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# **Norms of Corruption in Politicians' Malfeasance**

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# Introduction

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- question: how do well-designed legal institutions designed to curb corruption fare in a society where patterns of behavior are also shaped by norms?
- evidence from quasi-natural experiment on municipal anti-corruption audits in Puerto Rico
  - audits result in significant (short-term) reduction in corruption in a municipality
  - substantive (unintended, negative) spillovers of anti-corruption efforts across municipalities
- we show: pattern in the data is consistent with informal institutions (social mores, norms) playing a role and interacting with formal rules (elections, audits) to determine corruption

# A Model of Audits, Inter-community Spillovers & Norms

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- period-1 incumbent office holders' choice of corruption  $r$  weighs net benefit  $b - \theta$  against drop in re-election chances and loss in social reputation

$$u_1 = R + br + \theta(1 - r) + (1 - \mu)\Pi(r, \cdot)u_2 + \mu E[\theta|r]$$

- $r \in \{0, 1\}$  decision on period-1 corruption,  $b$  = benefit from corruption,  $R$  = office rent
  - $\theta \sim F(\theta)$  propensity to act pro-social, with symmetric pdf and  $E(\theta) = 0$
  - $\Pi(r, \cdot)$  = probability of re-election,  $\mu \in [0, 1]$  weight on norms motive vs re-election motive
  - $E[\theta|r]$  = reputational utility, average type of peers in neighboring communities who make the same choice as the incumbent
- voters
    - care about public good  $y$  which depends on random shock and  $r$
    - learn about  $\theta$  from  $y$  and outcome of audit  $I$
    - experience random aggregate preference shock  $\delta$  for incumbent vs unknown type challenger (variance of  $\delta$  measures voter sensitivity)

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## Re-Election Motive and Audits

- voters re-elect incumbent if probability of prosocial (high  $\theta$ ) incumbent higher than expected type of challenger
- in equilibrium, voters correctly anticipate incumbent strategy and rationally infer  $Pr(\theta \geq b|y, I)$ 
  - when observing low public good or  $I = \text{'corrupt'}$ , infer  $\theta \leq \theta^* < b \Rightarrow \Pi(\cdot) \downarrow$
  - when observing high public good or  $I = \text{'not corrupt'}$ , infer  $\theta \geq b$  more likely  $\Rightarrow \Pi(\cdot) \uparrow$

## Social Motive (Benabou and Tirole 2011)

- reputation varies with 'honour' of pro-social choice minus 'stigma' of antisocial choice:

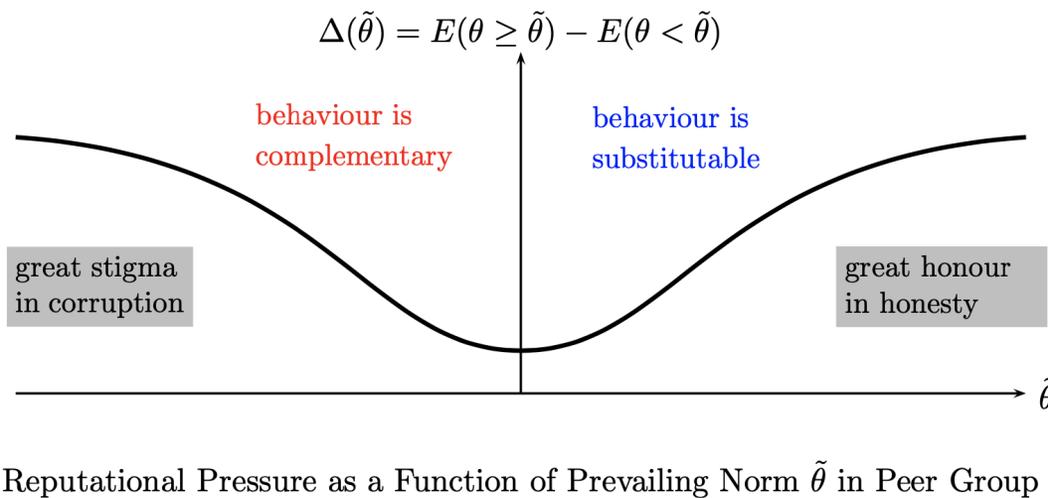
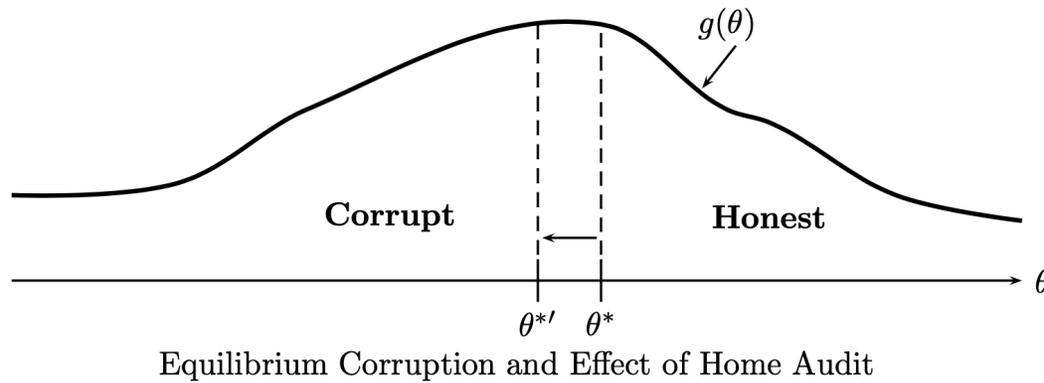
$$\Delta(\tilde{\theta}) = E(\theta|r = 0, \tilde{\theta}) - E(\theta|r = 1, \tilde{\theta}) > 0$$

where  $\tilde{\theta}$  = average cutoff type of corrupt politician among peers = neighboring communities

- audits among peers  $\rightarrow \tilde{\theta} \downarrow \rightarrow$  spillover effect of audits affects corruption at home

externality is positive (negative) if decrease in honour dominates (is dominated by) increase in stigma

# Social Motive - Graphic Illustration



- own and peer corruption are substitutes (compliments) if  $F(\tilde{\theta}) > (<) 0.5$

note: data has  $F(\tilde{\theta}) > .5$

# Theory Implications

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audits at home:

- decreases equilibrium corruption at home

audits in other communities → less corruption elsewhere

- *increases* corruption at home if own and peer corruption are substitutes (corruption = prevalent norm)

this effect is dampened if the re-election chances are more sensitive to behavior

→ expect long term incumbents to *react more strongly* to audits/less corruption elsewhere

# Data and Empirical Strategy

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- detailed data from audit reports in 87 municipalities in PR, from 1987-2014 (code into corrupt acts)
- electoral outcomes and politician characteristics, 1988-2016 elections
- exploit quasi-random variation in timing of elections and audits

$$C_{mt} = \theta_1 A_{mt} + \theta_2 A_{mt}^{-m} + \beta X_{mt} + \gamma_t + \alpha_m + \epsilon_{mt}$$

$C_{mt}$  = findings (per report) around election year  $t$

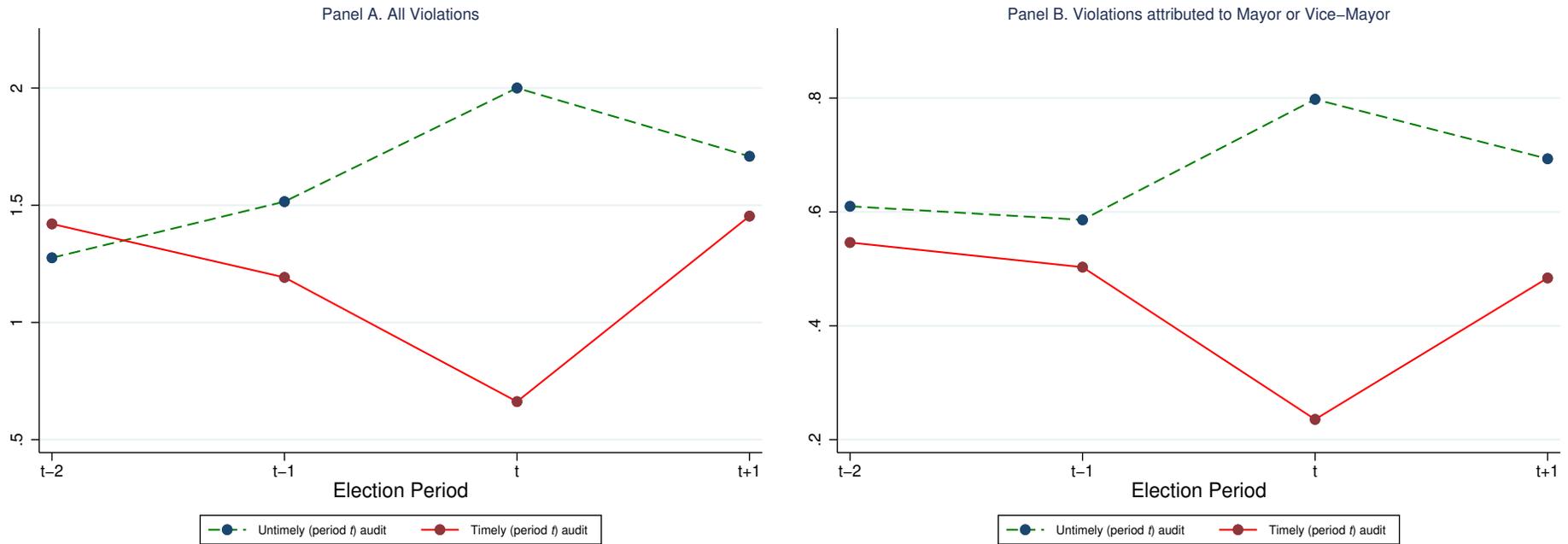
$A_{mt}$  = timely municipal audit (published < 2 years before election)

$A_{mt}^{-m}$  share of adjacent municipalities with timely municipal audit (published 2 years before election)

$X_{mt}$  = municipality and major controls, adjacent municipality controls

$\alpha_m, \gamma_t$  municipality-specific intercept, election-year indicators

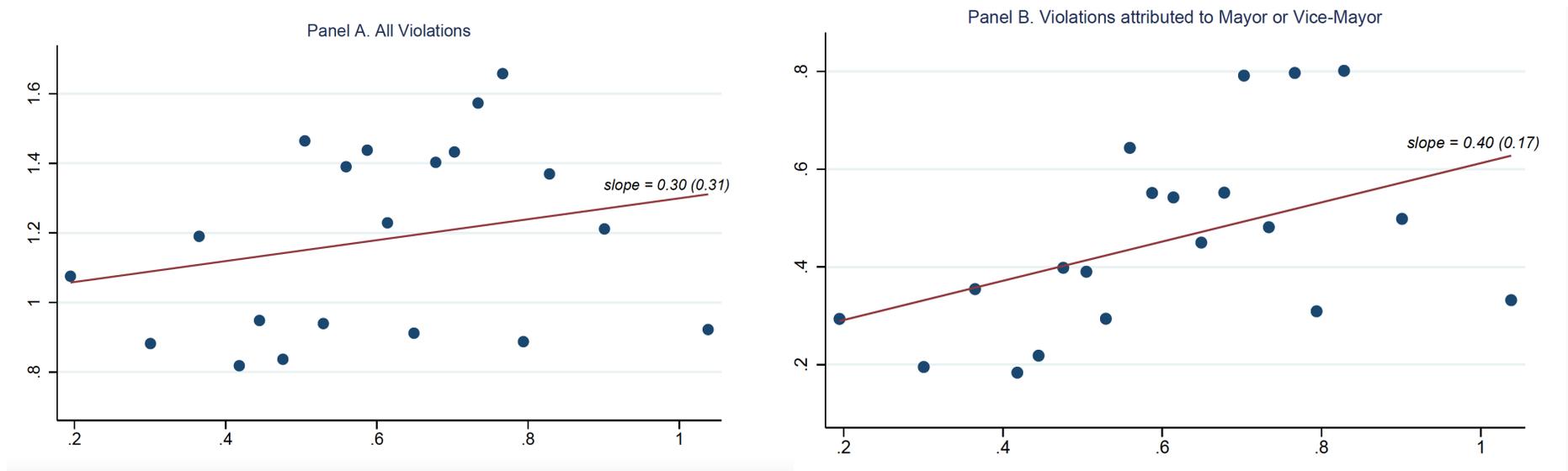
# Effect of Timely Audits on Home Corruption



Average number of corrupt violations per report for municipalities with timely and untimely audits

- point estimate is 67 - 70 % fewer reported corrupt violations as a result of timely audit

# Spillover Effects of Timely Audits Elsewhere on Home Corruption

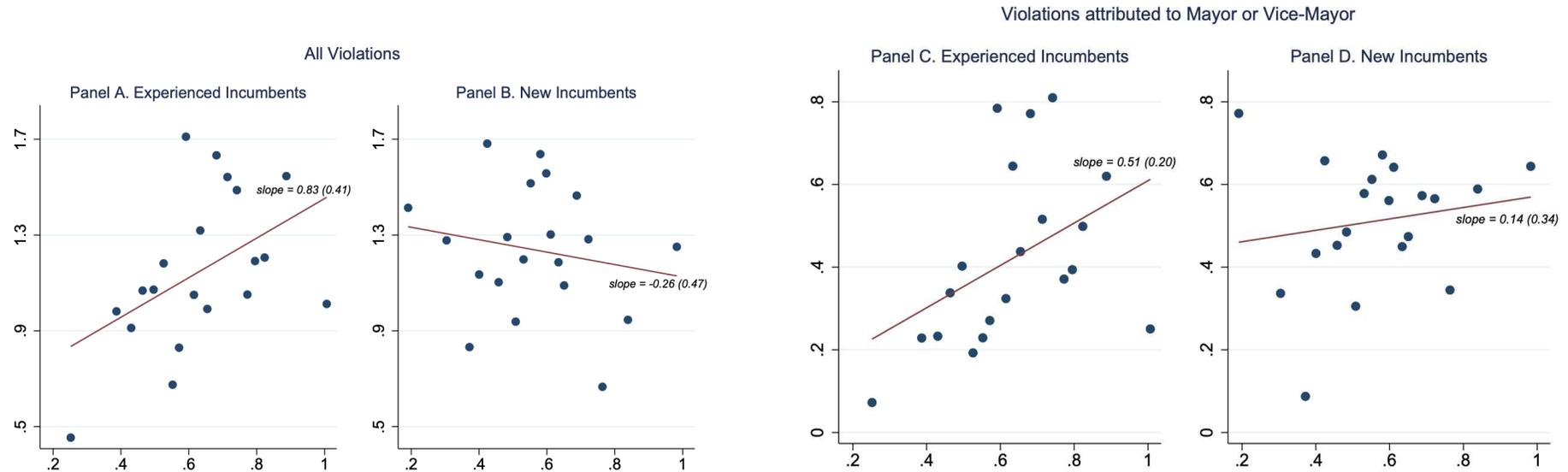


Number of corrupt violations per report in home municipality as a function of share of timely audits in adjacent municipalities

- substantial negative externalities
- point estimates for increase in corruption relative to control group mean are between 10% (all violations) and 34% (mayor and vice mayor), with no changes re-election chances

Note: binscatter estimates with linear fitted line control for own municipality timely audit, municipality controls, and municipality/election year fixed effects

# Spillover Effects by Level of Incumbency



Number of corrupt violations per report in home municipality as a function of share of timely audits in adjacent municipalities

- spillover effects entirely driven by long-term mayors, who arguably are less sensitive to electoral concerns → inconsistent with yardstick competition spillovers
- point estimates for increase in corruption relative to control group mean for mayor or vice-mayors is 51%

# Conclusion

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- data are consistent with norms playing a key role in shaping rent extraction
- evidence of interaction of formal institution (disciplinary effect of elections and audits) and informal institutions (social motives, norms)
- prevalence of corruption is key to direction of externality:
  - in societies with high levels of corruption, anti-corruption efforts can have negative spillover effects
  - in societies with low levels of corruption, pro-social behaviors reinforce each other