

Politics and Local Economic Growth

Asher & Novosad (2017)
Infrastructure Heterogeneity Extension

Amit Kr Eshore, 24msceco01

May 19, 2026

Do politically aligned constituencies grow faster?

Core idea

- Ruling parties may favor constituencies they control
- But does favoritism translate into **real economic growth**?
- The paper studies this using close elections in India

Why India?

- States control regulation, permits, land, labor
- Politicians influence bureaucratic implementation
- Firms depend heavily on state approvals

Identification Strategy: Regression Discontinuity

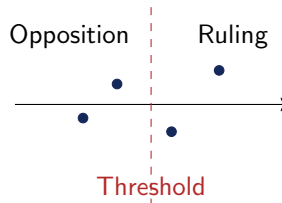
Idea

Barely won constituencies vs **Barely lost constituencies**

Running Variable

$$\text{Margin} = \frac{V^{\text{ruling}} - V^{\text{opp}}}{V^{\text{total}}}$$

- Margin > 0 : ruling-party win
- Margin < 0 : ruling-party loss
- Close elections approximate random assignment



Key assumption

Close winners $\approx$ Close losers

Econometric Strategy

1. Local Linear Regression (Optimal Bandwidth)

$$Y_{cst} = \beta_0 + \beta_1 \mathbf{1}(\text{margin}_{cst} > 0) + \beta_2 \text{margin}_{cst} \\ + \beta_3 \text{margin}_{cst} \times \mathbf{1}(\text{margin}_{cst} > 0) + \zeta \mathbf{X}_{cst} + \eta_{st} + \epsilon_{cst}$$

- Bandwidth of 5.1 pp
- β_1 identifies the causal effect of ruling party status

2. Polynomial Regression (Full Sample)

$$Y_{cst} = \beta_0 + \beta_1 \times \mathbf{1}(\text{margin}_{cst} > 0) + f(\text{margin}_{cst}) \\ + g(\text{margin}_{cst}) \times \mathbf{1}(\text{margin}_{cst} > 0) + \zeta \mathbf{X}_{cst} + \eta_{st} + \epsilon_{cst}$$

- $f(\cdot)$ and $g(\cdot)$ are polynomial functions checking full-sample robustness

Estimation Details

- η_{st} : State-time fixed effects to absorb regional shocks
- $\mathbf{X}_{cst}$: Constituency-level baseline controls to improve efficiency
- ϵ_{cst} : Standard errors clustered at the state-time level

Main Results

Outcome	Estimated Effect	Interpretation
Employment growth	+7.3 pp***	More private activity
Night lights	+4 pp**	Higher local output
Stock returns	+8–10%***	Markets value alignment

Key takeaway

- Results are consistent across independent datasets
- Effects are economically large
- Growth effects appear concentrated in the private sector

Table 2—Effect of Ruling Party Status on log Employment Growth

	Jobs: Local linear		Jobs: Polynomial		Lights: Local linear	
	(1)	(2)	(3)	(4)	(5)	(6)
Ruling party	0.014 (0.005)***	0.014 (0.004)***	0.009 (0.004)**	0.009 (0.004)**	0.040 (0.020)**	0.038 (0.018)**
Margin of victory	−0.175 (0.164)	−0.144 (0.155)			−0.908 (0.641)	−1.225 (0.580)**
Margin × ruling	0.190 (0.212)	0.072 (0.229)			0.708 (0.786)	1.387 (0.693)**
Baseline log employment		−0.021 (0.004)***		−0.019 (0.002)***		−0.127 (0.020)***
State-year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Constituency controls	No	Yes	No	Yes	No	No
Observations	768	742	3,712	3,521	2,240	2,240
R ²	0.16	0.26	0.15	0.24	0.47	0.59

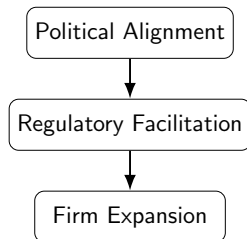
Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Standard errors are displayed in parentheses below the coefficients.

Table 3—Effect of Ruling Party Status on log Employment Growth: Private Sector versus Public Sector

	Public sector		Private sector	
	(1)	(2)	(3)	(4)
Ruling party	0.006 (0.011)	0.012 (0.008)	0.013 (0.006)**	0.012 (0.005)**
Margin of victory	−0.180 (0.291)	−0.144 (0.236)	−0.134 (0.173)	−0.094 (0.167)
Margin × ruling	0.586 (0.535)	0.220 (0.421)	0.163 (0.211)	0.039 (0.237)
Baseline log public employment		−0.043 (0.012)***		
Baseline log private employment				−0.023 (0.004)***
State-year fixed effects	Yes	Yes	Yes	Yes
Controls	No	Yes	No	Yes
Observations	768	742	768	742
R ²	0.27	0.41	0.14	0.24

Notes: Kernel regression discontinuity estimates. Columns 1–2 use public sector log employment growth; columns 3–4 use private sector log employment growth. Standard errors are clustered at the state-time level.

Mechanism: Why Does Alignment Matter?



Evidence

- Mining permits increase in ruling-party constituencies
- No strong evidence for:
 - public goods channel
 - credit channel

Regulatory discretion appears to be the main mechanism

Table 4—Effect of Ruling Party Status on Postelection Stock Returns

	Cumulative abnormal return (CAR)		CAR (placebo)	
	(1)	(2)	$t - 1$	$t - 2$
Ruling party	0.096 (0.029)***	0.082 (0.040)**	−0.011 (0.051)	−0.040 (0.027)
Margin of victory	−2.351 (0.701)***	−3.200 (1.025)***	−0.006 (0.888)	0.438 (0.815)
Margin $\times$ ruling	1.795 (1.085)*	3.715 (1.141)***	−0.030 (1.258)	0.344 (1.132)
State-year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	No	Yes	No	No
Observations	793	615	793	793
R^2	0.14	0.27	0.09	0.38

Notes: Regression discontinuity estimates for cumulative abnormal returns in the month following an election. Placebo columns use returns one and two months before the election. Standard errors are clustered at the state-time level.

Does road access change the alignment premium?

H1: Complementarity

Better roads increase returns to political facilitation.

$$\delta_1 > 0$$

H2: Substitutability

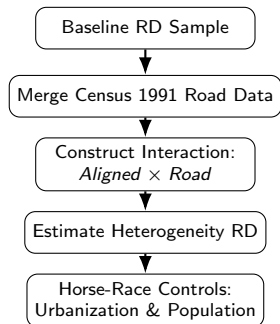
Better roads reduce dependence on political access.

$$\delta_1 < 0$$

Moderator

- Share of villages with paved-road access
- Measured using Census 1991
- Balanced at the RD threshold

Extension Design and Workflow



Key empirical choices

- Road access measured before elections
- Moderator balanced at RD threshold
- Variables centered within bandwidth
- Horse-race tests whether roads proxy for development

Extension Specification

Infrastructure heterogeneity model

$$Y_{cst} = \beta_1 D_c + \beta_2 m_c + \beta_3 (m_c \cdot D_c) + \beta_4 \tilde{R}_c + \delta_1 (\tilde{R}_c \cdot D_c) \\ + \gamma_1 (\tilde{R}_c \cdot m_c) + \gamma_2 (\tilde{R}_c \cdot m_c \cdot D_c) + \zeta X_{cst} + \eta_{st} + \varepsilon_{cst}$$

where $|m_c| \leq 0.051$, $\tilde{R}_c = R_c - \bar{R}$ (demeaned within bandwidth)

η_{st} : election fixed effects (i.election), absorbing state $\times$ period variation in a single index.

Treatment effect at road access level z

$$\text{ATE}(z) = \beta_1 + \delta_1 z \quad \leftarrow \quad \text{lincom aligned} + \text{road_X_aligned} * z$$

Interpretation

- β_1 : alignment effect evaluated at mean road access ($\tilde{R}_c = 0$)
- $\delta_1 > 0$: roads amplify alignment effects
- $\delta_1 < 0$: alignment effects decline with road access
- RD treatment effect remains causal; heterogeneity is associative

Extension Results: Infrastructure Heterogeneity

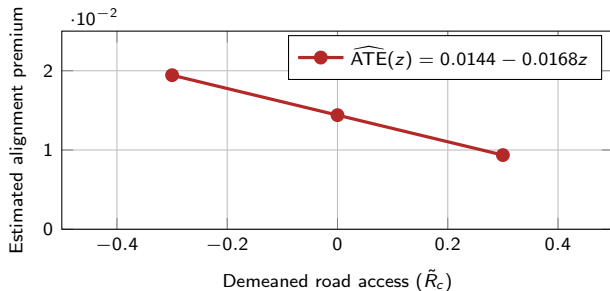
	(1) Base	(2) Infra	(3) Horse
Ruling party ($\hat{\beta}_1$)	0.0144*** (0.00420)	0.0144*** (0.00426)	0.0152* (0.00912)
$\tilde{R}_c \times D_c (\hat{\delta}_1)$		-0.0168 (0.0158)	-0.00271 (0.0274)
$\widetilde{Urban}_c \times D_c$			-0.00169 (0.00964)
$\widetilde{Pop}_c \times D_c$			-0.00943 (0.0194)
Election FE	Yes	Yes	Yes
Controls	Yes	Yes	Yes
Observations	742	742	387
R^2	0.245	0.247	0.349

Triangular kernel, $|m_c| \leq 0.051$; moderators demeaned within bandwidth. SEs clustered at election level. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Key read

- Alignment effect at mean road access is stable: $\hat{\beta}_1 = 0.0144$.
- Road interaction is negative but imprecise: $\hat{\delta}_1 = -0.0168$, $t = -1.06$.
- Horse-race controls are not significant.
- $N = 387$ in column 3, so it is not a common-sample comparison.

Infrastructure Heterogeneity Results



Plotted values use $\widehat{ATE}(z) = \hat{\beta}_1 + \hat{\delta}_1 z = 0.0144 - 0.0168z$ at $z \in \{-0.3, 0, +0.3\}$ (illustrative demeaned road values).

Estimated interaction

$$\hat{\delta}_1 = -0.0168$$

$$SE = 0.0158 \quad (t = -1.06)$$

Interpretation

- Point estimate is consistent with substitutability, but $t = -1.06$ does not reach conventional significance
- $\hat{\beta}_1 = 0.0144$ is stable across all columns: alignment adds **1.44 pp/year** at mean road access
- Horse-race model estimated on $N = 387$ vs $N = 742$; no horse-race interaction is significant
- Heterogeneity result is suggestive only

Thank You

Questions?