

Political Implications of Trade Liberalization: Evidence from India*

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Job Market Paper

November 11, 2024

[Most Recent Version](#)

Abstract

In recent decades, many developing countries have integrated into the global economy through trade reforms. However, the gains from trade liberalization have been unevenly distributed among various economic and social groups. This paper examines how adverse economic shocks, induced by trade liberalization, influenced voting behavior and political representation among marginalized groups in India. By utilizing exogenous variation in regional exposure to tariff reductions from India's 1990s trade liberalization and constructing a novel dataset that links politicians to social communities, we establish causal estimates of the economic and political effects of trade reforms. Our findings reveal that trade liberalization led to a relative decline in consumption and earnings growth for marginalized workers. In response, these groups increased their political engagement, resulting in higher vote shares and representation for marginalized politicians, while non-marginalized politicians experienced a corresponding decline. We show that these political effects were most pronounced in districts with a significant marginalized population share, suggesting a political backlash from marginalized groups. Furthermore, we provide evidence that a redistributive policy mitigated these political changes, thereby supporting the economic grievances hypothesis.

Keywords: Political Representation, Political Power, Political Backlash, Trade Liberalization
JEL Classification: F13, J15, O19, P10.

*We are grateful to Chris Udry, Lori Beaman, and Ameet Morjaria for their guidance and support. We thank Sam Asher, Kwok Yan Chiu, Devis Decet, Sean Higgins, Jacopo Ponticelli, Edoardo Teso, Silvia Vannutelli, Vikrant Vig, and Jin Yang as well as seminar participants at Northwestern University, Imperial College London, Colby College, 6th QMUL Economics and Finance Workshop for PhD & Post-doctoral Students, and 4th Early Career Workshop in Quantitative Political Economy at King's College London for helpful comments and feedback. We also thank Sam Asher, Paul Novosad, and Petia Topalova for sharing data on the Anthropological Survey of India and tariffs. Financial support from Global Poverty Research Lab is gratefully acknowledged.

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1 Introduction

Since 1980, many developing countries have integrated into the global economy ([World Bank, 2002](#)). Countries in Latin America, East and South Asia, and Sub-Saharan Africa implemented trade reforms during the 1980s and 1990s, leading to unprecedented global economic integration.¹ Factors that facilitated this significant shift in trade policy in developing countries include balance of payment crises, export promotion, changes in economists’ perception of foreign exchange rate adjustments, and a wave of democratization ([Krueger, 1997](#); [Irwin, 2022](#)). Following these policy shifts, many developing countries experienced accelerating economic growth rates and began to close the gap with developed countries ([Kremer, Willis and You, 2021](#); [Patel, Sandefur and Subramanian, 2021](#)).

However, the gains from trade reforms were not necessarily distributed evenly within these countries. While neoclassical trade theory (i.e., Ricardo and Heckscher-Ohlin) suggests that trade liberalization benefit low-wage workers, who are the locally abundant factor in developing countries, empirical evidence indicates the opposite. Due to the rigidity of labor markets in developing countries, trade liberalization did not necessarily result in labor reallocation and instead exacerbated economic inequality.² In India, [Topalova \(2010\)](#) finds that the 1991 trade liberalization slowed down the rate of poverty reduction in districts exposed to tariff reductions. Overall, the wave of trade liberalization in the 1980s and 1990s produced negative distributional consequences for low-wage workers in developing countries.

How did these adverse economic shocks induced by globalization affect the political landscape in developing countries? Economically marginalized groups in these countries may have altered their political behavior, especially if they initially anticipated positive economic returns from trade liberalization but instead encountered negative distributional effects.³ The political underrepresentation of economically marginalized groups in developing countries may have reinforced their tendency to adjust political behavior in response to economic shocks from trade liberalization ([Altamirano, 2019](#)).

In this paper, we investigate how economic shocks induced by trade liberalization affected political dynamics in India. Specifically, we examine how tariff reductions resulting from trade liberalization first impacted the economic outcomes of marginalized groups and subsequently influenced the political behaviors of these communities. Thus, we estimate the economic and political effects of exposure to import competition on marginalized groups.

¹See [Greenaway, Morgan and Wright \(2002\)](#) for the full list of developing countries that experienced trade liberalization in the 1980s and 1990s.

²See [Goldberg and Pavcnik \(2007\)](#) for the analysis in a few representative developing countries

³[Gaikwad and Suryanarayan \(2023\)](#) show that lower-ranked castes and Muslims, who mainly comprised lower-wage occupations, were more supportive of open trade than members from dominant castes in India.

This measure captures the extent to which local (i.e., Indian) workers and firms were exposed to increasing competition brought by foreign imports.

To establish a causal link between trade liberalization and shifts in economic and political power dynamics, we exploit India’s trade liberalization of the 1990s. This liberalization was externally imposed, rapidly implemented, and largely unexpected, ensuring the exogeneity of the shocks to the economic and political conditions. We began by examining how exposure to tariff reductions affected economic outcomes for marginalized groups, focusing specifically on the effects on consumption and earnings among marginalized workers. We then assess the political consequences of exposure to tariff reductions by analyzing changes in vote shares and political representation of candidates from both marginalized groups and general castes in response to economic outcomes. Lastly, we explore a suggestive mechanism through which adverse economic shocks led to strong political reactions among marginalized groups.

To implement our empirical strategies, we combine several data sources. First, we use detailed candidate-level election statistics, which provide information on electoral competition and the identities of local politicians running for office. Second, we leverage data from the 1990 Indian Economic Census (EC) to measure pre-reform economic conditions. Specifically, we match the pre-reform district-level industry employment shares with industry-level tariff data to measure each district’s exposure to trade liberalization. Third, to understand the economic effects of trade liberalization, we draw on economic outcomes data from the National Sample Survey (NSS) in India, specifically using data from the 43rd and 55th rounds of the NSS household surveys. Fourth, to identify the social group of each politician, we utilize information from the *People of India* (POI) Anthropological Survey launched in 1985. Given that Indian surnames are indicative of an individual’s community affiliation, this dataset enables us to categorize Indian political candidates by their primary communities (i.e., *jatis*). We match approximately 63,000 surnames with 3,000 *jatis*, covering about 83% of all political candidates in our sample. This approach allows us to assign individuals to specific social communities, enabling categorization of politicians into marginalized and non-marginalized groups.

We first document economic effect of trade reforms on marginalized workers. Our findings show that greater exposure to import competition at the district level did not lead to an improvement in consumption or total earnings for workers from marginalized groups. While exposure to tariff reductions had positive impacts on average consumption and total earnings across the economy, these benefits of trade liberalization were offset for marginalized workers. These offsetting effects were concentrated in sectors directly impacted by trade liberalization, as changes in the economic structure primarily occurred within these sectors.

Next, we investigate the political consequences of trade liberalization, focusing on the

vote shares and political representation of candidates from marginalized groups and general castes. Our findings reveal that exposure to import competition increased the vote shares of both all candidates and winning candidates from marginalized groups while reducing those of general castes candidates. We also find that exposure to tariff reductions increased both the shares of all candidates and winning candidates from marginalized groups, suggesting that both the composition of candidates running for office and the political representation of marginalized groups changed in response to trade liberalization. This political shift was most pronounced in districts with a significant marginalized population share, indicating that marginalized voters and politicians mobilized in post-liberalization elections. We interpret this as a political backlash from marginalized groups in response to adverse economic shocks. Additionally, the political backlash was concentrated in the political party that held anti-globalization ideologies.

To understand how adverse economic shocks to marginalized groups led to changes in their political behavior, we explore the economic grievances hypothesis. This hypothesis suggests that economically losing voters from marginalized groups supported candidates from their own social groups, expecting that these candidates would protect the economic interests of marginalized groups. This hypothesis in turn implies that compensatory transfers for economic losses would mitigate the political changes induced by trade liberalization. Our findings indicate that a policy intervention supporting economically disadvantaged districts helped mitigate the shifts in political behavior among marginalized groups caused by exposure to import competition, thereby supporting the economic grievances hypothesis.

Our paper closely relates to the existing literature on globalization and the rise of populism. Advanced economies have been exposed to the “China import shock” since the early 2000s, following China’s accession to the World Trade Organization. Consequently, increased exposure to import competition from China has caused significant economic shocks to labor market structures in these economies. In a canonical paper, [Autor, Dorn and Hanson \(2013\)](#) show that rising Chinese imports led to unemployment, lower labor force participation, and reduced wages among workers in manufacturing industries in the United States. Similar adverse economic shocks from Chinese imports have been observed in other developed countries ([Malgouyres, 2017](#); [Dauth, Findeisen and Suedekum, 2014](#); [Dippel et al., 2018](#)). Subsequent papers show that these trade-induced negative shocks contributed to increasing political polarization in the United States ([Autor et al., 2020](#)) and the rising support for nationalist and populist parties in Europe ([Colantone and Stanig, 2018](#); [Dippel et al., 2022](#); [Barone and Kreuter, 2021](#); [Caselli, Fracasso and Traverso, 2020](#)).⁴ However, due to data limitations, previous work has mainly focused on advanced economies. Our paper fills this knowledge

⁴See [Gurieva and Papaioannou \(2022\)](#) for the comprehensive review.

gap by documenting that adverse economic shocks led to a political backlash among affected social groups in developing countries. Moreover, our findings carry important policy implications, suggesting that compensatory measures for economically disadvantaged groups could mitigate the political backlash induced by adverse economic shocks.

Our paper also contributes to the literature on trade liberalization. Previous studies have found positive effects of market liberalization on the economy, including (i) higher firm productivity in the manufacturing sector (Topalova and Khandelwal, 2011; Sivadasan, 2009); (ii) a reduction in wage inequality (Mishra and Kumar, 2005); and (iii) a reduction in capital misallocation (Bau and Matray, 2023). While the economic effects of trade liberalization have been widely documented, the political effects remain underexplored. Furthermore, recent studies on the political consequences of trade liberalization tend to focus on the demand side of the political market, such as voters’ preferences and voting behaviors (Autor et al., 2020; Dippel et al., 2022; Blanchard, Bown and Chor, 2024).⁵ We address this gap by examining how trade liberalization affected both the supply and demand sides of the political market, impacting not only voters’ behavior but also political representation and selection of candidates from specific social groups.

The rest of the paper is structured as follows. Section 2 briefly discusses the institutional and policy settings. Section 3 describes the dataset we use for the empirical analysis. Section 4 outlines the empirical strategy for causal identification. Section 5 presents the effects of trade liberalization on both economic and political outcomes. Section 6 provides suggestive evidence of how adverse economic shocks led to a political backlash among marginalized groups. Section 7 concludes.

2 Background

In this section, we outline the features of India’s trade liberalization of the 1990s, describe the Indian political setting, and discuss the definition of marginalized groups.

2.1 India’s 1990s Trade Liberalization

Prompted by a balance-of-payment crisis and as part of the International Monetary Fund (IMF) adjustment program, India abandoned its restrictive trade policies in 1991—policies

⁵Previous research on the supply side effects of trade has focused on historical events. In specific, Puga and Treffer (2014) study the implications of increased trade during medieval Venice, while Acemoglu, Johnson and Robinson (2005) provide insights on the role of trade in Western Europe during the 16th century. We speak to these papers by providing new evidence on the political and democratic implications of trade in a modern developing country setting.

that had been in place since independence—and initiated rapid and unforeseen trade liberalization. The crisis arose from a rise in macroeconomic imbalances (i.e., fiscal and balance-of-payments deficits), which increased India’s vulnerability to economic shocks. Consequently, the sudden increase in oil prices due to the Gulf War in 1990, a decline in remittances from Indian workers in the Middle East, weakened demand from major trading partners, and political uncertainty all undermined investor confidence, resulting in significant capital outflows. To address its external payment problems, the Indian government requested a Stand-By Arrangement from the IMF in August 1991.

The conditions in the IMF adjustment program required India to rapidly, drastically, and unilaterally reduce its tariffs, resulting in a narrowing of tariff rate dispersion across sectors. The average tariff rate fell from approximately 80% in 1990 to 40% in 1996, with the standard deviation of tariffs decreasing by about 30% over the same period. Figure 1 shows the decline in the average tariff rate and the standard deviation of tariffs during the liberalization period. As illustrated in Appendix Figure C1, industries with the highest initial tariffs received the largest cuts, and there was substantial variation in tariff changes across industries.⁶

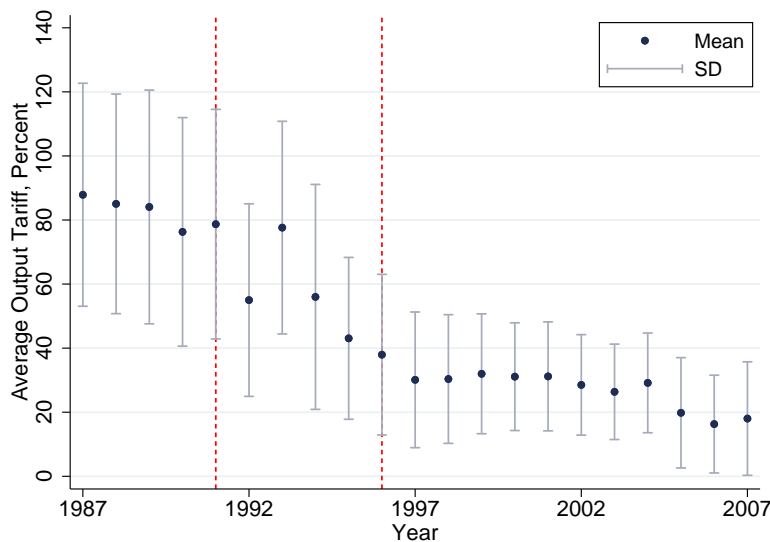


Figure 1. Average Output Tariff, 1987–2007

Notes: This figure shows the average tariff reduction and the standard deviation of tariffs at the industry (4-digit NIC) level during trade liberalization. The period between 1991 and 1996 denotes the most intensive period of tariff reductions.

⁶While tariff reductions constituted a main part of the IMF adjustment program, the program also included delicensing reforms and the relaxation of foreign direct investment (FDI) rules aimed at increasing domestic competition.

Following trade liberalization, total imports, and particularly imports of intermediate inputs, saw an increase (Goldberg et al., 2010). The growth in trade volume outpaced real output, raising the ratio of India’s manufacturing trade to GDP from an average of 13% in the 1980s to 19% by 1999–2000.

Because trade liberalization was prompted by external pressures from the IMF, its timing was largely unanticipated by political actors and firms in India (Varshney, 1998). Additionally, previous literature has shown that the tariff changes were uncorrelated with pre-reform firm and industry characteristics, such as productivity, size, output growth during the 1980s, and capital intensity (Topalova, 2010). Thus, trade liberalization does not appear to have been targeted toward specific industries, nor was it subject to typical political pressure, as the reform was largely unforeseen by firms and political actors in India.

2.2 Politics in India

India is a federal democracy with largely autonomous state-level governments, which grants the states substantial administrative and legislative power. The states account for approximately 60% of total expenditures and have administrative control over numerous areas, such as public goods provision, local labor markets, and public services (Jensenius, 2015; Asher and Novosad, 2017).

Our focus is on politicians in India’s state legislative assemblies, namely the Members of the Legislative Assembly (MLAs). In general, MLA elections are held every five years and are staggered across states. These elections use a first-past-the-post system, where candidates compete in single-member legislative constituencies. The candidate who receives the most votes in a constituency wins a seat in the state parliament, and the party with the largest seat share gets the opportunity to form the state government. During the time period analyzed, India had approximately 4,110 legislative constituencies, and nearly 30,000 single-member constituency elections were contested in total. On average, each constituency includes around 130,000 individual voters and has about nine candidates running for office, with voter turnout averaging around 62%. Out of the 4,110 legislative constituencies, 14% and 12% are reserved for Scheduled Castes and Scheduled Tribes, both of which are described in the next subsection.

2.3 Marginalized Groups in India: The Caste System and Religion

India has several ethnic and religious communities that are marginalized in terms of access to socioeconomic resources and opportunities. Within Hindu society, these marginalized groups, which have historically faced severe social and economic discrimination, are defined through

the Hindu caste system. Specifically, Hindu society consists of several thousand castes, or *jatis*, and caste membership plays a crucial role in people’s identity, influencing the social, economic, and political dimensions of life in India. *Jatis* are closely related to kinship or lineage group, and each *jati* is generally associated with specific traditional occupations. Several *jatis* are organized into a hierarchical system known as *varnas* (Bühler, 1886). The four *varnas* are Brahmins (Priests), Kshatriyas (Warriors), Vaishyas (Merchants), and Shudras (Laborers), in descending order of hierarchy. Large sub-population groups, now referred to as *Dalits* or Scheduled Castes (SC), were historically excluded from the *varna* system. In addition to *Dalits*, another marginalized sub-population group in India is the *Adivasi*, also known as Scheduled Tribes (ST). Both SC and ST are among the most disadvantaged socioeconomic groups and receive reserved quotas in education and government employment. Although affirmative action has narrowed the socioeconomic gaps between SC/ST and other groups over time, SC/ST communities still face economic disadvantages today (Mosse, 2018; Munshi, 2019; Asher, Novosad and Rafkin, 2024).

While India is predominantly Hindu, it is home to a diverse array of religious communities. The following religions represent the largest religious minorities in India and are granted minority status: Muslim (14.2% of the population); Christian (2.3%); Sikh (1.7%), Buddhist (0.7%), Jain (0.4%), and Parsi (0.006%) (Teater and Jenkins, 2019). Districts with a high concentration of minority population are often identified by the Government of India as relatively backward, lagging behind the national average in socioeconomic indicators and basic amenities. This correlates with lower individual welfare and economic participation. For instance, Muslims face lower educational mobility—a critical factor in future economic outcomes—and localities with a high Muslim population share have lower access to public services, even in comparison to marginalized caste groups such as SC and ST (Asher, Novosad and Rafkin, 2024; Asher et al., 2024b). Other religious minorities, such as Christians and Sikhs, have also been discriminated and violence. Thus, like SC and ST, some religious minorities in India have endured economic and political hardships due to their religious identity.

Since India is often classified as a labor-abundant country, neoclassical trade theory predicts that integration into the global economy would benefit low-wage workers, who largely overlap with SC, ST, and Muslims. This theoretical prediction suggests that these social groups would be more supportive of open trade policy than non-marginalized groups. Empirical evidence in India support this implication: Gaikwad and Suryanarayan (2023) find that SC, ST, and Muslim individuals are more likely to support international trade than individuals from forward caste and Other Backward Castes (OBC), based on survey responses and experiments.

However, neoclassical trade theory assumes that factors are mobile across sectors, which is not necessarily the case in India, as evidenced by low spatial and labor mobility (Munshi and Rosenzweig, 2016). Given this labor market rigidity and barriers to factor reallocation, trade liberalization would not necessarily benefit low-wage workers in India (Topalova, 2010). As a result, due to the significant overlap between low-wage workers and certain social classes, SC, ST, and Muslim workers were likely to experience relative economic hardship as a consequence of trade liberalization.

3 Data

To quantify the effects of India’s trade liberalization on the economic and political trajectories of different social groups, we combine several sources of data. Specifically, we compile: (i) establishment-level data from 1990 EC of India; (ii) tariff data from Topalova and Khandwal (2011) and UNCTAD-TRAINS (2020); (iii) households and individual-level data from the NSS; (iv) electoral data from the Election Commission of India (Jensenius and Verniers, 2017; Asher et al., 2021); and (v) jati-level data from the POI Anthropological survey. This section describes these data as well as the sample construction.

3.1 Data on Households and Firms

As our source of information on household earnings and consumption, we use the Indian NSS. The NSS is a large-scale, nationally representative household survey in India, conducted by the Ministry of Statistics and Programme Implementation (MOSPI). The survey is conducted annually and gathers data on household socioeconomic characteristics and economic outcomes from randomly selected households across the country. However, topics are rotated so that certain modules are only available in specific rounds. Since we are interested in earnings and consumption data, we specifically use the 43rd and 55th rounds of NSS data, conducted in 1987–1988 and 1999–2000, respectively, covering periods before and after trade liberalization.⁷

Importantly, the NSS data is particularly valuable for identifying each respondent’s social group, including caste and religion. This enables us to examine the effect of trade liberalization on the welfare and economic activities of marginalized households.

We use 1990 EC employment data to calculate district-level employment shares for each National Industrial Classification (NIC) level prior to trade liberalization. This allows us to

⁷We are unable to use 38th and 50th rounds of NSS data as they do not contain district identifiers.

measure each district’s exposure to tariff reductions.⁸ To ensure consistency in aggregating the data at the district level, we use the concordance provided by [Asher et al. \(2021\)](#). Additionally, since NIC codes in India have evolved over time, we use a harmonized classification across different NIC versions (Shric) as provided by [Asher et al. \(2021\)](#).⁹

3.2 Tariff Data

We use tariff data from [Topalova and Khandelwal \(2011\)](#) and [UNCTAD-TRAINS \(2020\)](#), which provide information on tariff rates at the 6-digit Harmonized System (HS) level across our sample period (1987–2007). To match tariffs with the Shric industry-level classification used in our EC data, we first aggregate tariffs to the 4-digit NIC 1998 level, using the concordance by [Debroy and Santhanam \(1993\)](#).¹⁰ We then apply the industrial concordance data from the Socioeconomic High-resolution Rural-Urban Geographic database ([Asher et al., 2021](#)) to harmonize NIC codes across various versions (NIC 1987, NIC 2004, and NIC 2008), allowing us to compute Shric-level tariff rates over the years.

Finally, we match the yearly Shric-level tariff rates with the district-level 1990 EC data, which includes the employment share of each Shric. We then compute the average tariff rates across all Shrics in each district, weighted by each Shric’s employment share. This weighted average defines the measure of district-level exposure to tariff rates (see Section 4).

3.3 Electoral Data

We use data on politicians’ characteristics and electoral performance from the Election Commission of India ([Jensenius and Verniers, 2017](#); [Asher et al., 2021](#)). The data date back to 1974 and include information on candidates for India’s state legislative assemblies. Our sample covers elections up to 2007, the last election year before the delimitation of state legislative assembly constituencies. Crucially, the data contains district and constituency identifier, which allow us to match electoral data with the district-level exposure to tariff reductions.

⁸Districts are the administrative units under the states or union territories. Each district contains 10 constituencies on average, and no constituencies cross the district borders.

⁹Specifically, the NIC has passed through several versions, and the Shric harmonize NIC codes across NIC 1987, NIC 2004 and NIC 2008.

¹⁰The concordance by [Debroy and Santhanam \(1993\)](#) maps the 6-digit HS (1988) classification to the 3-digit NIC-1987 industries. We use concordance tables provided by the Government of India’s Ministry of Statistics and Programme Implementation to map the 3-digit NIC-87 industries to the 4-digit NIC-98 industries.

3.3.1 Linking Politicians to Social Groups

The electoral data provides candidate-level information but does not include details about candidates' social group affiliation. To analyze the effects of trade reforms on the political representation of marginalized groups, we create a novel mapping that identifies the social group of political candidates.

Specifically, we link politicians' data to social groups using surnames, as Indian surnames typically indicate a person's social group (i.e., *jati*) (Fisman, Paravisini and Vig, 2017). To map surnames to *jatis*, we use the POI survey, which documents characteristics of main communities (*jatis*) in India. The POI data contains information on typical surnames and group names for each *jati*, allowing us to construct a surname-*jati* mapping. Since the names of all political candidates are recorded in the Election Commission data, this surname-*jati* mapping enables us to identify the *jati* affiliation of each politician.¹¹

After identifying the *jati* of each politician, we classify them into specific *varnas* and religious groups to better understand their social affiliations. Specifically, we assign each politician to the following social groups: (i) general castes and OBC; (ii) SC; (iii) ST; (iv) Muslim; and (v) other religious minorities. In our main analysis, we classify SC, ST, and Muslims as *marginalized groups*.¹²

Appendix Figure C6 shows the distribution of politicians across social groups by election year. As illustrated in the figure, general castes are overrepresented in politics, with an average share of around 70%. In contrast, marginalized groups and religious minorities together make up approximately 30%. These proportions are relatively stable over time, though there is some variation in individual years.

4 Empirical Strategy

4.1 Local Exposure to Trade Liberalization

Our goal is to quantify the local-level exposure to tariff reductions. Following Topalova (2010), we define the exposure to tariff reductions in district j as

$$ICE_j \equiv \sum_k \omega_{kj} \tau_{k,87}, \quad \text{where} \quad \omega_{kj} \equiv \frac{\text{Workers}_{kj,90}}{\text{Total Workers}_{j,90}}.$$

¹¹See Appendix A for more details on how we extract politicians' surnames, correct for inconsistency of spelling, and implement the matching process.

¹²We aggregate general castes and OBC mainly because the data before 1993 did not record general castes and OBC separately, which prevents us from tracking OBC over the time period around trade liberalization.

ω_{kj} thus captures the pre-reform (1990) employment share of industry k in district j , and $\tau_{k,87}$ is the tariff rate of industry k in 1987. ICE_j denotes the *Import Competition Exposure* of district j . Intuitively speaking, the measure is a weighted sum of pre-reform tariff rates across sectors, capturing the extent to which district j was exposed to competition with cheaper foreign products due to tariff reductions. Since industries with higher pre-reform tariff rates experienced larger tariff reductions (see Appendix Figure C1), higher values of exposure mean greater exposure to tariff reductions.¹³

To identify the effects of exposure to tariff reductions on economic and political outcomes, we leverage differential exposures to tariff reductions across local labor markets induced by trade liberalization. Figure 2 visualizes the district-level ICE_j . The figure illustrates significant variations in exposure to tariff reductions across districts, even within individual states. Appendix Figure C2 shows the evolution of district-level exposure during the liberalization and the relationship between baseline exposure and subsequent changes.

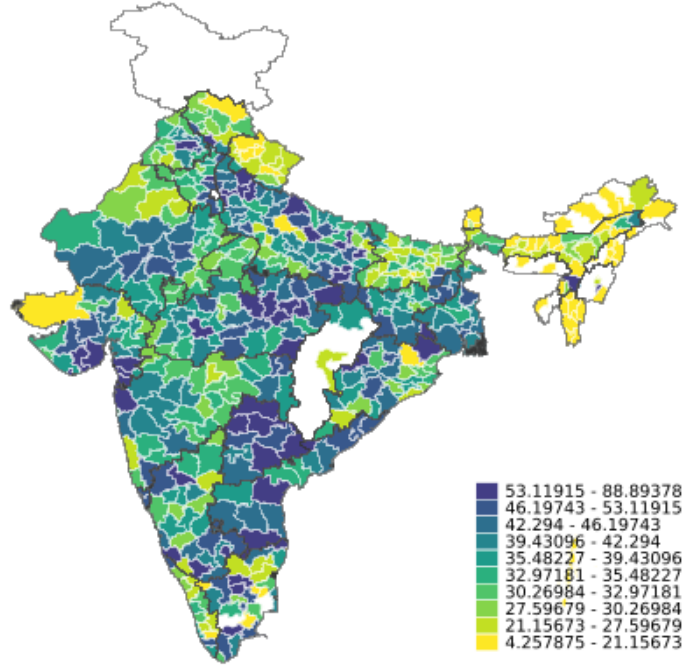


Figure 2. District-level Exposure to Tariff Reductions

Notes: This map shows exposure to tariff reductions at the district level. Districts with lighter colors experienced lower exposure to import competition, while districts with darker colors experienced higher exposure to import competition. White areas indicate missing data.

¹³Alternatively, we can use the actual change in tariff rate throughout the trade liberalization, instead of the pre-reform tariff rate, to construct the measure. We define the alternative local exposure measure as follows: $ICE'_j \equiv -\sum_k \omega_{jk}(\tau_{k,96} - \tau_{k,91})$, where $\tau_{k,91}$ and $\tau_{k,96}$ are the tariff rates of industry k in 1991 and 1996.

4.2 Regression Specifications

To understand how exposure to tariff reductions in a district affected the economic outcomes of marginalized workers and the political power dynamics of marginalized groups, we use the 1991 trade liberalization as an exogenous shock. As described in Section 2, this trade liberalization was externally imposed, and its timing was unanticipated by domestic political and corporate actors. We specifically exploit the exogenous nature and timing of the trade liberalization, geographic variation in exposure intensity, and the variation in the timing of state legislative assembly elections.

We first estimate the effects of exposure to tariff reductions on the economic outcomes of marginalized workers by running the following regression specification:

$$\begin{aligned}
y_{ijt} = & \alpha + \gamma_1 \mathbb{1}(t > 1991) \times ICE_j \\
& + Marg_{ijt} \times [\gamma_2 + \gamma_3 \mathbb{1}(t > 1991) + \gamma_4 ICE_j + \gamma_5 \mathbb{1}(t > 1991) \times ICE_j] \\
& + \delta \mathbf{X}_{ijt} + \eta_j + \lambda_{st} + \epsilon_{ijt},
\end{aligned} \tag{1}$$

where the outcome variable y_{ijt} is an economic outcome of individual i in district j in year t , $\mathbb{1}(t > 1991)$ is a post-liberalization indicator, and $Marg_{ijt}$ is an indicator for individual i from marginalized groups (i.e., SC, ST, and Muslims). For ease of interpretation, we standardize ICE_j to mean 0 and standard deviation 1. We control for individual-level socioeconomic characteristics, district fixed effects, and state-year fixed effects. The coefficients of main interest are γ_1 and γ_5 : the former estimates the effects of exposure to tariff reduction on the overall economic outcomes while the latter estimates the effects on the economic outcomes specific for marginalized workers.

Our second main objective is to estimate the effects of increased trade exposure on voters' preferences and political representation across different social groups. Our baseline regression specification is

$$y_{jt} = \alpha + \beta \mathbb{1}(t > 1991) \times ICE_j + \delta \mathbf{X}_{jt} + \eta_j + \lambda_{st} + \epsilon_{jt}, \tag{2}$$

where the outcome variable y_{jt} is a political outcome of district j in year t . The underlying assumption is that, in the absence of trade liberalization, the outcomes of districts more exposed to import competition would have followed the same trajectory as those of districts less exposed to import competition. When analyzing political outcomes, we define state-level elections that held after 1991 as post-liberalization elections.¹⁴ The specification includes

¹⁴Appendix Table D1 provides an overview of the timing of state elections around the start of the liberalization.

controls for district characteristics, district fixed effects, and state-year fixed effects. Thus, we compare election outcomes within the same state and year. The coefficient of interest, β , estimates the effects of increased exposure to tariff reductions on political outcomes.

5 Results

5.1 Trade Liberalization and Economic Performance

We start by examining the impact of India’s trade liberalization on the economic well-being of marginalized versus non-marginalized groups. Specifically, we analyze changes in consumption and earnings to assess the welfare effects. Appendix Table D2 reports summary statistics for the sample of individuals in NSS for 1988 and 2000.

5.1.1 Consumption and Earnings

We first estimate equation 1 using NSS household survey data. Table 1 presents effects of trade liberalization on household-level monthly per-capita consumption. We are primarily interested in the coefficient estimate on the triple-interaction $Post_t \times Marg_{ijt} \times ICE_j$, which captures the differential impact of trade liberalization on marginalized groups compared to non-marginalized groups. The results for the full NSS sample in columns (1) and (2) reveal a small, statistically insignificant negative effect of exposure to tariff reductions on marginalized individuals. However, when focusing on individuals employed in sectors directly impacted by trade liberalization,¹⁵ we find a strong negative and statistically significant effect, indicating that the consumption growth of individuals from marginalized groups was approximately 4.6% lower than that of non-marginalized groups from 1988 to 2000, as shown by the estimates in columns (3) and (4). This suggests that the economic effects were most pronounced in industries heavily exposed to trade liberalization, as changes in economic structure occurred mainly in these sectors.

Next, we examine household-level weekly per-capita earnings, presented in Table 2. The results for the full NSS sample in columns (1) and (2) indicate only a small negative effect on workers from marginalized groups. However, within sectors heavily affected by trade liberalization, earnings for marginalized individuals grew more slowly than those of their non-marginalized counterparts. The coefficient estimates on the triple-interaction in columns (3) and (4) suggest that the earnings growth of marginalized workers was approximately 7.3%

¹⁵We consider the following sectors in NSS as particularly exposed to trade liberalization: (i) manufacturing, (ii) mining and quarrying, and (iii) construction. We exploit the 1987 baseline tariff rates in these sectors to define ICE_j measure.

Table 1. Effect of Tariff Reduction Exposure on Individual Consumption

| | ln MPCE | | | |
|-----------------------------------------|-------------------|-------------------|---------------------|---------------------|
| | All Sectors | | Exposed Sectors | |
| | (1) | (2) | (3) | (4) |
| Post \times ICE (std.) | 0.006 (0.014) | 0.011 (0.014) | 0.008 (0.017) | 0.001 (0.016) |
| Post \times Marg. \times ICE (std.) | -0.006 (0.011) | -0.004 (0.010) | -0.045** (0.021) | -0.046** (0.020) |
| Outcome Mean | 5.985 | 5.985 | 6.074 | 6.074 |
| Observations | 193,947 | 193,947 | 29,096 | 29,096 |
| Districts | 412 | 412 | 409 | 409 |
| District FE | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes |

Notes: Outcome variable is the natural logarithm of the household-level monthly per-capita consumption from two rounds of NSS household surveys. In columns (1) and (2), we use all individuals in NSS household surveys. In columns (3) and (4), we select the subsample of workers in sectors exposed to trade liberalization: (i) manufacturing, (ii) mining and quarrying, and (iii) construction. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We control for the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend. We also control the industry fixed effects. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

lower than that of non-marginalized individuals.

These results highlight that while trade liberalization boosted average earnings, the gains were unequally distributed, favoring non-marginalized workers, in contrast to the marginalized groups' expectations found in [Gaikwad and Suryanarayan \(2023\)](#). Overall, the findings indicate that marginalized groups experienced limited economic benefits, or even setbacks, as a result of trade reforms. These results on the economic outcomes are in line with the findings of [Topalova \(2010\)](#), which shows that districts exposed to trade liberalization experienced a slower decline in poverty and that the effects were more pronounced at the bottom of the income distribution. Since the economic and social classes largely overlap in India, the slower decline in poverty induced by trade liberalization appears to have harmed marginalized groups ([Duraismy and Duraismy, 2017](#)).

5.1.2 Robustness

To ensure the robustness of our findings on economic outcomes, we tested alternative definitions of our exposure measure. We specifically use the alternative specification for the exposure measure variable. Appendix Tables [D5](#) and [D6](#) show estimates of the same outcome variables in Tables [1](#) and [2](#), but we use the alternative specification for the exposure

Table 2. Effect of Tariff Reduction Exposure on Individual Earnings

| | ln Earnings | | | |
|-----------------------------------------|-------------------|--------------------|-------------------|--------------------|
| | All Sectors | | Exposed Sectors | |
| | (1) | (2) | (3) | (4) |
| Post \times ICE (std.) | 0.092 (0.064) | 0.094** (0.042) | 0.136 (0.105) | 0.206** (0.096) |
| Post \times Marg. \times ICE (std.) | -0.046 (0.038) | -0.027 (0.037) | -0.073 (0.095) | -0.073 (0.094) |
| Outcome Mean | 2.168 | 2.168 | 3.044 | 3.044 |
| Observations | 193,947 | 193,947 | 29,096 | 29,096 |
| Districts | 412 | 412 | 409 | 409 |
| District FE | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes |

Notes: Outcome variable is the natural logarithm of the household-level weekly per-capita earnings from two rounds of NSS household surveys. In columns (1) and (2), we use all individuals in NSS household surveys. In columns (3) and (4), we select the subsample of workers in sectors exposed to trade liberalization: (i) manufacturing, (ii) mining and quarrying, and (iii) construction. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We control for the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend. We also control the industry fixed effects. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

measure variable that exploit the actual change in tariff rates. The overall results show very similar patterns: trade liberalization did not lead to a growth in consumption and earnings of workers from marginalized groups. Thus, these results mitigate the concern that our findings of the economic impacts of trade liberalization on marginalized groups are driven by a particular definition of the exposure measure.

Another concern is how we define the marginalized groups in India would influence our findings. As explained in Section 3, we classify SC, ST, and Muslim as marginalized groups. However, other religious minorities have been targeted for religious violence. For instance, 505 cases of persecution of Christians were reported to the United Christian Forum in 2021 (Minj, 2022). Similarly, Sikhs have been targeted for communal violence as well. The most notable incidence is the 1984 anti-Sikh riots, which erupted following the assassination of Indira Gandhi by her Sikh bodyguards. Government officials estimated that 2,733 Sikhs were killed in Delhi from October to November 1984. Thus, in the robustness exercises, we include Christians and Sikhs in marginalized groups and re-estimate the equation 1. Appendix Tables D7 and D8 show the coefficient estimates of equation 1 while using the alternative definition of marginalized groups. The coefficient estimates are very similar to the ones reported in Tables 1 and 2 across all the specifications. These results mitigate the concern that the main findings on the economic impact of trade liberalization on marginalized groups are driven

by the specific definition of these groups.

5.2 Political Consequences of Trade Liberalization

In the previous subsection, we establish that trade liberalization had adverse economic effects on individuals from marginalized groups. Since we are interested in understanding how such adverse economic shocks affected the political behaviors of marginalized groups, we present reduced-form results on how exposure to tariff reductions influenced voting behavior and political representation for marginalized groups.

Appendix Table D4 and Figure C6 show the descriptive statistics of political outcome variables and yearly time series of the share of candidates from each social group in the analysis, respectively. In order to estimate the effects of trade liberalization on political outcomes, we investigate the following variables: (i) district-level vote share of candidates from marginalized groups vs general castes; (ii) vote share of winners from marginalized groups vs general castes; (iii) share of candidates from marginalized groups vs general castes; (iv) share of winners from marginalized groups vs general castes. The descriptive statistics suggest that, given that the population shares of general castes and OBC are approximately 65%, general caste politicians are slightly overrepresented compared to the marginalized groups.

5.2.1 Voter Preferences and Political Representation

We analyze how exposure to tariff reductions affected political dynamics after trade liberalization. We estimate equation 2 using India Election Commission data. Table 3 shows estimates for district-level vote share of all and winning candidates from marginalized groups and general castes. The coefficient estimates in columns (1) and (2) suggest that exposure to tariff reductions increased the vote shares of political candidates from marginalized groups. In contrast, the coefficient estimates in columns (3) and (4) imply that trade liberalization led to a reduction in the vote shares of political candidates from general castes. The magnitude of the coefficients indicates that one standard deviation increase in exposure to tariff reductions leads to a 8.9 (5.5) percent increase (decrease) in vote share of all candidates from marginalized groups (general castes). Similarly, the coefficient estimates from columns (5) and (8) indicate that exposure to tariff reductions also increased (decreased) the vote shares of winning candidates from marginalized groups (general castes). Notably, the coefficient estimates are greater for the winning candidates sample than those for the all candidates sample even though the means of outcome variables are similar across both samples, indicating greater changes in the vote shares of winners from marginalized groups and general

castes than that of all candidates.

Table 3. Vote Share: All and Winning Candidates

| Candidates Sample: | All Candidates | | | | Winning Candidates | | | |
|--------------------------|--------------------|--------------------|----------------------|----------------------|---------------------|--------------------|----------------------|----------------------|
| Social Group: | Marginalized | | General | | Marginalized | | General | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Post \times ICE (std.) | 0.024** (0.010) | 0.025** (0.011) | -0.031*** (0.011) | -0.036*** (0.012) | 0.040*** (0.015) | 0.040** (0.018) | -0.042*** (0.015) | -0.048*** (0.017) |
| Outcome Mean | 0.281 | 0.281 | 0.660 | 0.660 | 0.275 | 0.275 | 0.668 | 0.668 |
| Observations | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 |
| Districts | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the vote shares of all political candidates from marginalized groups or general castes (Columns 1 to 4) and those of only winning political candidates from marginalized groups or general castes (Columns 5 to 8) in the district for each election. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We control the total number of votes, the share of reserved constituencies in the districts, the district-level 1990 total employment, and the district-level 1990 manufacturing sector employment share. District-level employment variables are interacted with the linear time trend in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

To evaluate the identifying assumption underpinning these estimates, we conducted an event study analysis, presented in Figure 3. We specifically run the following event study specification with control variables and state-year fixed effects:

$$y_{jt} = \alpha + \sum_{l=-3, l \neq -1}^3 \beta_l D_{j,t-l} \times ICE_j + \delta \mathbf{X}_{jt} + \eta_j + \lambda_{st} + \epsilon_{jt}, \quad (3)$$

where $D_{j,t-l}$ is an indicator variable for election period l , meaning that the district j was exposed to tariff reforms l periods relative to the beginning of trade liberalization (i.e., 1991). Each subgraph thus presents estimates of β_l . The outcome variables we consider in Figure 3 are the vote shares of all or winning candidates from marginalized groups or general castes. Both subgraphs show that the coefficient estimates before trade liberalization are not statistically significantly different from zero, suggesting there are no significant pre-trends. These insignificant coefficient estimates corroborate the assumption that districts exposed to tariff reductions would have followed a similar path for outcome variables in the absence of trade liberalization. The evolution of the coefficient estimates in the post-liberalization periods indicates that the effects of trade reforms on vote shares became evident in the immediate elections following liberalization and remained stable over time. Notably, the effects persist over a substantial time period post-liberalization (three election terms ≈ 15 years on average).

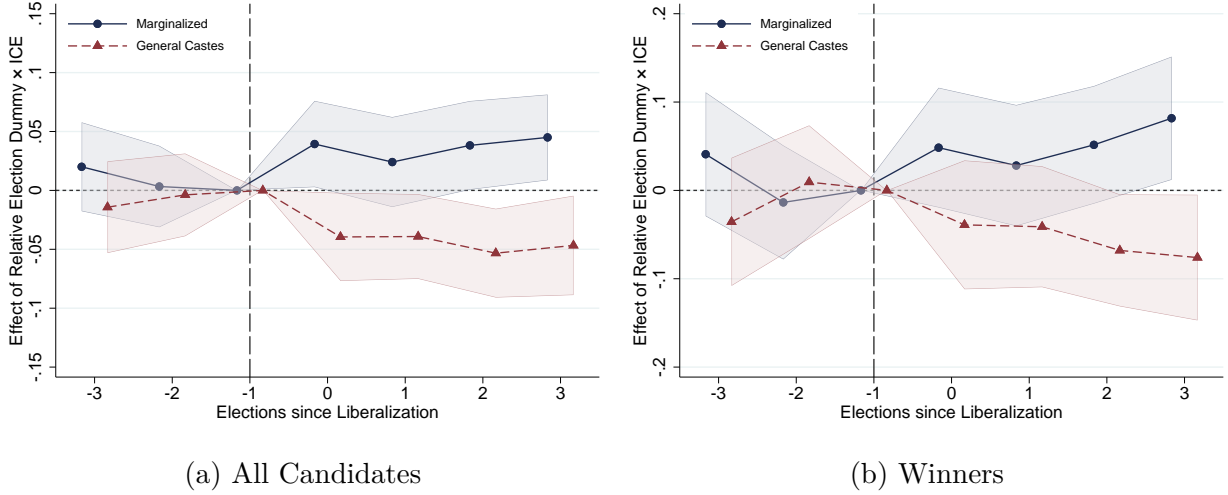


Figure 3. Event Study: Vote Share of All and Winning Candidates

Notes: Each subfigure shows the coefficient estimates from the event study specifications. Relative election “0” indicates the first post-liberalization election after 1991 (i.e., the beginning of trade liberalization). The outcome variables are the vote shares of all or winning candidates from general castes or marginalized groups.

Table 4 details how the composition of all and winning political candidates changed following trade liberalization. To compute the district-level share of candidates from marginalized groups and general castes, we divide the number of all (winning) candidates from marginalized groups or general castes by the total number of all (winning) candidates in each district. The coefficient estimates in columns (1) and (2) suggest that exposure to tariff reductions led to an increase in the share of candidates from marginalized groups. On the contrary, the coefficient estimates in columns (3) and (4) imply that the share of candidates from general castes decreased in the post-liberalization elections in exposed districts. Similarly, columns (5) and (8) show that the changes in candidate composition, as well as voting patterns, were translated into the change in political selection: one standard deviation increase in exposure to tariff reductions led to 13.5 (5.8) percent increase (decrease) in the share of winning candidates from marginalized groups (general castes) in the post-liberalization elections. Again, coefficient estimates are greater for the all candidates sample than those for the winning candidates, highlighting that trade liberalization had greater impacts on the political selection than the pool of all candidates.

Figure 4 shows estimates from the event study specification with control variables and state-year fixed effects. The outcome variables are the shares of all or winning candidates from marginalized groups or general castes. The coefficient estimates for the pre-liberalization elections suggest that there are no significant pre-trends, reinforcing the validity of our identifying assumptions. Again, similar to the results on the vote shares, the

Table 4. Candidates Share: All and Winning Candidates

| Candidates Sample: Social Group: | All Candidates | | | | Winning Candidates | | | |
|-------------------------------------|----------------|---------|----------|----------|--------------------|---------|----------|----------|
| | Marginalized | | General | | Marginalized | | General | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Post \times ICE (std.) | 0.013* | 0.013* | -0.017** | -0.016** | 0.036** | 0.037** | -0.034** | -0.039** |
| | (0.007) | (0.007) | (0.008) | (0.008) | (0.015) | (0.018) | (0.016) | (0.018) |
| Outcome Mean | 0.297 | 0.297 | 0.645 | 0.645 | 0.275 | 0.275 | 0.668 | 0.668 |
| Observations | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 |
| Districts | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the shares of all political candidates from marginalized groups or general castes (Columns 1 to 4) and those of only winning political candidates from marginalized groups or general castes (Columns 5 and 8) in the district for each election. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We control the total number of votes, the share of reserved constituencies in the districts, the district-level 1990 total employment, and the district-level 1990 manufacturing sector employment share. District-level employment variables are interacted with the linear time trend in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

effects of trade reforms on the candidates' share took place in the immediate elections after trade liberalization and were stable over time.

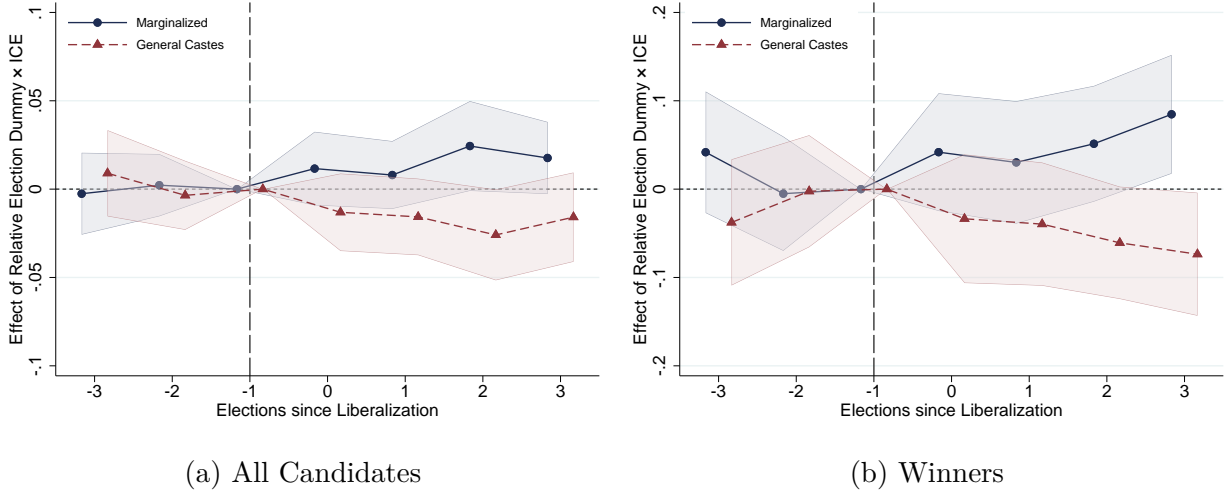


Figure 4. Event Study: Share of All and Winning Candidates

Notes: Each subfigure shows the coefficient estimates from the event study specifications. Relative election “0” indicates the first post-liberalization election after 1991 (i.e., the beginning of trade liberalization). The outcome variables are the shares of all or winning candidates from general castes or marginalized groups.

Since the supply and demand sides of politics are determined concurrently, we cannot pinpoint whether the change in voters' preferences led to the change in political selection or vice versa. However, taking these results together, we conclude that exposure to tariff reduc-

tions changed voters' preferences toward candidates from marginalized groups and increased political selection and representation of marginalized groups.

5.2.2 Robustness

In order to make sure that the results on the political impacts of trade liberalization are not driven by a particular regression specification, we implement robustness exercises. We first use the alternative specification for the exposure measure variable that exploits the actual change in tariff rates instead of the baseline tariff rates. Thus, we estimate the equation 2 by replacing ICE_j by $ICE'_j \equiv -\sum_k \omega_{jk}(\tau_{k,96} - \tau_{k,91})$. Appendix Tables D9 and D10 show estimates for the same outcome variables in Tables 3 and 4, but we use the alternative specification for the exposure measure variable. The coefficient estimates are qualitatively the same as those in the main results presented in Tables 3 and 4 in all specifications and statistically significant across most specifications. These estimates suggest that exposure to tariff reductions increased (decreased) the vote shares and share of both all and winning candidates from marginalized groups (general castes) in the post-liberalization elections. Thus, these results address the concern that the results on the political outcomes are sensitive to the specification of the exposure measure variable.

Another concern is how we define the marginalized groups in India would affect our findings on political outcomes. Following the robustness exercises in the economic outcomes subsection, we include Christians and Sikhs in marginalized groups and re-estimate the equation 2. Appendix Tables D11 and D12 show the coefficient estimates of equation 2 while using the alternative definition of marginalized groups. Here, the coefficient estimates are statistically significant across all the specifications and are consistent with those in the main results. These estimates suggest that the exposure to tariff reductions increased (decreased) the vote shares and share of candidates from marginalized groups (general castes), regardless of alternative definitions of marginalized groups. Thus, these results confirm that the main findings of the political outcomes are robust to various definitions of marginalized groups.

Lastly, we estimate the regression specification of equation 2 at different units than the district level. We start with the constituency-level analysis, where we maintain the district-level exposure measure to tariff reductions, but the outcome variables are measured at the *constituency* level instead of the district level. We thus run the following regression specification:

$$y_{cjt} = \alpha + \beta \mathbb{1}(t > 1991) \times ICE_j + \delta \mathbf{X}_{cjt} + \eta_j + \lambda_{st} + \epsilon_{cjt}, \quad (4)$$

where the subscript c denotes the constituency. Since no constituencies in India cross the

district boundaries, the exposure to tariff reductions of constituency c is exactly the same as that of district j , in which the constituency c is located. When we analyze the vote shares of candidates from general castes or marginalized groups, we consider the following outcome variables: (i) the vote shares of candidates from general castes or marginalized groups among all the votes in the *constituency*; and (ii) the vote shares of winning candidates in the *constituency* if they are from general castes or marginalized groups.¹⁶ Appendix Table D13 shows the coefficient estimates from the equation 4. The coefficient estimates are qualitatively the same across all the specifications as in the main results in reported in Table 3 and statistically significant in most specifications. Thus, the results suggest that the exposure to tariff reductions led to a rise (decline) in the vote shares of all and winning candidates from marginalized groups (general castes).

Regarding the share of candidates from general castes or marginalized groups, we consider the following outcome variables: (i) the share of candidates from general castes or marginalized groups among all the candidates in the *constituency*; and (ii) the indicator for constituency with the winning candidate from marginalized groups or general castes. Appendix Table D14 shows the coefficient estimates from the equation 4. Even though we lose statistical precision for the latter set of outcome variables, all the coefficient estimates are qualitatively the same as in the main results reported in Table 4. These coefficient estimates imply that the share and presence of all and winning candidates from marginalized groups (general castes) increased (decreased) in the post-liberalization elections.

We also analyze the political outcomes at the candidate level. Here, we consider the different regression specifications depending on the outcomes of interest. When we analyze the vote shares of all and winning candidates from general castes or marginalized groups, we run the regression specification of the equation 1, where the outcome variables are the vote shares of candidates, and we interact the post-liberalization indicator, an indicator for candidates from marginalized groups or general castes, and the measure of exposure to tariff reductions as a treatment variable. In contrast, when we investigate whether all or winning candidates are from general castes or marginalized groups, we run the regression specification similar to the equation 4 at the candidate level, where the outcome variables are indicators for candidates from marginalized groups or general castes.

Appendix Table D15 shows the coefficient estimates for vote shares of all and winning candidates from marginalized groups or general castes. The coefficient estimates on the triple-interaction term are qualitatively the same across all the specifications as in the results reported in Table 3. Similarly, Appendix Table D16 shows the coefficient estimates for indicators for all and winning candidates from general castes or marginalized groups. Again,

¹⁶This variable is set to zero if the winning candidate is not from general castes or marginalized groups.

the coefficient estimates are qualitatively the same across all the specifications as in the results reported in Table 4.

These results at the constituency- and candidate-level regression specifications address the concern that the main findings of the political outcomes are driven by a specific choice of the analysis unit. Overall, the changes in political outcomes of marginalized groups and general castes we find in the post-liberalization elections are robust to the specification of treatment variable, the definition of marginalized groups, and the unit of analysis.

5.2.3 Political Backlash from Marginalized Groups

To understand the drivers of this political shift, we examine whether voters from economically losing marginalized groups led the changes in voters' preferences and political representation. Since we cannot directly examine the individual voting behavior, we instead split the sample of districts by the population share of marginalized groups in 1991 and investigate whether districts with a higher share of marginalized populations experienced more significant changes in political outcomes. We run the following triple-difference regression specification:

$$\begin{aligned} y_{jt} = & \alpha + \theta_1 NonMarg_j \times \mathbb{1}(t > 1991) \times ICE_j \\ & + Marg_j \times [\theta_2 \mathbb{1}(t > 1991) + \theta_3 \mathbb{1}(t > 1991) \times ICE_j] \\ & + \delta \mathbf{X}_{jt} + \eta_j + \lambda_{st} + \epsilon_{jt}, \end{aligned} \quad (5)$$

where $NonMarg_j$ and $Marg_j$ are indicators for district j whose pre-liberalization population share of marginalized groups is below and above the national median, respectively. The coefficient of interest is θ_3 , which tells us the extent to which the district-level population share of marginalized groups affected the shift in political outcomes.

Tables 5 and 6 show the coefficient estimates for equation 5, where the outcome variables are vote shares and shares of political candidates from marginalized groups or general castes, respectively. Across all the specifications in both tables, the coefficient estimates on the triple-interaction term with above-median districts are statistically significant and much larger than those on the triple-interaction term with below-median districts. These estimates suggest that the change in political outcomes of marginalized groups and general castes were concentrated in districts where marginalized groups made up a larger portion of the population. The results present suggestive evidence that voters from marginalized groups were more likely to vote for the candidates from their own groups in the exposed districts, indicating that adverse economic shocks caused political backlash among voters from marginalized groups.

Notably, some districts in the main sample do not necessarily have information on the

Table 5. Vote Share: All and Winning Candidates

| Candidates Sample: Social Group: | All Candidates | | | | Winning Candidates | | | |
|---------------------------------------------------|---------------------|---------------------|----------------------|----------------------|---------------------|--------------------|---------------------|----------------------|
| | Marginalized | | General | | Marginalized | | General | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Post \times Non-Marg. Dist. \times ICE (std.) | 0.007 (0.013) | 0.006 (0.013) | -0.014 (0.013) | -0.017 (0.013) | 0.030 (0.019) | 0.027 (0.020) | -0.035* (0.019) | -0.037* (0.021) |
| Post \times Marg. Dist. \times ICE (std.) | 0.042*** (0.014) | 0.044*** (0.014) | -0.045*** (0.015) | -0.050*** (0.016) | 0.052*** (0.020) | 0.057** (0.023) | -0.051** (0.021) | -0.061*** (0.023) |
| Outcome Mean | 0.295 | 0.295 | 0.647 | 0.647 | 0.290 | 0.290 | 0.653 | 0.653 |
| Observations | 2,247 | 2,247 | 2,247 | 2,247 | 2,247 | 2,247 | 2,247 | 2,247 |
| Districts | 378 | 378 | 378 | 378 | 378 | 378 | 378 | 378 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the vote shares of all political candidates from marginalized groups or general castes (Columns 1 to 4) and those of only winning political candidates from marginalized groups or general castes (Columns 5 to 8) in the district for each election. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table 6. Candidates Share: All and Winning Candidates

| Candidates Sample: Social Group: | All Candidates | | | | Winning Candidates | | | |
|---------------------------------------------------|-------------------|-------------------|---------------------|---------------------|--------------------|--------------------|---------------------|---------------------|
| | Marginalized | | General | | Marginalized | | General | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Post \times Non-Marg. Dist. \times ICE (std.) | 0.009 (0.008) | 0.010 (0.008) | -0.011 (0.009) | -0.010 (0.008) | 0.023 (0.018) | 0.021 (0.020) | -0.021 (0.019) | -0.023 (0.021) |
| Post \times Marg. Dist. \times ICE (std.) | 0.016* (0.009) | 0.016* (0.009) | -0.022** (0.010) | -0.022** (0.010) | 0.050** (0.020) | 0.055** (0.023) | -0.048** (0.021) | -0.056** (0.024) |
| Outcome Mean | 0.312 | 0.312 | 0.630 | 0.630 | 0.290 | 0.290 | 0.653 | 0.653 |
| Observations | 2,247 | 2,247 | 2,247 | 2,247 | 2,247 | 2,247 | 2,247 | 2,247 |
| Districts | 378 | 378 | 378 | 378 | 378 | 378 | 378 | 378 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the shares of all political candidates from general castes or marginalized groups (Columns 1 to 4) and those of only winning political candidates from general castes or marginalized groups (Columns 5 to 8) in the district for each election. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

pre-reform population demographic, as evidenced by the lower number of observations in Tables 5 and 6 compared to that in Tables 3 and 4. We ensure that the changes in the voting patterns and political representation for marginalized groups and general castes would hold in the selected subsample, presented in Appendix Tables D17 and D18. The estimates suggest that we observe the increase (decrease) in the vote shares and share of candidates from marginalized groups (general caste) in post-liberalization elections in the districts exposed

to import competition even in this subsample. Thus, we confirm that the results in Tables 5 and 6 are not driven by the choice of this specific subsample.

5.2.4 Party Affiliations and Political Ideologies

To better understand the political backlash among voters from marginalized groups, we investigate how party affiliations interacted with changes in political outcomes for general castes or marginalized groups. Specifically, we assess whether shifts in voter preferences and candidate representation were associated with political ideologies of major national parties or smaller, caste- and religion-focused parties. We re-estimate the regression specification of the equation 2, but the outcome variables are the vote shares or share of all or winning candidates from general castes or marginalized groups in Indian National Congress (INC), Bharatiya Janata Party (BJP), or parties with policy agendas on low-castes and Muslims (LC/M parties, hereafter).¹⁷ INC and BJP are two major political parties in India especially since the 1990s, and INC consisted of a minority government in 1991. While INC has been historically the top choice among religious minorities in India, the main vote bank of BJP has been the upper caste groups, indicating the clear division of candidates and supporter bases for these national parties (Neha Sahgal et al., 2021).

Appendix Table D19 shows the coefficient estimates for the vote shares of all or winning political candidates from marginalized groups or general castes in INC, BJP, or LC/M parties. Estimates on marginalized groups (Odd columns) suggest that an increase in the vote shares of all and winning candidates from marginalized groups is concentrated in two major political parties, INC and BJP. Moreover, the magnitude of the coefficient estimates implies that BJP played a more significant role for the change in the vote shares of candidates from marginalized groups than INC. In contrast, we barely observe any increase in the vote shares of candidates from marginalized groups in LC/M parties, in spite of their political agendas. Estimates on general castes (Even columns) are all imprecisely estimated, suggesting that we do not observe clear patterns on which political parties drove the decline in vote share of candidates from general castes.

Appendix Table D20 shows the coefficient estimates for the share of all or winning political candidates from marginalized groups or general castes in INC, BJP, or LC/M parties. Again, the estimates on marginalized groups (Odd columns) indicate that INC and BJP mainly led to an increase in the candidate share of marginalized groups, especially among winners,

¹⁷Aneja and Ritadhi (2022) compiles a list of political parties with policy agendas centered on the social and economic status of low-castes. Besides these low-caste parties, we classify the following political parties as pro-Muslim parties: All India Majlis-e-Ittehadul Muslimeen, All India Trinamool Congress, Rashtriya Janata Dal, Indian Union Muslim League, and Peoples Democratic Party

instead of LC/M parties. From estimates on general castes (Even columns), it is unclear which political parties contributed to the reduction in the candidate share of general castes.

Why do we observe the concentration of political effects on marginalized groups in major political parties, especially in BJP? One potential channel is that its anti-globalization stance resonated well with economically losing marginalized groups. However, anti-incumbency sentiment against INC might have fueled the success of BJP as well. In order to distinguish these two channels, we separately consider the political outcomes for candidates with incumbency status and without the status. Appendix Tables D21 and D22 show the separate coefficient estimates for candidates with incumbency status and without the status. Across all the specifications, we can barely identify whether candidates without incumbency status drove the rise of the vote shares and share of candidates from marginalized groups. The results suggest that the anti-incumbency sentiment is not the only factor driving the concentration of political effects on marginalized groups in BJP, implying that their anti-globalization rhetoric was also of crucial significance behind this political shift.

6 Discussion

Our findings provide critical insights into how economic shocks from trade liberalization influenced political dynamics, particularly in developing countries with considerable economic inequality and socioeconomic heterogeneity. The results demonstrate that marginalized groups, who bore the brunt of economic disruptions, reacted by altering their political behavior. Their increased support for candidates from their own social groups likely stemmed from expectations of economic protection and advocacy.

6.1 Economic Grievances Mechanism

Why did adverse economic shocks translate into political mobilization among voters from marginalized groups? We specifically investigate economic grievances as a key mechanism. The hypothesis posits that voters from marginalized groups, who experienced economic setbacks, increasingly supported the candidates from the same social groups with the expectation that these candidates would address their economic concerns. In turn, this implies that transfers to compensate for these economic losses endured by marginalized groups would mitigate the shift in voters' preferences and political representation based on economic grievances. Although we lack data on individual voting behavior to directly test this hypothesis, we can explore whether policy interventions that benefit marginalized groups influence the political outcomes triggered by trade liberalization.

We specifically examine the backward district program launched in 1994. The Government of India identified 123 backward districts among 360 districts in 14 states based on the score that represented each district’s degree of industrial development. The Government of India established a threshold score of 500, categorizing districts scoring below this level as backward, with only a few exceptions. Districts assigned as backward received preferential tax treatment: Firms located in these backward districts would be exempted from tax for 5 years and benefit from tax cuts for another 5 years.

Given the stark difference between backward and non-backward districts, we cannot simply compare changes in political outcomes caused by trade liberalization across these districts. To address this concern, we employ the difference-in-discontinuity design by following [Hasan, Jiang and Rafols \(2021\)](#) and [Grembi, Nannicini and Troiano \(2016\)](#). We specifically compare the evolution of political outcomes induced by exposure to tariff reductions across districts whose score was just above and below the threshold of 500. We thus run the following difference-in-discontinuity regression specification:

$$y_{jt} = \alpha + \theta_1 \mathbb{1}(t > 1991) \times ICE_j + Backward_j \times [\theta_2 \mathbb{1}(t > 1991) + \theta_3 \mathbb{1}(t > 1991) \times ICE_j] + \delta \mathbf{X}_{jt} + \eta_j + \lambda_{st} + \epsilon_{jt} \quad \forall Score_j \in (246, 754), \quad (6)$$

where $Backward_j$ is an indicator for district j identified as backward. The coefficients of interest are θ_1 and θ_3 , which inform about how the assignment of backward districts affects the changes in political outcomes caused by trade liberalization. In order to compare similar districts, we restrict our sample within the score bandwidth of 254 by following the optimal bandwidth selection proposed by [Calonico, Cattaneo and Titiunik \(2014\)](#): We select districts whose score was in-between 246 and 754.

The identifying assumption is the continuity of observable and unobservable characteristics at the policy cutoff and the absence of manipulation of the district’s score. First, we examine whether districts within this bandwidth have similar pre-reform characteristics. Appendix Table [D23](#) shows the results from comparing pre-reform district characteristics. The p -values suggest that backward and non-backward districts within the bandwidth are not significantly different along these baseline characteristics. We also investigate whether there exists bunching of the district scores around the policy cutoff. Appendix Figure [C9](#) shows the distribution of the density of the district’s score. The distribution shows that there are no clear signs of manipulation of the score. These results confirm the validity of our identifying assumptions.

Table [7](#) shows the coefficient estimates for equation [6](#), where the outcome variables are the vote shares of candidates from marginalized groups or general castes. In most specifica-

tions, the estimates on the interaction between the post-liberalization indicator and import competition exposure measure are statistically significant and qualitatively the same as those reported in Table 3. In contrast, the sign of the estimates on the triple-interaction term is opposite of that on the double-interaction term. While mostly statistically insignificant, these estimates suggest that the assignment of backward districts had mitigating effects on the changes in the voting patterns induced by exposure to tariff reductions. We test whether the summation of these two coefficient estimates is significantly different from zero. The reported p -values across most specifications suggest that exposure to import competition did not necessarily lead to an increase (decrease) in the vote shares of all and winning candidates from marginalized groups (general castes) in backward districts.

Table 7. Vote Share: All and Winning Candidates

| Candidates Sample: Social Group: | All Candidates | | | | Winning Candidates | | | |
|--------------------------------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|-------------------|-------------------|-------------------|
| | Marginalized | | General | | Marginalized | | General | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Post \times ICE (std.) | 0.076** (0.024) | 0.078** (0.027) | -0.081** (0.030) | -0.081* (0.033) | 0.070* (0.035) | 0.082 (0.042) | -0.068 (0.035) | -0.071 (0.044) |
| Post \times Backward Dist. \times ICE (std.) | -0.052* (0.027) | -0.051 (0.028) | 0.051 (0.031) | 0.043 (0.034) | -0.033 (0.042) | -0.048 (0.046) | 0.033 (0.041) | 0.038 (0.046) |
| p -value | 0.195 | 0.138 | 0.109 | 0.057 | 0.219 | 0.315 | 0.224 | 0.315 |
| Outcome Mean | 0.307 | 0.307 | 0.646 | 0.646 | 0.310 | 0.310 | 0.645 | 0.645 |
| Observations | 834 | 834 | 834 | 834 | 834 | 834 | 834 | 834 |
| Districts | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the vote shares of all political candidates from general castes or marginalized groups (Columns 1 to 4) and those of only winning political candidates from general castes or marginalized groups (Columns 5 to 8) in the district for each election. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table 8 shows the coefficient estimates for equation 6, where the outcome variables are the shares of political candidates from marginalized groups or general castes. Again, the estimates on the double-interaction term are qualitative the same as those reported in Table 4, with less statistical precision. In contrast, the sign of the estimates on the triple-interaction term is opposite of that on the double-interaction term in most specifications, especially the winning candidates sample. The reported p -values across most specifications imply that we do not necessarily observe the increase (decrease) in the share of all and winning candidates from marginalized groups (general castes) in backward districts in response to adverse economic shocks.

Table 8. Candidates Share: All and Winning Candidates

| Candidates Sample: Social Group: | All Candidates | | | | Winning Candidates | | | |
|--------------------------------------------------|------------------|------------------|-------------------|-------------------|--------------------|-------------------|-------------------|-------------------|
| | Marginalized | | General | | Marginalized | | General | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Post \times ICE (std.) | 0.008 (0.012) | 0.008 (0.013) | -0.011 (0.015) | -0.013 (0.016) | 0.061 (0.033) | 0.074 (0.040) | -0.057 (0.033) | -0.061 (0.042) |
| Post \times Backward Dist. \times ICE (std.) | 0.003 (0.014) | 0.012 (0.014) | 0.002 (0.017) | -0.004 (0.017) | -0.036 (0.040) | -0.048 (0.044) | 0.034 (0.038) | 0.036 (0.044) |
| <i>p</i> -value | 0.366 | 0.079 | 0.523 | 0.186 | 0.421 | 0.472 | 0.456 | 0.497 |
| Outcome Mean | 0.318 | 0.318 | 0.637 | 0.637 | 0.311 | 0.311 | 0.643 | 0.643 |
| Observations | 834 | 834 | 834 | 834 | 834 | 834 | 834 | 834 |
| Districts | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the shares of all political candidates from general castes or marginalized groups (Columns 1 to 4) and those of only winning political candidates from general castes or marginalized groups (Columns 5 to 8) in the district for each election. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Since the subsample in Tables 7 and 8 is considerably different from the sample in the main analysis, we verify that the main effects of trade liberalization on political outcomes still hold in this subsample, presented in Appendix Tables D24 and D25. The coefficient estimates suggest that we observe an increase (decrease) in the vote shares and share of candidates from marginalized groups (general caste) in post-liberalization elections in the districts exposed to import competition. Thus, we confirm that the results in Tables 7 and 8 are not driven by the choice of this specific subsample.

In order to ensure that our results are not sensitive to a specific bandwidth choice, we explore a different set of bandwidth choice. Appendix Tables D26 and D27 show the estimates using different bandwidth choice. While statistical precision varies significantly across specifications due to the lack of power, we observe the qualitatively same results across different bandwidth choices: backward district program had mitigating effects on the political backlash among marginalized voters induced by exposure to import competition.

Overall, these results indicate that the treatment given to backward districts alleviated the magnitude of the changes in political outcomes caused by trade liberalization. While we cannot directly test the economic grievances hypothesis that voters from economically losing marginalized groups became more supportive of candidates from the same communities, the findings in Tables 7 and 8 suggest that transfer to compensate trade shocks would mitigate the political backlash in response to adverse economic shocks.

7 Conclusions

In recent decades, economic integration through the wave of globalization has affected both economic and political structures in developing countries. While the previous literature has extensively studied the economic effects of trade liberalization and economic integration, there is little evidence of the political consequences of trade reforms, especially in developing countries. In this paper, we exploit India’s 1990s trade liberalization to study how exposure to tariff reductions affects the economic outcomes and political behaviors of marginalized groups.

We provide empirical evidence that marginalized groups, who suffered economically due to increased import competition, significantly altered their political behavior. Our analysis demonstrates that trade reforms, though beneficial for the overall economy, had disproportionate and often negative effects on marginalized communities, manifesting in reduced consumption and earnings for these groups. These economic grievances translated into political backlash, increasing support and representation for politicians from marginalized groups while diminishing representation for non-marginalized groups. We further provide evidence that transfers to economically backward districts alleviated this shift in voters’ preferences and political representation induced by exposure to trade reforms.

Our findings have several important implications. First, they highlight the need for policymakers to carefully consider the distributional consequences of trade liberalization. While open trade policies can drive economic growth, they may exacerbate inequalities, potentially leading to social and political unrest if not managed carefully. To mitigate these adverse effects, our results underscore the importance of implementing targeted policy interventions, such as social safety nets and economic support programs for affected communities. The backward district program, which offered tax incentives and economic aid to underdeveloped areas, provides a compelling example of how redistributive policies can alleviate the negative social and political impacts of globalization.

Moreover, our study reveals that backlash against economic shocks was not limited to marginalized-focused parties but also influenced major political movements. This suggests that economic grievances can drive shifts in voter alignment, even within well-established political parties. Policymakers must recognize the role of inclusive political representation in addressing the needs of marginalized populations. By ensuring that these groups have a voice in decision-making processes, governments can promote social cohesion and reduce the risk of long-term political fragmentation.

Our research also has broader implications for the global debate on trade and inequality. The long-lasting nature of political effects, observed over multiple election cycles, underscores

the enduring consequences of economic shocks. This finding calls for a reevaluation of trade policies in developing economies, where social structures are often rigid, and labor mobility is low. Future trade agreements should be designed with a focus on equity, ensuring that economic integration does not come at the cost of social stability.

In conclusion, while trade liberalization can generate substantial economic gains, it is crucial to address its unequal impacts through proactive and inclusive policies. By learning from the experience of India's trade reforms, governments can better navigate the challenges of globalization, fostering both economic growth and social stability. Our study adds to the growing body of literature advocating for policies that protect vulnerable populations and promote equitable development, ensuring that globalization's benefits are shared broadly and fairly.

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A Data Appendix

A.1 Surname Extraction from Names of Indian Politicians

To match surnames and *jatis*, we need to extract the last surname segment from each candidate’s entire name. The challenge, however, lies in the inconsistency of naming order across candidates. For instance, consider the politician named “Romesh Lal” who ran for office in Ranbir Singh Pora constituency of Jammu and Kashmir in 1996. Since his name is recorded as “romesh lal” in the India Election Commission Data, we can simply extract the last segment of his name as his surname (Lal). However, another politician named “Gopinath Waman Rao” ran for office in Pernem constituency of Kerala in 1989. His name is recorded as “rao gopinath waman” in the electoral data, suggesting that we cannot use the last segment of his name as his surname.

To address this challenge, we use the OpenAI API. We specifically input the name of each politician into each API and obtain the inferred surname from the input. We first take the inferred surname from the OpenAI API. If it cannot identify the surname from the full name input, we use the last segment of the candidate’s name as their surname. We drop the observations without an identified surname.¹⁸ Once we identify the surname of each politician, we implement the surname-*jati* match using the POI survey.

A.2 Matching between Indian Surnames and *Jatis*

Once we successfully extract the surname segment from the entire names of political candidates, we can implement the surname-*jati* match. We do so by using the data from the POI survey to identify the *jatis* of political candidates. However, the challenge is the inconsistency of Devanagari transliteration (i.e., transliteration from the Indic scripts to the Roman script) and variations of the same surnames. For instance, surnames “Lal” and “Lall” are considered variations of the same surname. This inconsistency of spelling in the Roman script inhibits the exact name matching between politicians’ surnames data and the surname-*jati* key. To address this problem, we apply a fuzzy-name matching algorithm between the surname-*jati* key and surnames of politicians to identify *jati*-belonging of each politician (Cassan, Keniston and Kleineberg, 2022; Böken et al., 2023; Asher et al., 2024a). The fuzzy-name matching algorithm we employ is based on the Levenshtein edit distance algorithm, which calculates the number of edits, deletions, and insertions required to get from one name to another but is adjusted to lower the cost of certain substitutions that are common in Hindi.¹⁹

¹⁸There are only 23 politicians whose surname we could not identify.

¹⁹This algorithm, `masala_merge`, was developed by Paul Novosad: <https://github.com/devdatalab/masala-merge>.

Since some *jatis* have varying socioeconomic characteristics depending on the states they inhabit, we match the politicians’ surname data with the surname-*jati* key in the following sequence: (1) exact and fuzzy name matching between the surnames and the key *within* each state; (2) using the OpenAI API to identify the *jati* of unmatched surnames from the previous step and matching these with the POI data *within* the state; (3) performing exact and fuzzy name matching *across* all states for any remaining unmatched surnames; (4) applying the output *jatis* from step 2 to any surnames still unmatched and matching them with the POI data *across* states. Thus, we prioritize surname-*jati* match within each state and then try to match the unmatched surnames with the key across the states. In order to verify the results of the fuzzy-name matching algorithm, we also employ the OpenAI API: we specifically input the fuzzily matched surnames from surnames data and the surname-*jati* key and ask if they are variations of the same surname.

B Breakdown of Marginalized Groups

Through the paper, we aggregate SC, ST, and Muslim into marginalized groups and treat them as one social group. In this section, we break down marginalized groups into SC, ST, and Muslim to understand which specific social groups drove the economic and political outcomes of trade liberalization.

B.1 Trade Liberalization and Economic Performance

To understand which social groups within the marginalized groups drove the economic results, we split the indicator for marginalized individuals into three distinct subgroups: (i) SC, (ii) ST, and (iii) Muslims. Appendix Figure C5 shows coefficient estimates by social groups. Panel (a) shows that the lower consumption growth resulting from trade liberalization was primarily driven by SC and ST individuals, whereas panel (b) shows that earnings losses were predominantly driven by Muslims. However, these effects are not statistically distinguishable from each other. Overall, these results do not necessarily present the clear patterns of which social groups are the main driver of the change in economic outcomes.

B.2 Political Consequences of Trade Liberalization

To determine which subgroups within the marginalized groups influenced the political results, we divide them into (i) SC, (ii) ST, and (iii) Muslim. We then estimate the equation 2, with outcome variables being the vote shares for SC, ST, or Muslim candidates, or the share of these candidates in the district.

Appendix Figure C7 shows the coefficient estimates of the equation 2, where the outcome variables are the vote shares of candidates from marginalized groups, SC, ST, or Muslim, respectively. In the first row of each subfigure, we present the coefficient estimates from Table 3 for marginalized groups to benchmark the coefficient estimate of each subgroup. For both all candidates and winning candidates samples, the coefficient estimates for SC candidates are statistically insignificant. In contrast, the coefficient estimates for ST and Muslim candidates are significantly positive, suggesting that the exposure to tariff reductions increased the vote share of ST and Muslim candidates in the post-liberalization elections.

Similarly, Appendix Figure C8 shows the coefficient estimates of equation 2, where the outcome variables are the shares of candidates from marginalized groups, SC, ST, or Muslim, respectively. Again, we present the coefficient estimates from Table 4 for marginalized groups in the first row of each subfigure. When we investigate the share of candidates from each subgroup among *all* candidates, we observe the significantly positive coefficient estimate for SC candidates and insignificant estimates for ST and Muslim candidates. These estimates imply that the exposure to tariff reforms increased only the share of SC candidates among *all* candidates running for the elections. In contrast, when the outcome variables are the share of candidates from each subgroup among *winning* candidates, we only observe significantly positive coefficient estimates for Muslim *winning* candidates. These results indicate that Muslims primary drove the changes in political outcomes in response to trade liberalization shocks.

C Additional Figures

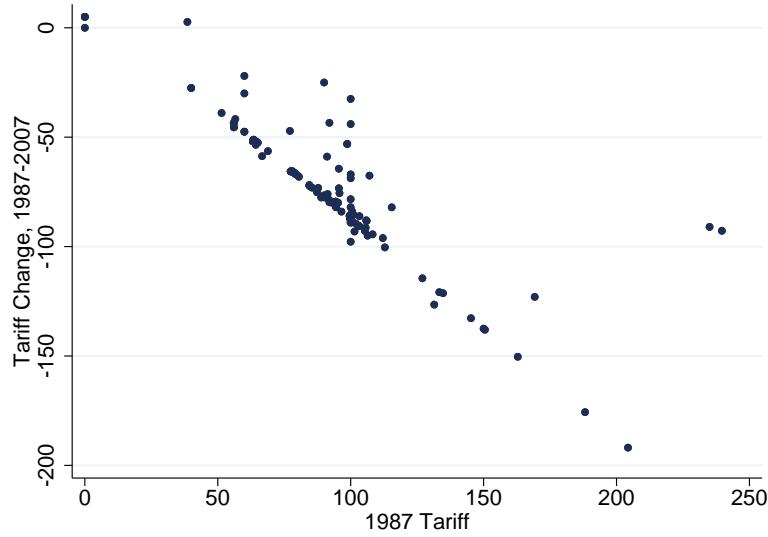


Figure C1. Pre-reform Tariff Rate and Tariff Change

Notes: This figure shows the correlation between the 1987 tariff rate and tariff changes from 1987 to 2007 across industries (4-digit NIC). Each marker corresponds to a 4-digit NIC industry.



(a) District Tariffs during Trade Liberalization (b) Baseline Exposure and Exposure Change

Figure C2. District-level Exposure to Tariff Reductions

Notes: This figure shows the district-level exposure to tariff reductions. Panel (a) illustrates the average district-level tariff decline over the liberalization period. Panel (b) illustrates the relationship between baseline (1987) exposure and exposure change between 1987 and 2007. Each marker represents a district.

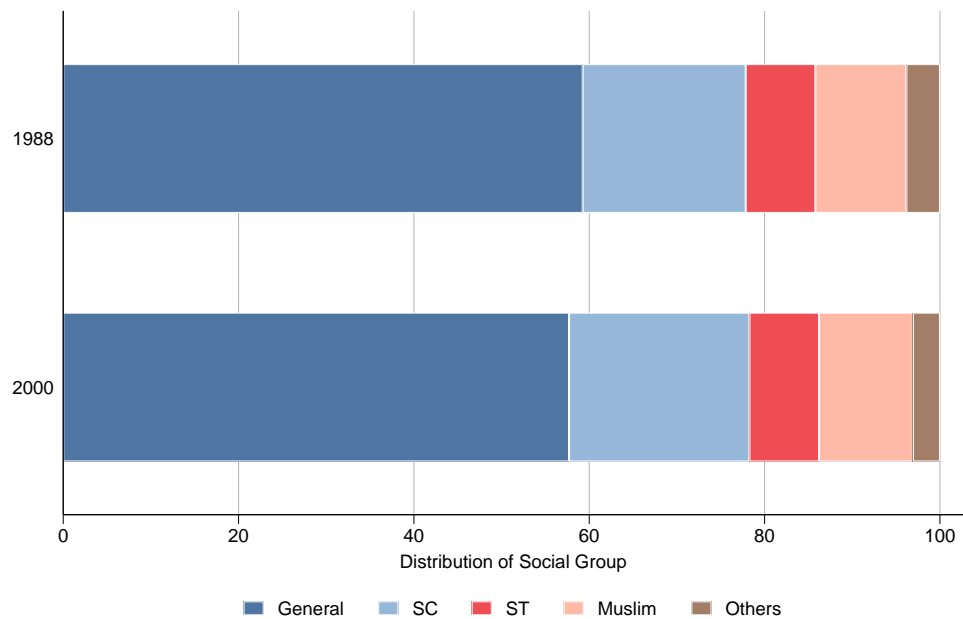


Figure C3. Group Composition in NSS

Notes: This figure shows the composition of individuals in the NSS between 1988 and 2000.

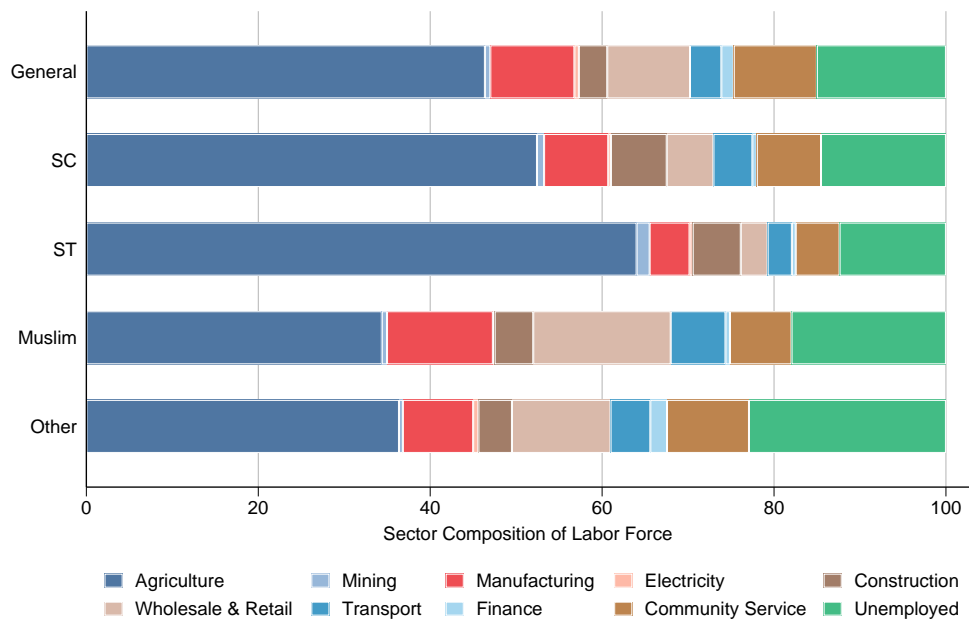


Figure C4. Sector Composition in NSS, by Social Group

Notes: This figure shows the distribution of social groups across sectoral categories in the labor force as measured in the NSS.

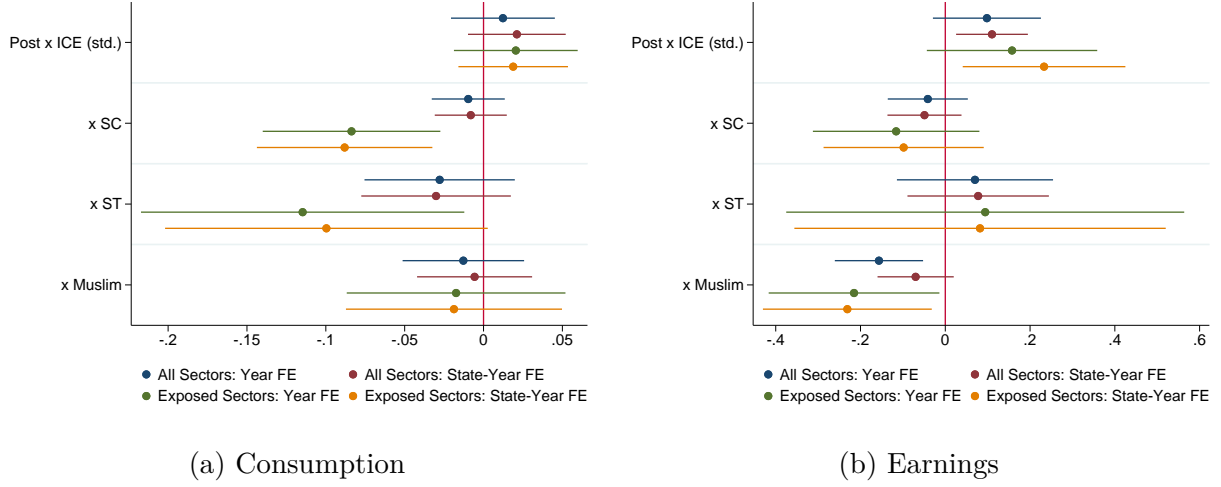


Figure C5. Effect on Consumption and Earnings by Social Group

Notes: This figure shows the effects of tariff reduction exposure on consumption (panel (a)) and earnings (panel (b)) by social group using data from the NSS, 1988–2000. The topmost coefficient is the effect for the reference category: non-marginalized individuals.

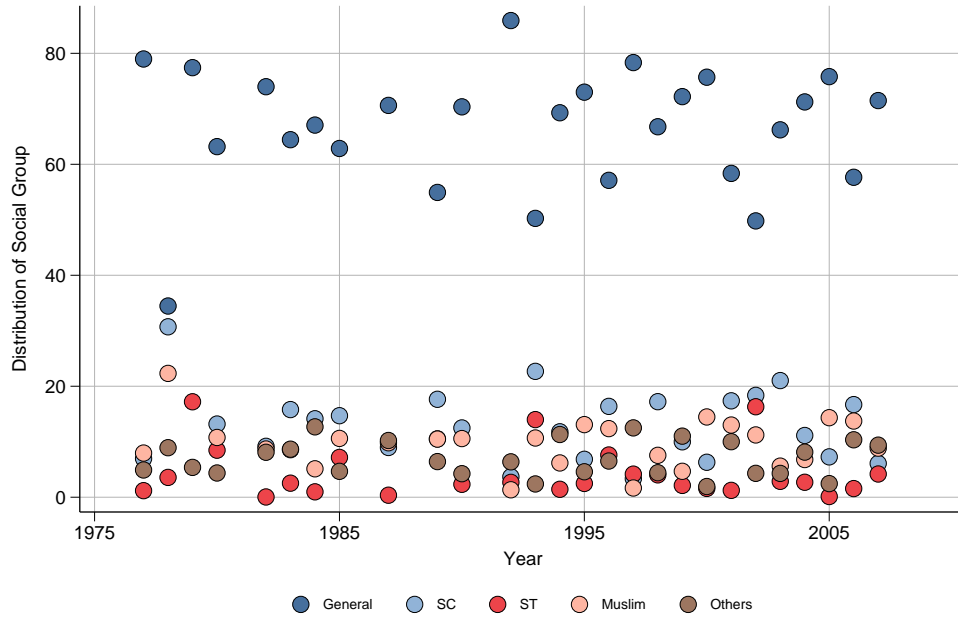


Figure C6. Distribution of Social Groups in State-level Elections

Notes: This figure shows the distribution of social groups contesting state-level political office by year.

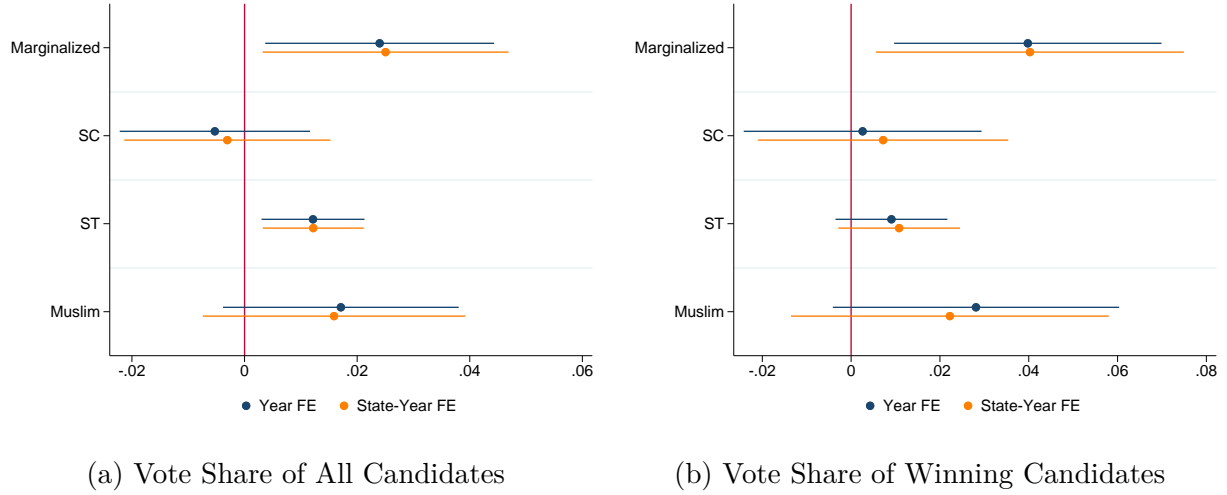


Figure C7. Coefficient Estimates: Vote Share of All and Winning Candidates

Notes: Each subfigure shows the coefficient estimate of the interaction term between an indicator for post-liberalization election and the measure of import competition exposure. Outcome variables are the vote shares of all political candidates from marginalized groups, SC, ST, or Muslim and those of only winning political candidates from marginalized groups, SC, ST, or Muslim in the district for each election. Navy plots show the coefficient estimates from the regression specification only with year fixed effects while orange plots show the coefficient estimates from the regression specification with state-year fixed effects.

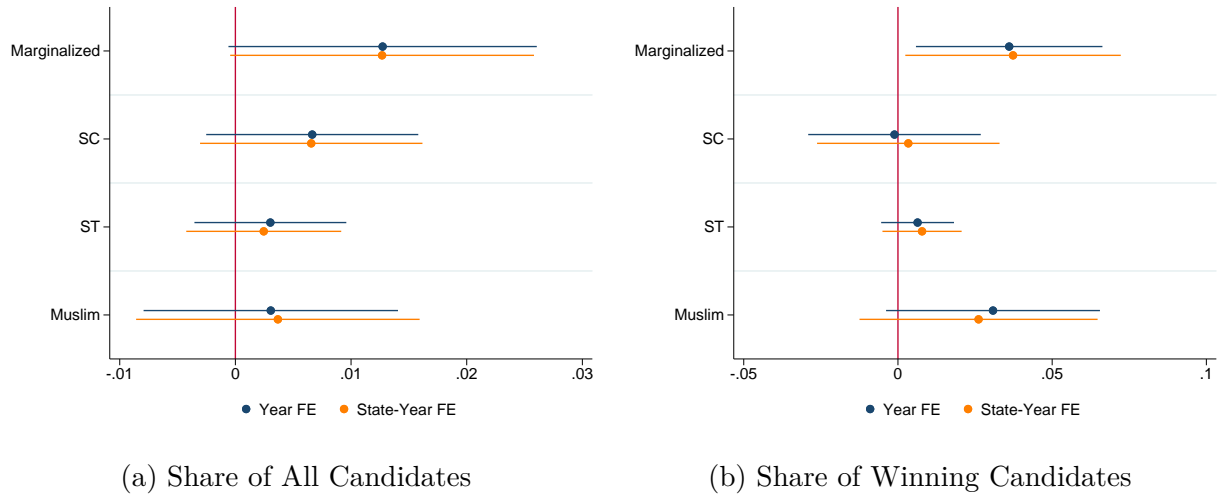
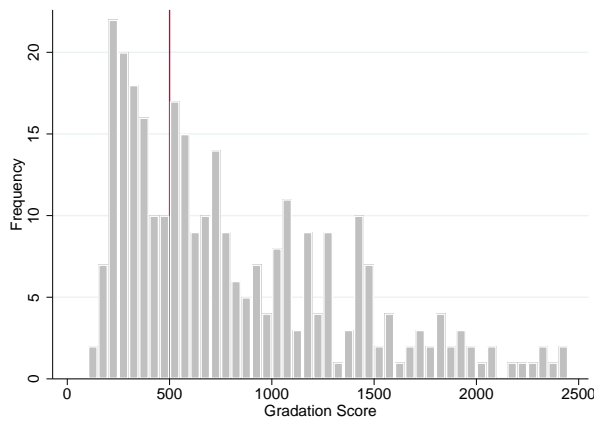
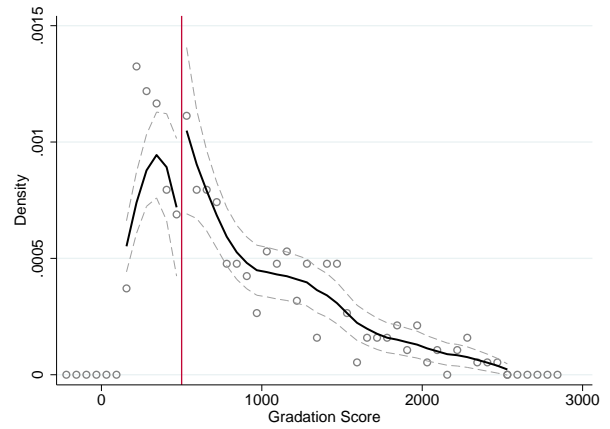


Figure C8. Coefficient Estimates: Share of All and Winning Candidates

Notes: Each subfigure shows the coefficient estimate of the interaction term between an indicator for post-liberalization election and the measure of import competition exposure. Outcome variables are the shares of all political candidates from marginalized groups, SC, ST, or Muslim and those of only winning political candidates from marginalized groups, SC, ST, or Muslim in the district for each election. Navy plots show the coefficient estimates from the regression specification only with year fixed effects while orange plots show the coefficient estimates from the regression specification with state-year fixed effects.



(a) Density of District Score



(b) [McCrary \(2008\)](#) Test

Figure C9. Density of District Graduation Scores

Notes: This figure shows the density of district scores used to identify backward districts and the [McCrary \(2008\)](#) test to check for a discontinuity of the density at the cutoff.

D Additional Tables

Table D1. Overview of Indian State Assembly Elections around Liberalization

| State | Relative Election Period $e(t)$ | | | | | | | | |
|-------------------|---------------------------------|---------|---------|---------|---------|--------|--------|--------|--------|
| | $e(-5)$ | $e(-4)$ | $e(-3)$ | $e(-2)$ | $e(-1)$ | $e(0)$ | $e(1)$ | $e(2)$ | $e(3)$ |
| Andhra Pradesh | . | 1978 | 1983 | 1985 | 1989 | 1994 | 1999 | 2004 | 2009 |
| Arunachal Pradesh | . | . | . | . | 1990 | 1995 | 1999 | 2004 | 2009 |
| Assam | . | . | 1978 | 1983 | 1985 | 1991 | 1996 | 2001 | 2006 |
| Bihar | . | 1977 | 1980 | 1985 | 1990 | 1995 | 2000 | 2005 | 2010 |
| Chhattisgarh* | . | . | . | . | . | 2003 | 2008 | 2013 | 2018 |
| Delhi | . | . | . | . | . | 1993 | 1998 | 2003 | 2008 |
| Goa | . | . | . | . | 1989 | 1994 | 1999 | 2002 | 2007 |
| Gujarat | . | 1975 | 1980 | 1985 | 1990 | 1995 | 1998 | 2002 | 2007 |
| Haryana | . | . | 1977 | 1982 | 1987 | 1991 | 1996 | 2000 | 2005 |
| Himachal Pradesh | . | 1977 | 1982 | 1985 | 1990 | 1993 | 1998 | 2003 | 2007 |
| Jammu & Kashmir | . | . | . | . | . | 1996 | 2002 | 2008 | 2014 |
| Jharkhand** | . | . | . | . | . | 2005 | 2009 | 2014 | 2019 |
| Karnataka | . | 1978 | 1983 | 1985 | 1989 | 1994 | 1999 | 2004 | 2008 |
| Kerala | . | 1977 | 1980 | 1982 | 1987 | 1991 | 1996 | 2001 | 2006 |
| Madhya Pradesh | . | 1977 | 1980 | 1985 | 1990 | 1993 | 1998 | 2003 | 2008 |
| Maharashtra | . | 1978 | 1980 | 1985 | 1990 | 1995 | 1999 | 2004 | 2009 |
| Manipur | . | . | . | . | 1990 | 1995 | 2000 | 2002 | 2007 |
| Meghalaya | . | . | 1978 | 1983 | 1988 | 1993 | 1998 | 2003 | 2008 |
| Mizoram | . | . | . | 1987 | 1989 | 1993 | 1998 | 2003 | 2008 |
| Nagaland | 1974 | 1977 | 1982 | 1987 | 1989 | 1993 | 1998 | 2003 | 2008 |
| Orissa | 1974 | 1977 | 1980 | 1985 | 1990 | 1995 | 2000 | 2004 | 2009 |
| Puducherry | 1974 | 1977 | 1980 | 1985 | 1990 | 1991 | 1996 | 2001 | 2006 |
| Punjab | . | . | 1977 | 1980 | 1985 | 1992 | 1997 | 2002 | 2007 |
| Rajasthan | . | 1977 | 1980 | 1985 | 1990 | 1993 | 1998 | 2003 | 2008 |
| Sikkim | . | . | 1979 | 1985 | 1989 | 1994 | 1999 | 2004 | 2009 |
| Tamil Nadu | . | 1977 | 1980 | 1984 | 1989 | 1991 | 1996 | 2001 | 2006 |
| Tripura | . | . | 1977 | 1983 | 1988 | 1993 | 1998 | 2003 | 2008 |
| Uttar Pradesh | 1974 | 1977 | 1980 | 1985 | 1989 | 1991 | 1993 | 1996 | 2002 |
| Uttarakhand*** | . | . | . | . | . | 2002 | 2007 | 2012 | 2017 |
| West Bengal | . | . | 1977 | 1982 | 1987 | 1991 | 1996 | 2001 | 2006 |

Notes: This table provides an overview of state-level elections around the 1991 trade liberalization. “ $e(0)$ ” denotes the first post-liberalization election. *Carved out of Madhya Pradesh; **carved out of Bihar; ***carved out of Uttar Pradesh (all in 2000).

Table D2. Descriptive Statistics: NSS Data

| | Mean | S.D. | Min | Max | Obs. |
|--------------------------|--------|--------|------|----------|---------|
| Female | 0.10 | 0.30 | 0.00 | 1.00 | 193,947 |
| Age | 44.38 | 13.96 | 0.00 | 99.00 | 193,947 |
| Years Education | 4.33 | 4.65 | 0.00 | 14.00 | 193,947 |
| Urban Household | 0.36 | 0.48 | 0.00 | 1.00 | 193,947 |
| Monthly Consumption (Rs) | 422.46 | 395.55 | 0.00 | 2731.00 | 193,947 |
| Earnings (Rs) | 69.86 | 277.36 | 0.00 | 25150.00 | 193,947 |

Notes: This table reports summary statistics for the economic outcomes used in the analysis and shows the sample of individuals in NSS for 1988 and 2000. Earnings and wages are reported in Indian rupees. Each observation is a household-head individual.

Table D3. Descriptive Statistics: Tariff exposure

| | Mean | S.D. | Min | Max | Obs. |
|--------------|--------|-------|--------|-------|------|
| ICE | 38.21 | 11.37 | 8.68 | 84.08 | 412 |
| Δ ICE | -17.03 | 5.30 | -39.42 | -4.02 | 412 |

Notes: This table reports the district-level measures of local exposure to tariff reductions. The first measure is the weighted average of 1987 tariff rates in each district, where the weight is the employment share of each sector. The second measure is the weighted average of the differences between 1991 and 1996 tariff rates in each district with the same weight.

Table D4. Descriptive Statistics: Political Outcomes

| | Mean | S.D. | Min | Max | Obs. |
|----------------------------------------------------------------------------------------|------|------|------|------|-------|
| <i>Panel A. Voters' Preferences & Political Participation: All Candidates</i> | | | | | |
| Cand. Vote Share: General Caste | 0.66 | 0.24 | 0.00 | 1.00 | 2,459 |
| Cand. Vote Share: Marginalized | 0.28 | 0.23 | 0.00 | 1.00 | 2,459 |
| Cand. Share: General Caste | 0.65 | 0.19 | 0.00 | 1.00 | 2,459 |
| Cand. Share: Marginalized | 0.30 | 0.19 | 0.00 | 1.00 | 2,459 |
| <i>Panel B. Voters' Preferences & Political Representation: Winning Candidates</i> | | | | | |
| Winner Vote Share: General Caste | 0.67 | 0.32 | 0.00 | 1.00 | 2,459 |
| Winner Vote Share: Marginalized | 0.28 | 0.31 | 0.00 | 1.00 | 2,459 |
| Winner Share: General Caste | 0.67 | 0.31 | 0.00 | 1.00 | 2,459 |
| Winner Share: Marginalized | 0.27 | 0.30 | 0.00 | 1.00 | 2,459 |

Notes: This table reports summary statistics for the the political outcome variables from election data between 1977 and 2007.

Table D5. Consumption

| | ln MPCE | | | |
|--------------------------------------------------|-------------------|-------------------|-------------------|--------------------|
| | All Sectors | | Exposed Sectors | |
| | (1) | (2) | (3) | (4) |
| Post \times Δ ICE (std.) | 0.008 (0.013) | 0.011 (0.012) | 0.007 (0.015) | -0.002 (0.013) |
| Post \times Marg. \times Δ ICE (std.) | -0.008 (0.011) | -0.005 (0.010) | -0.032 (0.020) | -0.035* (0.019) |
| Outcome Mean | 5.985 | 5.985 | 6.074 | 6.074 |
| Observations | 193,947 | 193,947 | 29,096 | 29,096 |
| Districts | 412 | 412 | 409 | 409 |
| District FE | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the natural logarithm of the household-level monthly per-capita consumption from two rounds of NSS household surveys. In columns (1) and (2), we use all individuals in NSS household surveys. In columns (3) and (4), we select the subsample of workers in sectors exposed to trade liberalization: (i) manufacturing, (ii) mining and quarrying, and (iii) construction. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D6. Earnings

| | ln Earnings | | | |
|--------------------------------------------------|--------------------|---------------------|--------------------|--------------------|
| | All Sectors | | Exposed Sectors | |
| | (1) | (2) | (3) | (4) |
| Post \times Δ ICE (std.) | 0.080 (0.057) | 0.096*** (0.035) | 0.163** (0.082) | 0.193** (0.082) |
| Post \times Marg. \times Δ ICE (std.) | -0.069* (0.037) | -0.044 (0.036) | -0.073 (0.094) | -0.072 (0.093) |
| Outcome Mean | 2.168 | 2.168 | 3.044 | 3.044 |
| Observations | 193,947 | 193,947 | 29,096 | 29,096 |
| Districts | 412 | 412 | 409 | 409 |
| District FE | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the natural logarithm of the household-level per-capita earnings from two rounds of NSS household surveys. In columns (1) and (2), we use all individuals in NSS household surveys. In columns (3) and (4), we select the subsample of workers in sectors exposed to trade liberalization: (i) manufacturing, (ii) mining and quarrying, and (iii) construction. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D7. Consumption

| | ln MPCE | | | |
|-----------------------------------------|-------------------|-------------------|---------------------|---------------------|
| | All Sectors | | Exposed Sectors | |
| | (1) | (2) | (3) | (4) |
| Post \times ICE (std.) | 0.005 (0.014) | 0.011 (0.014) | 0.007 (0.017) | 0.001 (0.016) |
| Post \times Marg. \times ICE (std.) | -0.004 (0.011) | -0.002 (0.010) | -0.042** (0.020) | -0.045** (0.019) |
| Outcome Mean | 5.985 | 5.985 | 6.074 | 6.074 |
| Observations | 193,947 | 193,947 | 29,096 | 29,096 |
| Districts | 412 | 412 | 409 | 409 |
| District FE | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the natural logarithm of the household-level monthly per-capita consumption from two rounds of NSS household surveys. In columns (1) and (2), we use all individuals in NSS household surveys. In columns (3) and (4), we select the subsample of workers in sectors exposed to trade liberalization: (i) manufacturing, (ii) mining and quarrying, and (iii) construction. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D8. Earnings

| | ln Earnings | | | |
|-----------------------------------------|-------------------|--------------------|-------------------|--------------------|
| | All Sectors | | Exposed Sectors | |
| | (1) | (2) | (3) | (4) |
| Post \times ICE (std.) | 0.096 (0.065) | 0.091** (0.043) | 0.148 (0.104) | 0.206** (0.096) |
| Post \times Marg. \times ICE (std.) | -0.037 (0.035) | -0.009 (0.036) | -0.091 (0.090) | -0.068 (0.091) |
| Outcome Mean | 2.168 | 2.168 | 3.044 | 3.044 |
| Observations | 193,947 | 193,947 | 29,096 | 29,096 |
| Districts | 412 | 412 | 409 | 409 |
| District FE | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the natural logarithm of the household-level per-capita earnings from two rounds of NSS household surveys. In columns (1) and (2), we use all individuals in NSS household surveys. In columns (3) and (4), we select the subsample of workers in sectors exposed to trade liberalization: (i) manufacturing, (ii) mining and quarrying, and (iii) construction. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D9. Vote Share: All and Winning Candidates

| Candidates Sample: | All Candidates | | | | Winning Candidates | | | |
|-----------------------------------|--------------------|--------------------|----------------------|----------------------|--------------------|-------------------|---------------------|---------------------|
| Social Group: | Marginalized | | General | | Marginalized | | General | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Post \times Δ ICE (std.) | 0.021** (0.010) | 0.021** (0.010) | -0.026*** (0.009) | -0.026*** (0.010) | 0.032** (0.015) | 0.032* (0.016) | -0.032** (0.014) | -0.033** (0.015) |
| Outcome Mean | 0.312 | 0.312 | 0.660 | 0.660 | 0.305 | 0.305 | 0.668 | 0.668 |
| Observations | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 |
| Districts | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the vote shares of all political candidates from marginalized groups or general castes (Columns 1 to 4) and those of only winning political candidates from marginalized groups or general castes (Columns 5 to 8) in the district for each election. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D10. Candidates Share: All and Winning Candidates

| Candidates Sample: | All Candidates | | | | Winning Candidates | | | |
|-----------------------------------|--------------------|-------------------|---------------------|--------------------|--------------------|------------------|--------------------|-------------------|
| Social Group: | Marginalized | | General | | Marginalized | | General | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Post \times Δ ICE (std.) | 0.013** (0.006) | 0.012* (0.006) | -0.016** (0.007) | -0.013* (0.007) | 0.028** (0.014) | 0.026 (0.016) | -0.024* (0.014) | -0.024 (0.016) |
| Outcome Mean | 0.297 | 0.297 | 0.645 | 0.645 | 0.275 | 0.275 | 0.668 | 0.668 |
| Observations | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 |
| Districts | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the shares of all political candidates from marginalized groups or general castes (Columns 1 to 4) and those of only winning political candidates from marginalized groups or general castes (Columns 5 to 8) in the district for each election. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D11. Vote Share: All and Winning Candidates

| Candidates Sample: | All Candidates | | | | Winning Candidates | | | |
|--------------------------|--------------------|--------------------|----------------------|----------------------|---------------------|---------------------|----------------------|----------------------|
| Social Group: | Marginalized | | General | | Marginalized | | General | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Post \times ICE (std.) | 0.028** (0.011) | 0.031** (0.012) | -0.031*** (0.011) | -0.036*** (0.012) | 0.043*** (0.016) | 0.047*** (0.018) | -0.042*** (0.015) | -0.048*** (0.017) |
| Outcome Mean | 0.312 | 0.312 | 0.660 | 0.660 | 0.305 | 0.305 | 0.668 | 0.668 |
| Observations | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 |
| Districts | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the vote shares of all political candidates from marginalized groups or general castes (Columns 1 to 4) and those of only winning political candidates from marginalized groups or general castes (Columns 5 to 8) in the district for each election. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D12. Candidates Share: All and Winning Candidates

| Candidates Sample: | All Candidates | | | | Winning Candidates | | | |
|--------------------------|-------------------|-------------------|---------------------|---------------------|--------------------|--------------------|---------------------|---------------------|
| Social Group: | Marginalized | | General | | Marginalized | | General | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Post \times ICE (std.) | 0.014* (0.007) | 0.014* (0.007) | -0.017** (0.008) | -0.016** (0.008) | 0.038** (0.016) | 0.042** (0.018) | -0.034** (0.016) | -0.039** (0.018) |
| Outcome Mean | 0.327 | 0.327 | 0.645 | 0.645 | 0.305 | 0.305 | 0.668 | 0.668 |
| Observations | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 |
| Districts | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the shares of all political candidates from marginalized groups or general castes (Columns 1 to 4) and those of only winning political candidates from marginalized groups or general castes (Columns 5 to 8) in the district for each election. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D13. Vote Share: All and Winning Candidates

| Candidates Sample: | All Candidates | | | | Winning Candidates | | | |
|--------------------------|--------------------|-------------------|----------------------|----------------------|--------------------|------------------|-------------------|-------------------|
| Social Group: | Marginalized | | General | | Marginalized | | General | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Post \times ICE (std.) | 0.022** (0.010) | 0.020* (0.011) | -0.028*** (0.010) | -0.030*** (0.011) | 0.015** (0.007) | 0.010 (0.008) | -0.012 (0.008) | -0.014 (0.009) |
| Outcome Mean | 0.260 | 0.260 | 0.669 | 0.669 | 0.116 | 0.116 | 0.324 | 0.324 |
| Observations | 14,809 | 14,809 | 14,809 | 14,809 | 11,712 | 11,712 | 11,712 | 11,712 |
| Districts | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the vote shares of all political candidates from marginalized groups or general castes (Columns 1 to 4) and those of only winning political candidates from marginalized groups or general castes (Columns 5 to 8) in the constituency for each election. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D14. Candidates Share: All and Winning Candidates

| Candidates Sample: | All Candidates | | | | Winning Candidates | | | |
|--------------------------|--------------------|--------------------|----------------------|---------------------|--------------------|------------------|-------------------|-------------------|
| Social Group: | Marginalized | | General | | Marginalized | | General | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Post \times ICE (std.) | 0.014** (0.006) | 0.012** (0.006) | -0.018*** (0.006) | -0.015** (0.006) | 0.017 (0.012) | 0.019 (0.013) | -0.009 (0.013) | -0.005 (0.014) |
| Outcome Mean | 0.272 | 0.272 | 0.659 | 0.659 | 0.202 | 0.202 | 0.532 | 0.532 |
| Observations | 14,813 | 14,813 | 14,813 | 14,813 | 14,813 | 14,813 | 14,813 | 14,813 |
| Districts | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the shares of all political candidates from marginalized groups or general castes (Columns 1 to 4) and those of only winning political candidates from marginalized groups or general castes (Columns 5 to 8) in the constituency for each election. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D15. Vote Share: All and Winning Candidates

| Candidates Sample | All Candidates | | | | Winning Candidates | | | |
|-----------------------------------------|---------------------|------------------|-------------------|------------------|--------------------|-------------------|---------------------|-------------------|
| Social Group: | Marginalized | | General | | Marginalized | | General | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Post \times ICE (std.) | 0.000 (0.002) | 0.001 (0.001) | 0.003* (0.002) | 0.002 (0.001) | -0.001 (0.004) | -0.005 (0.004) | 0.009** (0.004) | 0.001 (0.004) |
| Post \times Marg. \times ICE (std.) | 0.005*** (0.002) | 0.003 (0.002) | | | 0.012** (0.005) | 0.008* (0.005) | | |
| Post \times Gen. \times ICE (std.) | | | -0.002 (0.002) | 0.000 (0.002) | | | -0.011** (0.005) | -0.007 (0.004) |
| Outcome Mean | 0.105 | 0.105 | 0.105 | 0.105 | 0.476 | 0.476 | 0.476 | 0.476 |
| Observations | 110,950 | 110,950 | 110,950 | 110,950 | 11,669 | 11,669 | 11,669 | 11,669 |
| Districts | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the vote shares of all political candidates from marginalized groups or general castes (Columns 1 to 4) and those of only winning candidates from marginalized groups or general castes (Columns 5 to 8) for each election. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D16. Candidates Share: All and Winning Candidates

| Candidates Sample | All Candidates | | | | Winning Candidates | | | |
|--------------------------|--------------------|-------------------|---------------------|---------------------|--------------------|------------------|-------------------|-------------------|
| Social Group: | Marginalized | | General | | Marginalized | | General | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Post \times ICE (std.) | 0.010** (0.005) | 0.009* (0.005) | -0.013** (0.005) | -0.013** (0.005) | 0.009 (0.014) | 0.013 (0.015) | -0.009 (0.014) | -0.017 (0.016) |
| Outcome Mean | 0.302 | 0.302 | 0.641 | 0.641 | 0.255 | 0.255 | 0.672 | 0.672 |
| Observations | 110,957 | 110,957 | 110,957 | 110,957 | 11,673 | 11,673 | 11,673 | 11,673 |
| Districts | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the indicators for political candidates from marginalized groups or general castes (Columns 1 to 4) and for winning candidates from marginalized groups or general castes (Columns 5 to 8) for each election. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D17. Vote Share: All and Winning Candidates

| Candidates Sample: | All Candidates | | | | Winning Candidates | | | |
|--------------------------|--------------------|--------------------|----------------------|----------------------|---------------------|--------------------|----------------------|----------------------|
| Social Group: | Marginalized | | General | | Marginalized | | General | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Post \times ICE (std.) | 0.024** (0.011) | 0.025** (0.012) | -0.030*** (0.011) | -0.035*** (0.012) | 0.041*** (0.016) | 0.043** (0.019) | -0.044*** (0.016) | -0.051*** (0.018) |
| Outcome Mean | 0.295 | 0.295 | 0.647 | 0.647 | 0.290 | 0.290 | 0.653 | 0.653 |
| Observations | 2,247 | 2,247 | 2,247 | 2,247 | 2,247 | 2,247 | 2,247 | 2,247 |
| Districts | 378 | 378 | 378 | 378 | 378 | 378 | 378 | 378 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are vote shares for all political candidates from marginalized groups or general castes (Columns 1 to 4) and for winning candidates from marginalized groups or general castes (Columns 5 to 8) for each election. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D18. Candidates Share: All and Winning Candidates

| Candidates Sample: | All Candidates | | | | Winning Candidates | | | |
|--------------------------|-------------------|-------------------|---------------------|---------------------|--------------------|--------------------|---------------------|---------------------|
| Social Group: | Marginalized | | General | | Marginalized | | General | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Post \times ICE (std.) | 0.012* (0.007) | 0.012* (0.007) | -0.016** (0.008) | -0.016** (0.008) | 0.037** (0.016) | 0.040** (0.019) | -0.036** (0.016) | -0.042** (0.019) |
| Outcome Mean | 0.312 | 0.312 | 0.630 | 0.630 | 0.290 | 0.290 | 0.653 | 0.653 |
| Observations | 2,247 | 2,247 | 2,247 | 2,247 | 2,247 | 2,247 | 2,247 | 2,247 |
| Districts | 378 | 378 | 378 | 378 | 378 | 378 | 378 | 378 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the shares of all political candidates from marginalized groups or general castes (Columns 1 to 4) and for winning candidates from marginalized groups or general castes (Columns 5 to 8) for each election. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D19. Vote Share: All and Winning Candidates

| Candidates Sample: | All Candidates | | | | | | Winning Candidates | | | | | |
|--------------------------|--------------------|-------------------|---------------------|-------------------|------------------|-------------------|--------------------|-------------------|---------------------|------------------|------------------|------------------|
| Political Party: | INC | | BJP | | LC/M | | INC | | BJP | | LC/M | |
| Social Group: | Marg. | Gen. | Marg. | Gen. | Marg. | Gen. | Marg. | Gen. | Marg. | Gen. | Marg. | Gen. |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| Post \times ICE (std.) | 0.010** (0.005) | −0.013 (0.008) | 0.016*** (0.005) | −0.000 (0.006) | 0.004 (0.007) | −0.001 (0.010) | 0.022** (0.010) | −0.031 (0.020) | 0.035*** (0.009) | 0.007 (0.013) | 0.005 (0.012) | 0.011 (0.015) |
| Outcome Mean | 0.070 | 0.187 | 0.044 | 0.114 | 0.062 | 0.107 | 0.075 | 0.194 | 0.050 | 0.126 | 0.062 | 0.116 |
| Observations | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 |
| Districts | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | No | No | No | No | No | No | No | No | No | No | No | No |
| State-Year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are vote shares for all political candidates from marginalized groups or general castes (Columns 1 to 6) and for winning candidates from marginalized groups or general castes (Columns 7 to 12) for each election. Odd columns show the estimates for marginalized groups while even columns for general castes. INC, BJP, and LC/M denote Indian National Congress, Bharatiya Janata Party, and parties with policy agendas on low-castes and Muslims, respectively. All columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts.

*** = 1% significance, ** = 5%, * = 10%.

Table D20. Candidates Share: All and Winning Candidates

| Candidates Sample: | All Candidates | | | | | | Winning Candidates | | | | | |
|--------------------------|--------------------|-------------------|------------------|-------------------|------------------|-------------------|--------------------|-------------------|---------------------|------------------|------------------|------------------|
| Political Party: | INC | | BJP | | LC/M | | INC | | BJP | | LC/M | |
| Social Group: | Marg. | Gen. | Marg. | Gen. | Marg. | Gen. | Marg. | Gen. | Marg. | Gen. | Marg. | Gen. |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| Post \times ICE (std.) | 0.003** (0.001) | −0.001 (0.003) | 0.003 (0.002) | −0.003 (0.002) | 0.002 (0.004) | −0.005 (0.004) | 0.022** (0.009) | −0.025 (0.020) | 0.033*** (0.009) | 0.007 (0.013) | 0.007 (0.012) | 0.011 (0.015) |
| Outcome Mean | 0.025 | 0.067 | 0.018 | 0.053 | 0.041 | 0.077 | 0.075 | 0.193 | 0.049 | 0.126 | 0.062 | 0.116 |
| Observations | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 |
| Districts | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | No | No | No | No | No | No | No | No | No | No | No | No |
| State-Year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the shares of all political candidates from marginalized groups or general castes (Columns 1 to 6) and for winning candidates from marginalized groups or general castes (Columns 7 to 12) for each election. Odd columns show the estimates for marginalized groups while even columns for general castes. INC, BJP, and LC/M denote Indian National Congress, Bharatiya Janata Party, and parties with policy agendas on low-castes and Muslims, respectively. All columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D21. Vote Share: All and Winning Candidates

| Candidates Sample: | All Candidates | | | | | | Winning Candidates | | | | | |
|-------------------------------|---------------------|-------------------|---------------------|-------------------|-------------------|-------------------|---------------------|---------------------|--------------------|-------------------|-------------------|------------------|
| Political Party: | INC | | BJP | | LC/M | | INC | | BJP | | LC/M | |
| Social Group: | Marg. | Gen. | Marg. | Gen. | Marg. | Gen. | Marg. | Gen. | Marg. | Gen. | Marg. | Gen. |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| <i>Panel A. Incumbent</i> | | | | | | | | | | | | |
| Post \times ICE (std.) | 0.007*** (0.003) | −0.003 (0.006) | 0.007*** (0.003) | 0.005 (0.005) | −0.000 (0.003) | −0.000 (0.004) | 0.013*** (0.005) | 0.003 (0.011) | 0.016** (0.006) | 0.010 (0.010) | −0.001 (0.006) | 0.006 (0.008) |
| Outcome Mean | 0.021 | 0.059 | 0.010 | 0.033 | 0.011 | 0.025 | 0.025 | 0.068 | 0.014 | 0.044 | 0.015 | 0.037 |
| Observations | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 |
| Districts | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | No | No | No | No | No | No | No | No | No | No | No | No |
| State-Year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| <i>Panel B. Non-Incumbent</i> | | | | | | | | | | | | |
| Post \times ICE (std.) | 0.003 (0.005) | −0.010 (0.007) | 0.008 (0.005) | −0.006 (0.007) | 0.005 (0.006) | −0.001 (0.009) | 0.009 (0.009) | −0.034** (0.014) | 0.019** (0.008) | −0.004 (0.014) | 0.006 (0.011) | 0.005 (0.011) |
| Outcome Mean | 0.048 | 0.128 | 0.033 | 0.081 | 0.051 | 0.082 | 0.049 | 0.125 | 0.036 | 0.082 | 0.047 | 0.080 |
| Observations | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 |
| Districts | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | No | No | No | No | No | No | No | No | No | No | No | No |
| State-Year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are vote shares for all political candidates from marginalized groups or general castes (Columns 1 to 6) and for winning candidates from marginalized groups or general castes (Columns 7 to 12) with incumbency status (Panel A) or without (Panel B) for each election. Odd columns show the estimates for marginalized groups while even columns for general castes. INC, BJP, and LC/M denote Indian National Congress, Bharatiya Janata Party, and parties with policy agendas on low-castes and Muslims, respectively. All columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D22. Candidates Share: All and Winning Candidates

| Candidates Sample: | All Candidates | | | | | | Winning Candidates | | | | | |
|-------------------------------|------------------|-------------------|--------------------|--------------------|-------------------|-------------------|---------------------|---------------------|---------------------|-------------------|------------------|------------------|
| Political Party: | INC | | BJP | | LC/M | | INC | | BJP | | LC/M | |
| Social Group: | Marg. | Gen. | Marg. | Gen. | Marg. | Gen. | Marg. | Gen. | Marg. | Gen. | Marg. | Gen. |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| <i>Panel A. Incumbent</i> | | | | | | | | | | | | |
| Post \times ICE (std.) | 0.001 (0.001) | -0.001 (0.002) | 0.002** (0.001) | 0.001 (0.001) | -0.000 (0.001) | -0.000 (0.002) | 0.012*** (0.004) | 0.004 (0.010) | 0.017*** (0.006) | 0.011 (0.009) | 0.000 (0.006) | 0.005 (0.008) |
| Outcome Mean | 0.007 | 0.019 | 0.003 | 0.010 | 0.003 | 0.008 | 0.025 | 0.068 | 0.013 | 0.043 | 0.015 | 0.036 |
| Observations | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 |
| Districts | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | No | No | No | No | No | No | No | No | No | No | No | No |
| State-Year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| <i>Panel B. Non-Incumbent</i> | | | | | | | | | | | | |
| Post \times ICE (std.) | 0.002 (0.001) | 0.000 (0.003) | 0.001 (0.002) | -0.004* (0.002) | 0.002 (0.004) | -0.005 (0.004) | 0.010 (0.009) | -0.029** (0.015) | 0.016** (0.007) | -0.003 (0.014) | 0.007 (0.011) | 0.006 (0.011) |
| Outcome Mean | 0.018 | 0.048 | 0.015 | 0.043 | 0.038 | 0.069 | 0.050 | 0.125 | 0.036 | 0.083 | 0.048 | 0.080 |
| Observations | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 | 2,459 |
| Districts | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 | 412 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | No | No | No | No | No | No | No | No | No | No | No | No |
| State-Year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the shares of all political candidates from marginalized groups or general castes (Columns 1 to 6) and for winning candidates from marginalized groups or general castes (Columns 7 to 12) with incumbency status (Panel A) or without (Panel B) for each election. Odd columns show the estimates for marginalized groups while even columns for general castes. INC, BJP, and LC/M denote Indian National Congress, Bharatiya Janata Party, and parties with policy agendas on low-castes and Muslims, respectively. All columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D23. Balance of Baseline District Characteristics

| | Backward District (<i>Treated</i>) | | Forward District (<i>Control</i>) | | Mean Difference | |
|------------------------------|--------------------------------------|-------------|-------------------------------------|-------------|-----------------|------------------------|
| | Mean (1) | Obs. (2) | Mean (3) | Obs. (4) | Diff. (5) | <i>p</i> -value (6) |
| PC91 Marg. Population Share | 0.356 | 77 | 0.371 | 63 | 0.015 | 0.463 |
| ICE (std.) | 0.056 | 77 | 0.114 | 63 | 0.058 | 0.708 |
| EC90 Total Employment | 71636.097 | 77 | 79942.659 | 63 | 8306.561 | 0.481 |
| EC90 Manuf. Employment Share | 0.301 | 77 | 0.315 | 63 | 0.014 | 0.446 |

Notes: Baseline District characteristics are 1991 population share of marginalized groups, baseline exposure to import competition, 1990 total employment, and 1990 manufacturing sector employment share. Columns (1) and (3) show the mean of each district characteristic in backward districts and non-backward districts, respectively. All comparisons are made within a bandwidth of 250 points around the gradation score cutoff (500).

Table D24. Vote Share: All and Winning Candidates

| Candidates Sample: | All Candidates | | | | Winning Candidates | | | |
|--------------------------|-------------------|--------------------|---------------------|---------------------|--------------------|------------------|--------------------|-------------------|
| Social Group: | Marginalized | | General | | Marginalized | | General | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Post \times ICE (std.) | 0.041* (0.016) | 0.043** (0.016) | -0.048** (0.018) | -0.052** (0.018) | 0.050* (0.025) | 0.051 (0.029) | -0.049* (0.024) | -0.048 (0.030) |
| Outcome Mean | 0.307 | 0.307 | 0.646 | 0.646 | 0.310 | 0.310 | 0.645 | 0.645 |
| Observations | 834 | 834 | 834 | 834 | 834 | 834 | 834 | 834 |
| Districts | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the vote shares for all political candidates from marginalized groups or general castes (Columns 1 to 4) and for winning candidates from marginalized groups or general castes (Columns 5 to 8) for each election. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D25. Candidates Share: All and Winning Candidates

| Candidates Sample: | All Candidates | | | | Winning Candidates | | | |
|--------------------------|------------------|------------------|-------------------|-------------------|--------------------|------------------|-------------------|-------------------|
| Social Group: | Marginalized | | General | | Marginalized | | General | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Post \times ICE (std.) | 0.012 (0.010) | 0.018 (0.010) | -0.011 (0.012) | -0.017 (0.012) | 0.039 (0.026) | 0.042 (0.031) | -0.037 (0.026) | -0.038 (0.031) |
| Outcome Mean | 0.318 | 0.318 | 0.637 | 0.637 | 0.311 | 0.311 | 0.643 | 0.643 |
| Observations | 834 | 834 | 834 | 834 | 834 | 834 | 834 | 834 |
| Districts | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | Yes | No | Yes | No | Yes | No | Yes | No |
| State-Year FE | No | Yes | No | Yes | No | Yes | No | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the shares of all political candidates from marginalized groups or general castes (Columns 1 to 4) and for winning candidates from marginalized groups or general castes (Columns 5 to 8) for each election. Odd columns show the regression estimates only with year fixed effects while even columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D26. Vote Share: All and Winning Candidates

| Candidates Sample: | All Candidates | | | | | | Winning Candidates | | | | | |
|--------------------------------------------------|----------------|---------|---------|---------|---------|---------|--------------------|---------|---------|---------|---------|---------|
| Social Group: | Marginalized | | | General | | | Marginalized | | | General | | |
| Bandwidth: | 200 | 250 | 300 | 200 | 250 | 300 | 200 | 250 | 300 | 200 | 250 | 300 |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| Post \times ICE (std.) | 0.069* | 0.078** | 0.052 | -0.069 | -0.081* | -0.065* | 0.074 | 0.081 | 0.059 | -0.059 | -0.070 | -0.064 |
| | (0.031) | (0.027) | (0.027) | (0.036) | (0.033) | (0.030) | (0.054) | (0.042) | (0.040) | (0.053) | (0.044) | (0.040) |
| Post \times Backward Dist. \times ICE (std.) | -0.032 | -0.051 | -0.029 | 0.021 | 0.043 | 0.030 | -0.023 | -0.048 | -0.020 | 0.012 | 0.037 | 0.025 |
| | (0.034) | (0.028) | (0.029) | (0.039) | (0.034) | (0.032) | (0.058) | (0.046) | (0.045) | (0.056) | (0.047) | (0.043) |
| <i>p</i> -value | 0.066 | 0.148 | 0.210 | 0.038 | 0.061 | 0.069 | 0.180 | 0.326 | 0.239 | 0.226 | 0.322 | 0.232 |
| Outcome Mean | 0.309 | 0.309 | 0.302 | 0.648 | 0.644 | 0.653 | 0.313 | 0.311 | 0.298 | 0.647 | 0.643 | 0.657 |
| Observations | 625 | 827 | 1,004 | 625 | 827 | 1,004 | 625 | 827 | 1,004 | 625 | 827 | 1,004 |
| Districts | 105 | 139 | 169 | 105 | 139 | 169 | 105 | 139 | 169 | 105 | 139 | 169 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | No | No | No | No | No | No | No | No | No | No | No | No |
| State-Year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the indicators for political candidates from marginalized groups or general castes (Columns 1 to 6) and for winning candidates from marginalized groups or general castes (Columns 7 to 12) for each election. We run the regression specification with a different set of bandwidth choice: 200 (Columns 1, 4, 7, and 10), 250 (Columns 2, 5, 8, and 11), and 300 (Columns 3, 6, 9, and 12). All columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.

Table D27. Candidates Share: All and Winning Candidates

| Candidates Sample: | All Candidates | | | | | | Winning Candidates | | | | | |
|--------------------------------------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|--------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Social Group: | Marginalized | | | General | | | Marginalized | | | General | | |
| Bandwidth: | 200 | 250 | 300 | 200 | 250 | 300 | 200 | 250 | 300 | 200 | 250 | 300 |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| Post \times ICE (std.) | 0.016 (0.017) | 0.008 (0.013) | -0.002 (0.013) | -0.018 (0.019) | -0.013 (0.016) | -0.004 (0.015) | 0.069 (0.051) | 0.074 (0.040) | 0.050 (0.039) | -0.050 (0.049) | -0.060 (0.042) | -0.052 (0.039) |
| Post \times Backward Dist. \times ICE (std.) | 0.021 (0.017) | 0.012 (0.015) | 0.019 (0.014) | -0.013 (0.019) | -0.005 (0.017) | -0.010 (0.016) | -0.020 (0.055) | -0.048 (0.044) | -0.019 (0.044) | 0.006 (0.052) | 0.036 (0.044) | 0.022 (0.041) |
| <i>p</i> -value | 0.002 | 0.074 | 0.143 | 0.038 | 0.175 | 0.275 | 0.220 | 0.479 | 0.375 | 0.289 | 0.497 | 0.390 |
| Outcome Mean | 0.322 | 0.319 | 0.313 | 0.636 | 0.636 | 0.643 | 0.312 | 0.313 | 0.300 | 0.647 | 0.641 | 0.656 |
| Observations | 625 | 827 | 1,004 | 625 | 827 | 1,004 | 625 | 827 | 1,004 | 625 | 827 | 1,004 |
| Districts | 105 | 139 | 169 | 105 | 139 | 169 | 105 | 139 | 169 | 105 | 139 | 169 |
| District FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Year FE | No | No | No | No | No | No | No | No | No | No | No | No |
| State-Year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

Notes: Outcome variables are the indicators for political candidates from marginalized groups or general castes (Columns 1 to 6) and for winning candidates from marginalized groups or general castes (Columns 7 to 12) for each election. We run the regression specification with a different set of bandwidth choice: 200 (Columns 1, 4, 7, and 10), 250 (Columns 2, 5, 8, and 11), and 300 (Columns 3, 6, 9, and 12). All columns show the regression estimates with state-year fixed effects. We also control the district-level 1990 total employment and the district-level 1990 manufacturing sector employment share, both of which are interacted with the linear time trend, in all specifications. The analysis excludes constituencies reserved for SC and ST. Standard errors are clustered by districts. *** = 1% significance, ** = 5%, * = 10%.