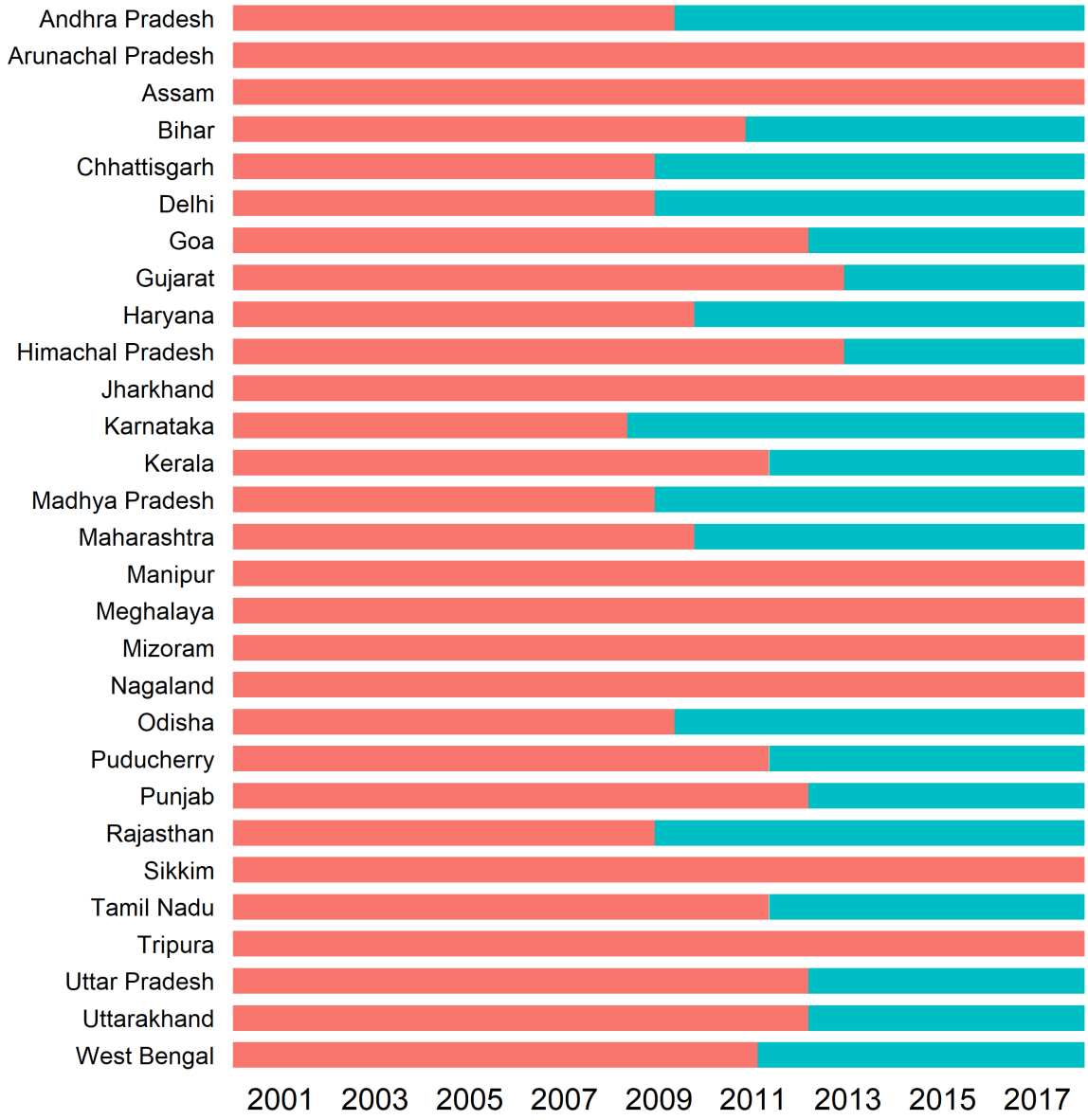
Figure A5

Impact of political quotas on SC owned firm by industry



Notes: The dependent variable is the share of firms owned by the SC community (SC-owned firm) in a village. We report coefficients from a differences-in-differences specification 1, which examines the impact of a village becoming part of an SC-reserved constituency (from a general constituency) at the village level. We classify the industry using India's National Industrial Classification (NIC), a standardized system for classifying business establishments and other economic activities. We sort the figure by the share of firms owned by SC, i.e. SC has the highest share in the "footwear manufacturing industry" and the least in "unions, professions, and community services". All specifications include village and year fixed effects and control for time-varying village-level characteristics: (1) SC population share in the village, (2) ST population share in the village, (3) total village population, and (4) village literacy rate. State-year linear trends are also added to account for state-specific factors that change linearly over time. Standard errors are clustered at the pre-delimited electoral constituency level.

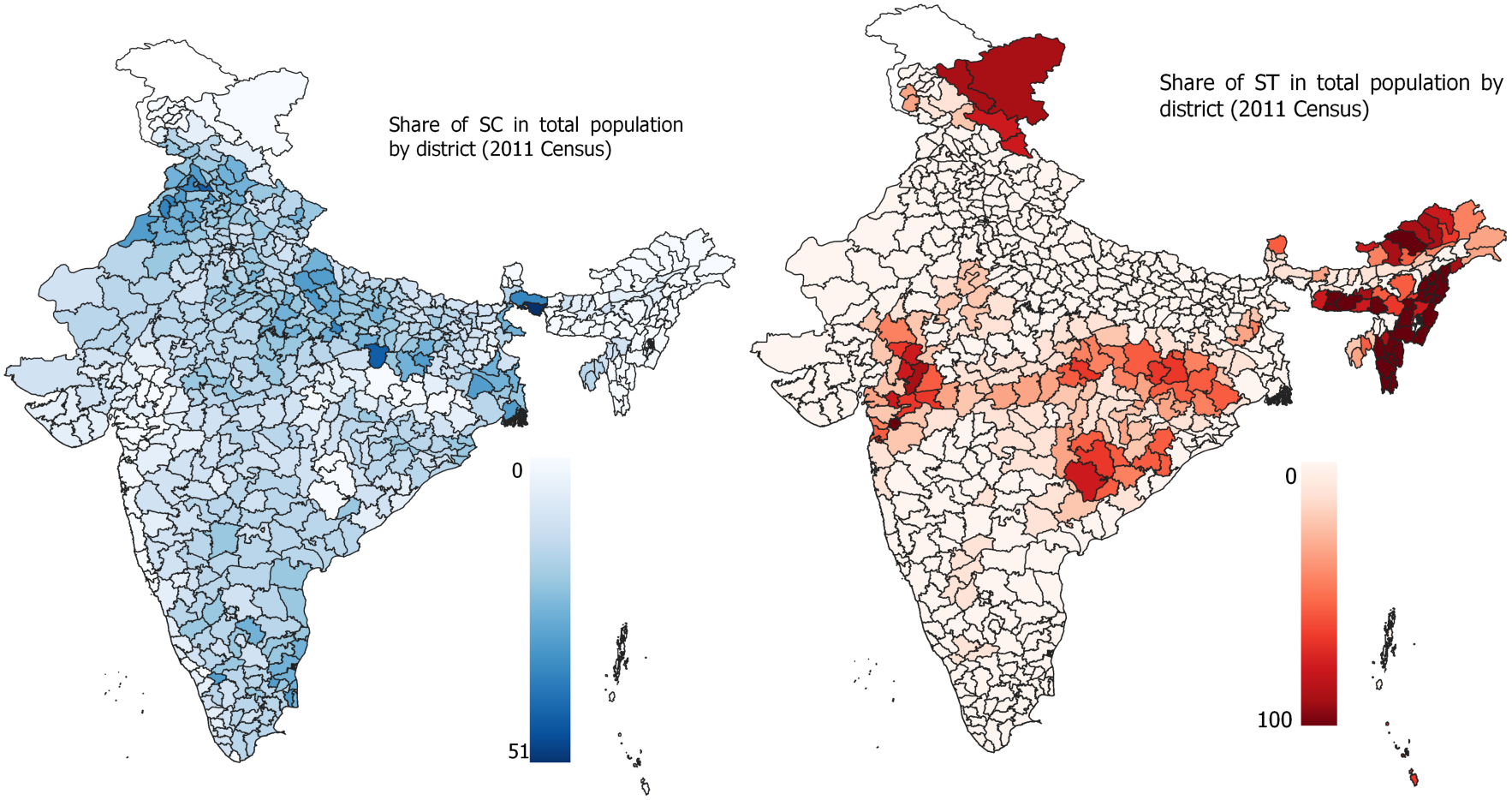
Figure A6
Timeline of treatment



Notes: Delimitation for all states was completed by the year 2008. However, the effective treatment begins once the elections take place with the new maps. As the election took place at different times in different states of India, we see that there is staggered treatment. Red refers to the time period pre-redrawing, and blue refers to post-redrawing. In the states of Arunachal Pradesh, Assam, Jharkhand, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura, the delimitation exercise was not conducted.

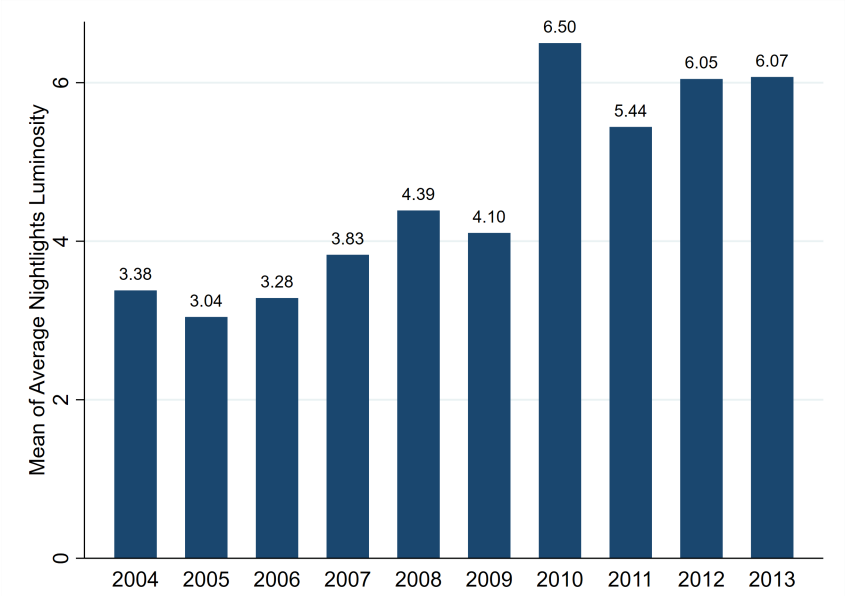
Figure A7

Concentration of SC and ST population at district level (Census 2011)



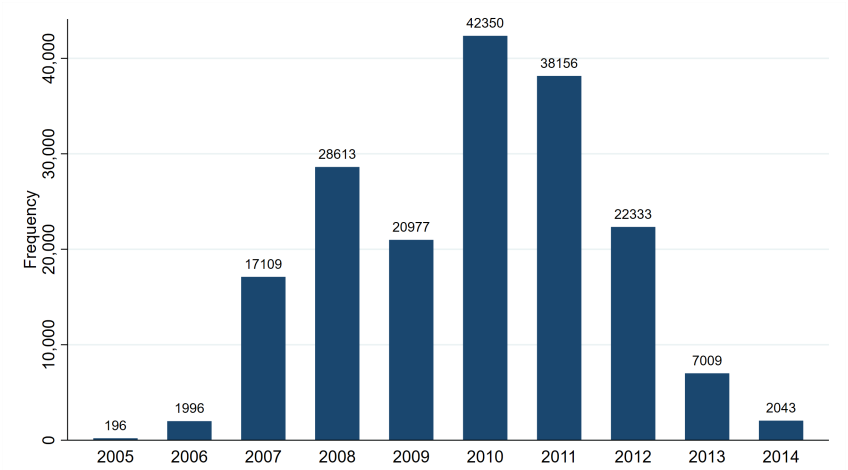
Notes: This figure shows the spatial distribution of Scheduled Caste(SC) community in the left panel and spatial distribution of Scheduled Tribes (ST) in the right panel. We can see that the SC population is relatively spread out and rarely is in the majority. However, the ST population is clustered in certain pockets of India. Given the spatial distribution and electoral system (first past the post system), it is empirically more viable to study the reservation for SC)

Figure A8
Average nighttime light density over the years



Notes: This Figure shows the average nightlight in the village over the years. The average nightlight of a village is calculated by dividing the total light from all the pixels in the village by the number of pixels.

Figure A9
Electrification by the year



Notes: The figure plots the number of villages electrified under the electrification program of the Indian government (RGGVY) from 2005 through 2014.