The Economic Consequences of Re-electing the Incumbent: Evidence From India

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Abstract

This paper examines the economic effects of re-electing incumbent politicians in India using a regression discontinuity design. While incumbents may have more experience and better connections, they may also have more opportunities for corruption. We use data from state assembly elections in India - in which politicians face no term limits. This allows us to isolate any effects purely due to re-electing the incumbent from the (dis)incentivizing effects of term limits. Using data on nighttime lights as a proxy for economic activity, our results show that re-electing the incumbent in a close election reduces the average growth rate of nighttime lights for that constituency by approximately 4 percentage points over the subsequent 5 year period.

1 Introduction

> "There is an assumption ... that the longer a leader is in office, the more experienced, and hence better, they become. But I have also seen how they accumulate baggage. ... [they] become surrounded by an adviser team that has only ever known them as premiers. A soft corruption sets in, where respect for the rules dissipates and every senior official has been appointed to their post by the current administration.
>
> Democracies need change. Fresh blood and the "anything is possible" enthusiasm that comes with inexperience have a place, too. There's a reason why Americans decided presidents shouldn't serve more than two terms, and a reason why only two British prime ministers since the second world war have celebrated 10 years in office — and were then ejected shortly afterwards." (George Osborne, 2024)

Does re-electing an incumbent politician have a positive or negative affect on economic outcomes? On the one hand, incumbents are likely to have more experience with governing, more local knowledge and more connections with potentially useful parties (e.g. bureaucrats, other politicians, potential service providers, and private citizens).

On the other hand, a longer political tenure may expose politicians to greater opportunities and incentives to engage in corrupt behaviour that is detrimental to economic outcomes (Fisman et al. (2019)).

While there is a large literature on "incumbency advantages" in winning elections – and in understanding the determinants of incumbent re-elections more generally (e.g. Lee (2008), Uppal (2009)) – and a growing literature on the economic consequences of electing politicians with particular characteristics (e.g. Prakash et al. (2019)), we know surprisingly little about the economic consequences of re-electing political incumbents, especially in developing countries and at local levels.

In this paper we provide evidence on the economic effects of re-electing the incumbent in the context of Indian state legislative assembly elections between 1993 and 2019 using a close-elections framework. Our identification strategy employs a regression discontinuity approach, comparing subsequent economic growth between constituencies in which the political incumbent narrowly won re-election and constituencies in which the incumbent narrowly lost. India is an ideal setting for the study because, among other things, elections to state legislative assemblies are not constrained by term-limits, which impose their own unique incentives for politicians serving multiple terms. This allows us to abstract from the separate issue of term-limit incentive effects when studying the effects of electing an incumbent. Other reasons to focus on India include the fact that it is a robust and competitive democracy - with a large number of elections.

We find that re-electing the incumbent leads to a significant decline in the growth of nighttime lights (our proxy for economic activity) compared to a narrow loss. The results suggest a decline in the growth rate of nighttime lights of approximately 4% over the subsequent 5 year period after an election. Various tests confirm the validity of the RD approach and robustness of the findings.

In Brazil, party turnovers in municipalities adversely affect the quality of public services, this is mainly due to changes in bureaucracy (Akhtari et al. (2022)). In addition, this negatively affects children's health (Akhtari et al. (2022)). As far as we are aware, the only other paper which studies the economic effects of electing a political incumbent candidate is Marx et al. (2022), which shows that electoral turnovers of a country's head of state have positive economic implications for a country in the aggregate. The authors

argue that this is because turnovers induce policy change and reduce perceptions of corruption. Our paper differs from Marx et al. (2022) in several ways. First, we study the effects of electoral turnover at a different scale by looking at elections for representatives in (subnational) state legislative bodies. This is important because the effects may be different at different levels of scale (e.g. at more local levels of political life, in which politicians are closer to their constituents and have access to different actions and policy levers than heads of state). The effects of re-electing an incumbent may also be different in developing countries - where institutions are weaker and corruption is more prevalent.

Indeed, there is evidence that in developing countries, politicians at a local level (including members of parliament and state legislative bodies) can have significant effects on development outcomes. In India, a country with an overburdened and sometimes dysfunctional bureaucracy, citizens often turn to politicians for help, for example when they need access to credit, electricity, dealing with regulations, or simply to benefit from economic policies (Asher and Novosad (2017), Blakeslee (2018)).

Finally, our paper is also related to a literature which studies effects of electing politicians with various characteristics. For example, previous work has shown that the gender, religion or criminal status of elected politicians can have important implications for economic growth, health, and education in the areas where they have been elected (Clots-Figueras (2012), Bhalotra and Clots-Figueras (2014), Prakash et al. (2019), and Baskaran et al. (2023)).

The rest of the paper proceeds as follows. In the next section we describe the data sources used in our analysis. These include information on state assembly election candidates and nighttime light intensity as a proxy for economic activity. In Section 3 we describe our methodology. Section 4 presents our main results, and Section 5 concludes.

2 Data

To answer the research question, we bring together data from multiple sources on state election candidates, constituency characteristics, nighttime lights, and other economic outcomes at the state assembly consituency level. The data on state election candidates (going back to 1974) comes from Lok Dhaba, created by the Trivedi Center for Political

Data, which contains information on incumbent status, challengers, vote shares, and other characteristics of electoral candidates. This allows tracking politicians over time to code re-election.

The main outcome variable used is nighttime light intensity measured by satellites, which has been shown to strongly correlate with economic activity and development - at least when looking at changes over time in a given location (Henderson et al., 2011). Two separate sources provide this annual data at the constituency level. The Defense Meteorological Satellite Program's Operational Linescan System (DMSP-OLS) covers 1994 to 2013 at roughly 1 km resolution. The Visible Infrared Imaging Radiometer Suite (VIIRS) from the Suomi NPP satellite has data from 2013 to 2021 at finer 750 m resolution. The night-lights data come from the SHRUG database, created by Asher et al. (2019) and aggregated to the constituency level.

Additionally, the Economic Census provides data on registered establishments, employment, and financial information across the country in four rounds - 1990, 1998, 2005, and 2013. This dataset helps explore potential mechanisms for the estimated effects. In this version of the paper we use the constituency level aggregates, provided by the SHRUG.

We provide descriptive statistics in Tables 1-4. While 15% of all candidates who contest an election decide to recontest, this is true for 41% of the winners. Interestingly, the winners who recontest are not that different in characteristics such as party, gender, caste and turnout in the constituency compared to winners who do not. In addition, comparing incumbents who won and lost, and incumbents who ended up in close elections or not, they are as well very similar in these characteristics. As it is shown in Figure 1, when an incumbent recontests, in most cases he or she ends up in either the first or second positions.

3 Methodology

Our primary identification challenge is due to the fact that the re-election of incumbents is endogenous to potential economic outcomes.

We deal with this challenge by focusing our analysis on close elections in which, we argue, the outcome can be considered - to a large extent and under some conditions

- random. The paper leverages a regression discontinuity (RD) design to estimate the causal effect of re-electing the incumbent on economic performance. The running variable is the vote margin between the incumbent and the candidate in the constituency who obtained the maximum number of votes and is not the incumbent. The RD model compares constituencies where the incumbent barely won re-election to those where they barely lost:

$$Y_{it} = \alpha + \beta IncumbWin_{i,t-1} + \gamma f(M_{i,t-1}) + \delta IncumbWin_{i,t-1} \times f(M_{i,t-1}) + \epsilon_{it} \quad (1)$$

Y_{it} is a measure of economic outcomes in constituency i and year t. In fact, the main outcome we use is the yearly growth rate of total lights in a constituency, measured by $Log(Y_{i,t+1}) - Log(Y_{i,t})$, and averaged over the subsequent 5 year electoral cycle. In the context of India, night lights have been shown to proxy for population, employment, per-capita consumption, and electrification (Asher et al. (2021)), while changes in night lights over time correspond to changes in per-capita income (Henderson et al. (2011)).

$IncumbWin_{i,t-1}$ is an indicator for whether the incumbent narrowly won reelection in the last period. $f(M_{i,t-1})$ is a flexible function of the running variable $M_{i,t-1}$, the previous vote margin between the incumbent and the closest non-incumbent competitor. The RD treatment effect β measures the discontinuity in average outcomes when incumbents barely win an election compared to when they barely lose. The sample is restricted to an optimal bandwidth around the cutoff and local linear regressions are used to estimate the parameters, utilizing the data described above and implementing the procedures described in Cattaneo et al. (2020) and Cattaneo and Titiunik (2022).

This strategy provides a quasi-experimental setting to isolate the impact of an additional term for the incumbent, avoiding concerns about endogenous selection into re-election. To establish the validity of our approach, we first show that there is no manipulation of the running variable; that is, that there is no incumbency advantage or disadvantage in close elections (see Figure A1 in the Appendix). Further tests show that there is no manipulation of the running variable, even after restricting the sample according to the non-incumbent candidate characteristics (Figures A2 and A3 in the Appendix).

We also show that covariates and pre-determined variables do not jump at the discontinuity (Figures A4-A9 in the Appendix). In particular, incumbent and non-incumbent candidates in close elections win in constituencies that are similar in SC or ST reservations, number of candidates, voter turnout or the effective number of candidates. In addition, incumbents and non-incumbents in close elections are similar in age, gender, education, assets, number of crimes, punishment for crimes, political party, and previous occupation. They are also similar in the number of times contested and won, and they are equally likely to contest for the same party and the same constituency.

4 Results

Our main results are shown in Table 5. Here, we see a significant negative effect of re-electing the incumbent on growth in night lights over the subsequent 5 years. The result can also be seen in the RD plot in Figure 2, which shows a sharp decline in the growth of nighttime lights at the threshold between an incumbent victory and loss.

The results are similar when we use a calibrated measure of total lights (column 2 of Table 5), average lights (column 3), and when we use an average measure of calibrated lights (column 4). The main specification shows that re-electing the incumbent leads to a statistically significant decrease of about 4 percentage points in the growth rate of total nighttime lights compared to a narrow loss (and a decrease of about 7 percentage points when using calibrated night lights). With average growth of 2.33% over a 5-year electoral cycle, this represents a sizable reduction. In addition, re-electing the incumbent leads to a statistically significant decrease of about 2.5 percentage points in the growth rate of average nighttime lights compared to a narrow loss. The magnitudes of these decreases are larger for calibrated measures of night lights. To quantify the economic magnitude of these results, we use 0.15 as an estimate of the elasticity of GDP growth to growth in night lights (from Baskaran et al. (2023)), which would imply a decrease of 0.6 percentage points in GDP growth when incumbents are re-elected.

Robustness tests in Table 6 show that the results are robust to variations in bandwidth (column 2), polynomial order (column 3), and controlling for the political party of the winner (column 4). The point estimates remain of a similar magnitude when using the VIIRS nighttime lights data from 2013-2021 instead of the DMSP (Table 8),

although this data source provides a smaller number of observations due to the time range for which these data are available.

In Figure 3 we show results when we relate the election outcomes to the growth of lights during the 6 years before the election took place. This constitutes a placebo test, showing that elections when an incumbent won or lost closely against a non-incumbent had similar economic outcomes prior to the election, given that there is no jump at the discontinuity.

Another potential concern we must address is the fact that the decision to re-contest cannot be considered random. To deal with this concern, we restrict the sample to cases in which the non-incumbent is also re-contesting. Results are shown in column 2 of Table 7 and, if anything, are a bit larger in magnitude than the coefficient in our main specification. When restricting the analysis to opponents who had also held office in the past in column 3, or to those who had held office and also contested in the last election, the number of observations drop dramatically, but the coefficients are very similar in magnitude.

In what follows we try to understand the mechanisms at play, using data from the Economic Census, aggregated at the assembly constituency level. We run specifications in which each outcome is related to the previous election that took place in the constituency. We use information on the number of establishments, aggregate employment, employment in manufacturing, and employment in services. The coefficients in Table 9 are not statistically significant at the conventional levels. However, sectors like services and manufacturing may take time to respond to the policy environment. Since the Economic Census has limited periodicity (being conducted once every 7 years or more), exploring these channels remains an area for future work.

5 Conclusion

Our study provides novel evidence on the economic consequences of re-electing political incumbents. It is the first to study the link between re-election of politicians and growth at a local/subnational level or in a developing country context, where institutions, incentives and potential policy actions all differ from other contexts. Using a regression discontinuity design based on close-election outcomes in Indian state legislative assem-

bly elections, we find that re-electing incumbents leads to a significant reduction in economic growth, as measured by nighttime light intensity. Specifically, our results indicate that the growth rate of nighttime lights declines by approximately 4% over the five-year period following an election in constituencies where the incumbent narrowly won re-election compared to those where the incumbent narrowly lost.

These findings contribute to a growing literature on the role of politician characteristics and identity in shaping economic outcomes. While it is possible that constituents may benefit from re-electing incumbency due to their experience and political connections, our results suggest that, in net, prolonged tenure fosters conditions that are detrimental to economic growth, potentially due to entrenched corruption or reduced incentives for policy innovation. By focusing on local-level elections, we highlight the importance of political turnover in fostering economic dynamism, especially in contexts where institutions are weaker and accountability mechanisms may be less effective.

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Tables and Figures

Table 1: Descriptive Statistics by Recontesting or not

Group	Not recontesting		Recontesting	
BJP	0.05	(0.22)	0.14	(0.35)
INC	0.06	(0.23)	0.22	(0.42)
Left	0.02	(0.15)	0.06	(0.24)
Female	0.05	(0.23)	0.04	(0.21)
SC	0.13	(0.33)	0.14	(0.34)
ST	0.06	(0.24)	0.13	(0.33)
Turnout	63.02	(12.96)	66.01	(14.03)
Experience	0.03	(0.22)	1.04	(1.27)
Times_contested	1.09	(0.44)	3.33	(4.05)
N	358356		65060	

Table 2: Descriptive Statistics by Recontesting (winners)

Group	Not recontesting		Recontesting	
BJP	0.18	(0.39)	0.20	(0.40)
INC	0.24	(0.43)	0.28	(0.45)
Left	0.07	(0.25)	0.08	(0.27)
Female	0.07	(0.26)	0.05	(0.22)
SC	0.15	(0.35)	0.13	(0.34)
ST	0.11	(0.31)	0.13	(0.34)
Turnout	64.76	(14.23)	66.01	(14.32)
Experience	0.54	(1.05)	1.25	(1.38)
Times_contested	1.91	(1.49)	3.05	(1.82)
N	22773		16126	

Table 3: Descriptive Statistics by Incumbent winning

Group	Incumbent lost		Incumbent won	
BJP	0.17	(0.38)	0.24	(0.43)
INC	0.36	(0.48)	0.28	(0.45)
Left	0.04	(0.21)	0.09	(0.28)
Female	0.06	(0.24)	0.06	(0.23)
Net_assets	3.83e+07	(1.20e+08)	3.80e+07	(1.08e+08)
Num_crimes	1.33	(5.14)	1.82	(5.93)
SC	0.14	(0.34)	0.12	(0.33)
ST	0.14	(0.35)	0.14	(0.35)
Turnout	68.17	(12.74)	68.70	(13.08)
Experience	1.91	(1.21)	2.04	(1.36)
Times_contested	3.65	(1.78)	3.65	(1.80)
N	9371		9717	

Table 4: Descriptive Statistics by Incumbent being close

Group	Incumbent not close		Incumbent close	
BJP	0.21	(0.40)	0.22	(0.42)
INC	0.32	(0.47)	0.32	(0.46)
Left	0.07	(0.25)	0.07	(0.25)
Female	0.06	(0.24)	0.06	(0.23)
Net_assets	3.87e+07	(1.11e+08)	3.52e+07	(1.26e+08)
Num_crimes	1.58	(5.28)	1.72	(6.91)
SC	0.13	(0.34)	0.12	(0.32)
ST	0.14	(0.34)	0.16	(0.36)
Turnout	68.22	(12.93)	69.66	(12.78)
Experience	1.98	(1.29)	1.96	(1.25)
Times_contested	3.64	(1.79)	3.70	(1.80)
N	16161		2927	

Table 5: RD Results: Effect of Incumbent Winning on Growth in Night Lights

VARIABLES	(1) total lights 5 yr growth	(2) total lights (cal) 5 yr growth	(3) avg lights (cal) 5 yr growth	(4) avg lights (cal) 5 yr growth
RD_Estimate	-0.0423**	-0.0703**	-0.0254**	-0.0406**
	(0.0201)	(0.0306)	(0.0110)	(0.0171)
Observations	5,181	5,181	5,181	5,181
Robust Std. Error	0.0225	0.0340	0.0121	0.0189
Robust p-value	0.0244	0.0142	0.0125	0.0108
Eff. no of obs (left)	1077	1129	1073	1086
Eff. no of obs (right)	1175	1255	1169	1193
Bandwidth	0.0988	0.106	0.0981	0.100
kernel	Triangular	Triangular	Triangular	Triangular

Table 6: RD Robustness Checks

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Growth log average lights					
RDD Estimate	-0.0406**	-0.0425*	-0.0300**	-0.0576**	-0.0416**	-0.0387**
	(0.0171)	(0.0259)	(0.0142)	(0.0227)	(0.0169)	(0.0179)
Observations	5,181	5,181	5,181	5,181	5,181	5,123
Optimal bandwidth	0.100	0.0500	0.105	0.229	0.101	0.0930
P value (Robust)	0.0108	0.362	0.0231	0.0191	0.00858	0.0192
		Half bw	Uniform kern.	3rd porder poly	Control party	Same party won

Table 7: Incumbent versus other types of candidates

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
	Growth log average lights					
RDD Estimate	-0.0406**	-0.0308	-0.0375*	-0.0299	-0.0435**	-0.0396**
	(0.0171)	(0.0215)	(0.0226)	(0.0263)	(0.0218)	(0.0184)
Observations	5,181	3,395	1,956	1,356	3,918	4,887
Optimal Bandwidth	0.100	0.133	0.109	0.143	0.0833	0.0947
P value Robust	0.0108	0.123	0.0702	0.224	0.0346	0.0197
	Incumbent	Incumbent vs Recontested	Incumbent vs won before	Incumbent vs recontested and won before	incumbent same party	incumbent same constituency

Table 8: Robustness: Measuring Night Lights with VIIRS

VARIABLES	(1) VIIRS NL Total	(2) VIIRS NL mean
RDD Estimate	-0.0322*	-0.0178
	(0.0169)	(0.0111)
Observations	2,690	2,690
Optimal bandwith	0.162	0.132
Effective nº obs	1168	1093
P value (robust)	0.0738	0.117

Table 9: Mechanisms: Outcomes from the Economic Census

VARIABLES	(1) Log count establishments	(2) Log empl	(3) Log empl manufacturing	(4) Log empl services
RDD Estimate	-0.0312	-0.0214	0.0340	-0.0360
	(0.0604)	(0.0618)	(0.0731)	(0.0607)
Observations	6,944	6,944	6,944	6,944
Optimal bandwith	0.121	0.122	0.147	0.119
Effective nº obs	2684	2662	2804	2673
P value (robust)	0.462	0.569	0.804	0.414

Figure 1: Incumbent Position

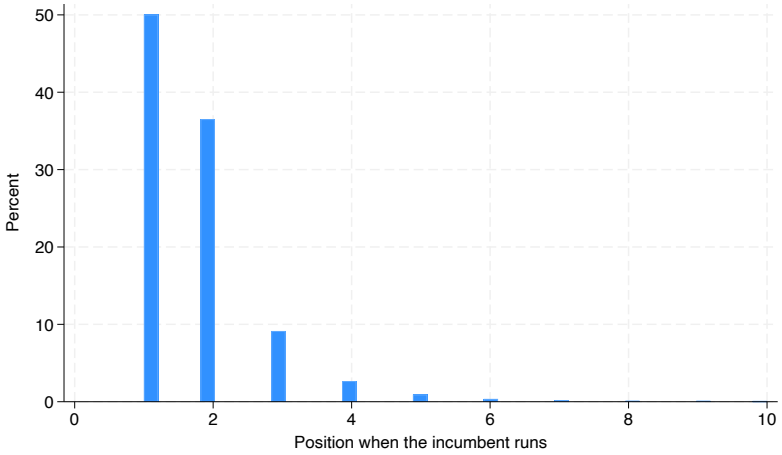


Figure 2: Effect of Incumbent Winning on 5 Year Growth in Night Lights

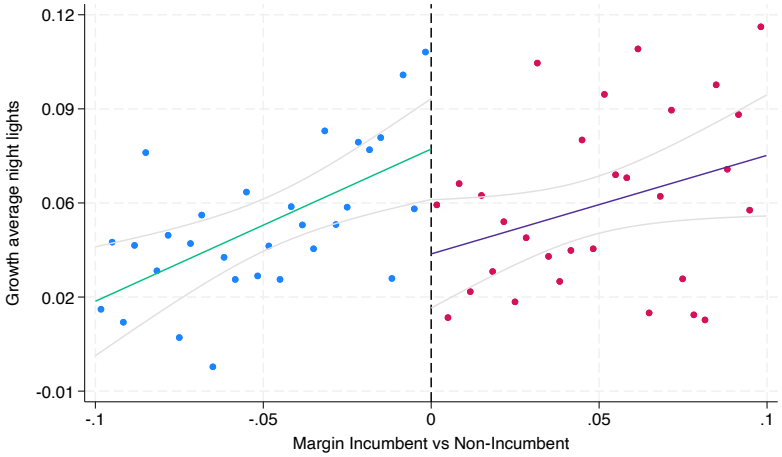
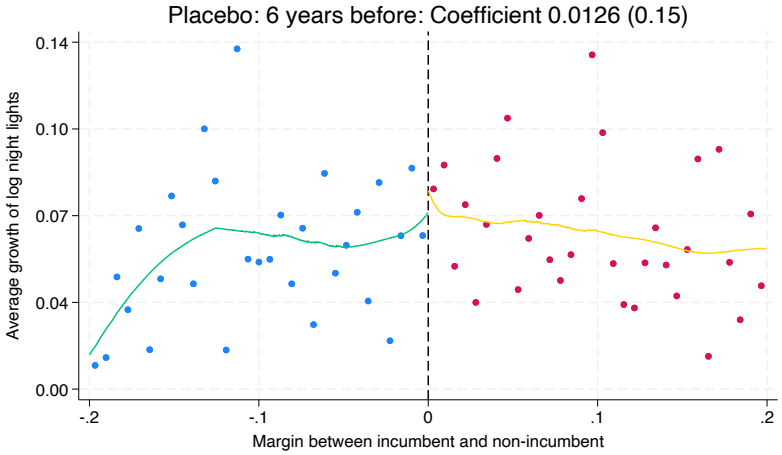


Figure 3: Placebo (6 years before election)



A Appendix

This section includes some of the necessary robustness checks needed to conduct an RD analysis.

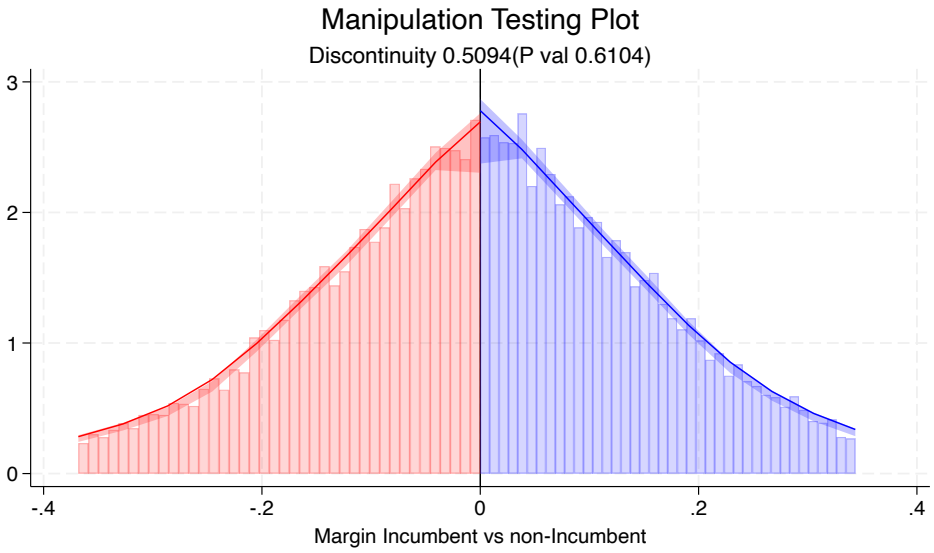


Figure A1: Manipulation of the running variable

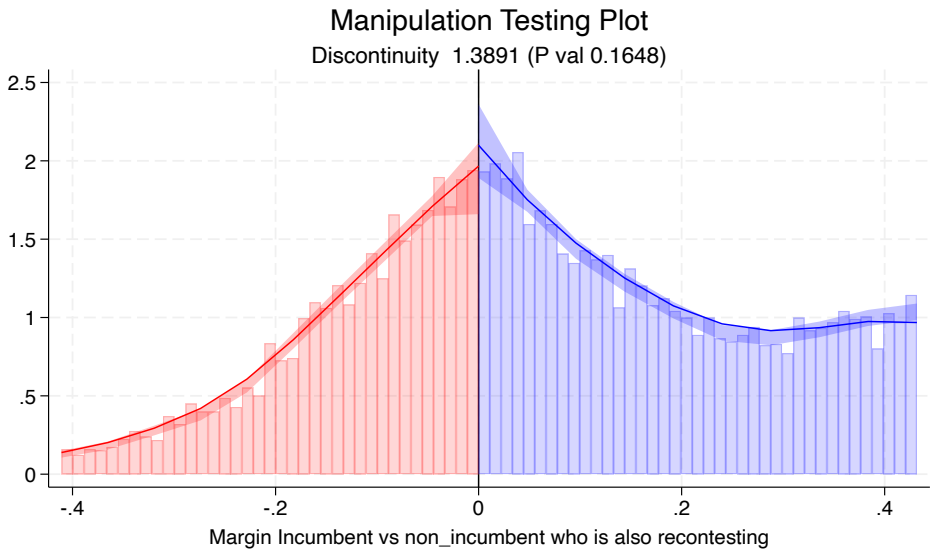


Figure A2: Manipulation of the running variable

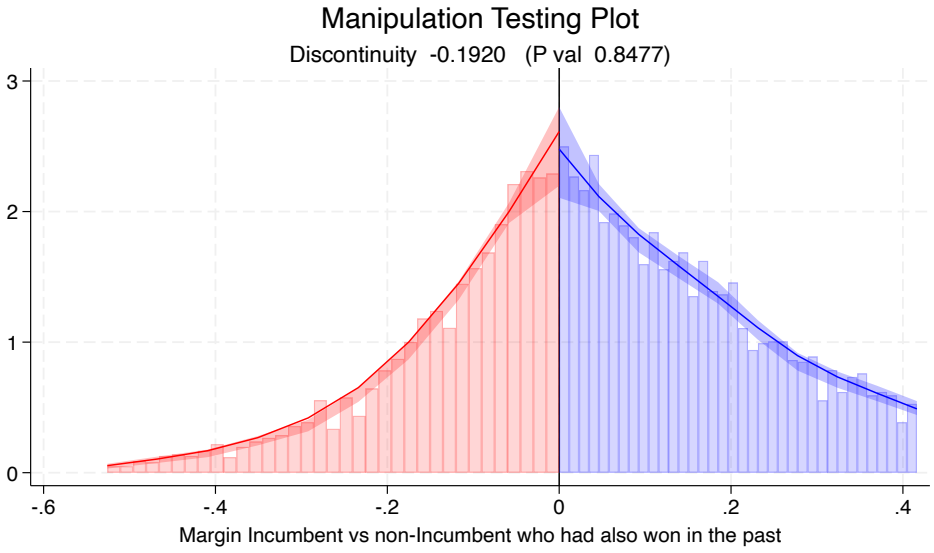


Figure A3: Manipulation of the running variable

Figure A4: Covariate Balance: politician characteristics (SC, ST, gender and age)

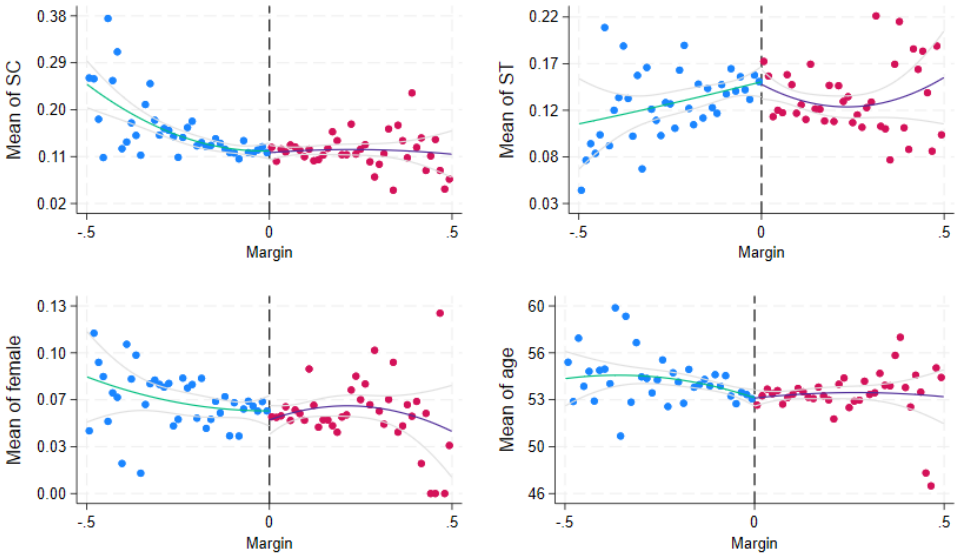


Figure A5: Covariate Balance: previous profession in politics, business, or agriculture

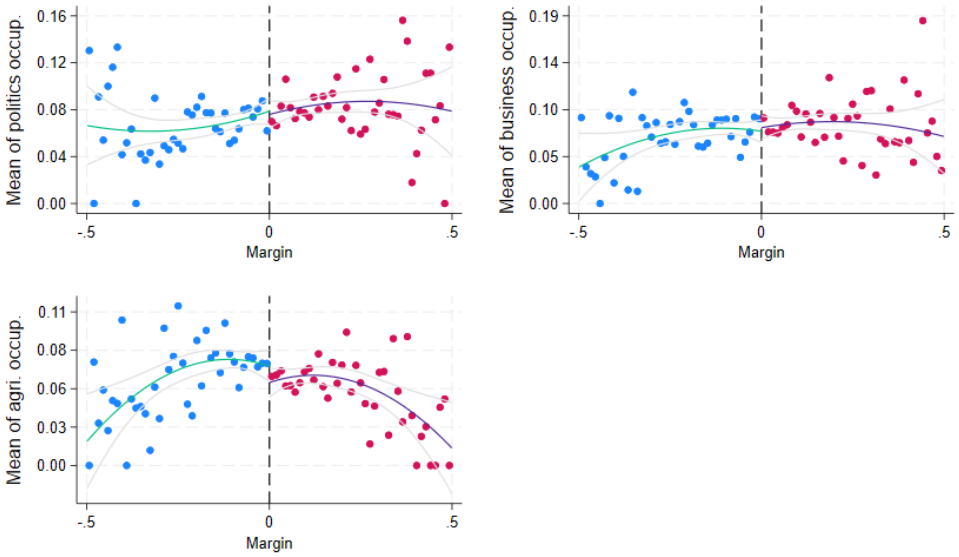


Figure A6: Covariate Balance: party characteristics (BJP, INC, Left and turncoat)

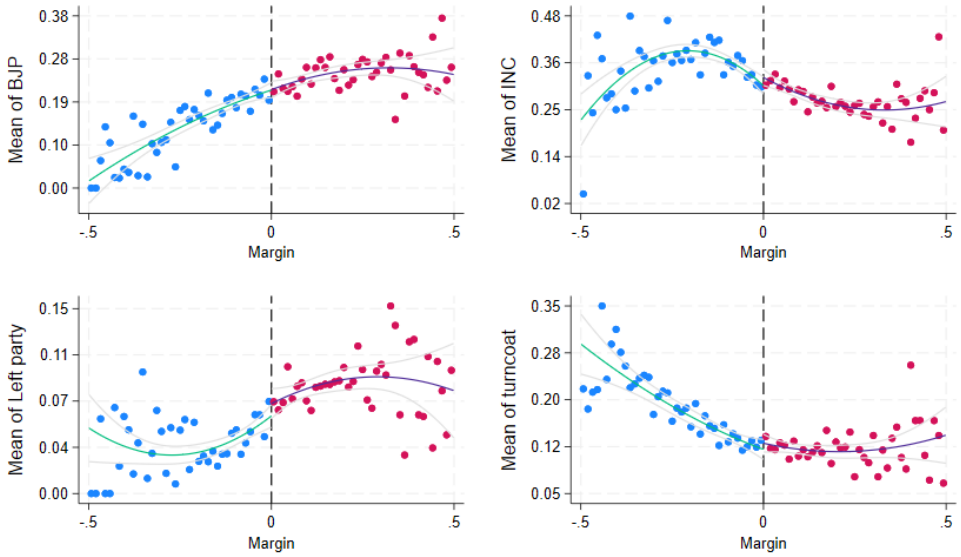


Figure A7: Covariate Balance: election characteristics (voter turnout (percentage), number of candidates, effective number of parties)

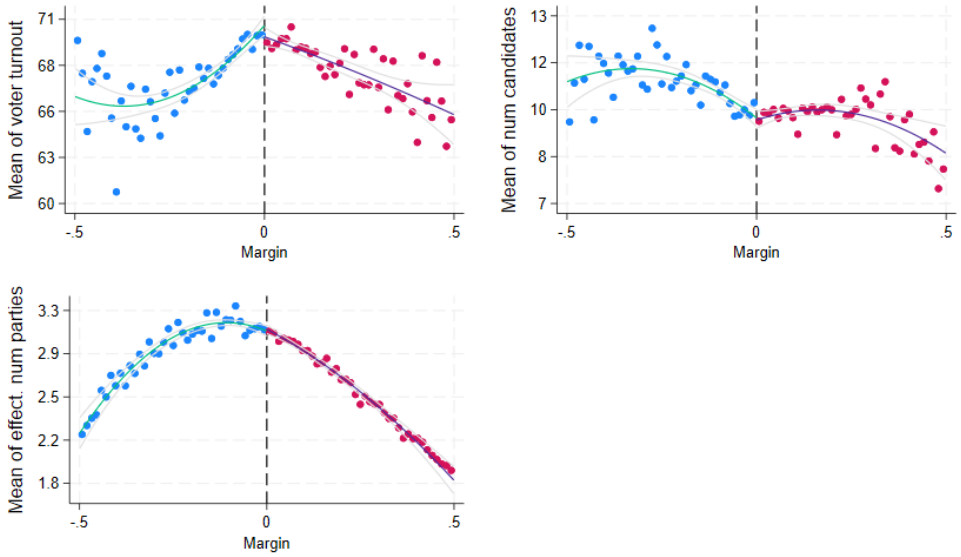


Figure A8: Covariate Balance: other characteristics (same party, same constituency, times contested, experience)

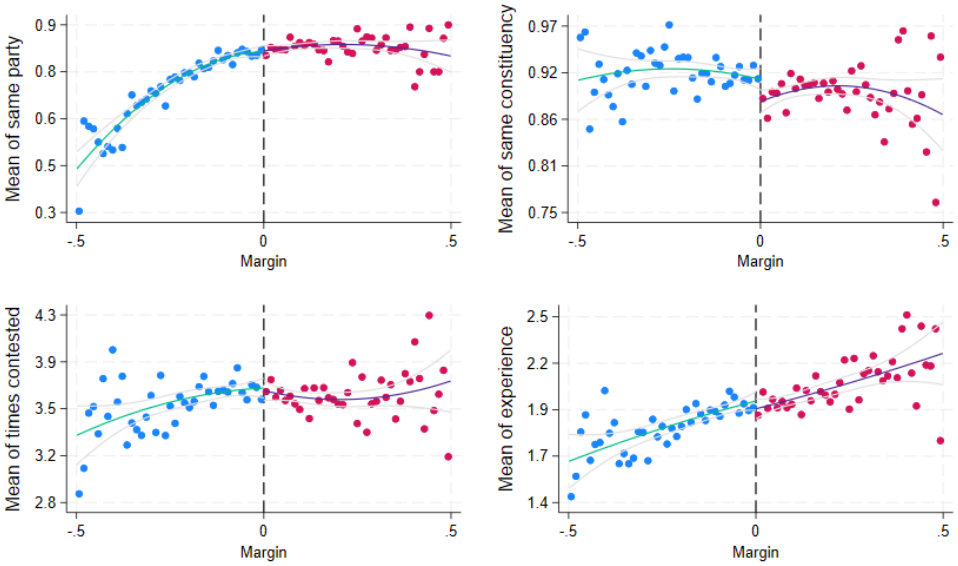


Figure A9: Covariate Balance: other characteristics (education, net assets, number of open charges, years of punishment)