IEB Working Paper 2026/04

THE CASE FOR LOBBYING TRANSPARENCY

Antoine Zerbini

Version January 2026

Political Economy

IEB Institut d'Economia de Barcelona

THE CASE FOR LOBBYING TRANSPARENCY

Antoine Zerbini

Postal Address:
Institut d'Economia de Barcelona
Facultat d'Economia i Empresa
Universitat de Barcelona
C/ John M. Keynes, 1-11
(08034) Barcelona, Spain
Tel.: + 34 93 403 46 46
ieb@ub.edu
http://www.ieb.ub.edu

IEB Working Paper 2026/04

THE CASE FOR LOBBYING TRANSPARENCY*

Antoine Zerbini

ABSTRACT: Lobbying transparency regulations are hailed as a potential solution to concerns about the excessive influence of special interest groups (SIGs) over policy-making. I study how these regulations shape strategic interactions between voters, politicians and SIGs. By clarifying the process through which a policy was implemented, lobbying transparency helps voters hold politicians accountable and control the influence of SIGs. Ex-post, conditional on access, SIGs prefer to operate without lobbying transparency. Ex-ante, they may benefit from lobbying transparency because it redirect the voters' blame towards politicians. Ultimately however, lobbying transparency standards may hurt the electoral prospects of politicians and thus risk never being implemented, potentially explaining why voters' demand for it remains unanswered.

JEL Codes: D72, D82, P35, D02
Keywords: Lobbying, Transparency, Disclosure, Information Design, Political Agency

Antoine Zerbini
Universitat Autònoma de Barcelona,
IEB & BSE
E-mail: antoine.zerbini@bse.eu

*For invaluable advice and guidance I thank Stephane Wolton. I also thank Emiel Awad, Benjamin Blumenthal, Roel Bos, Luis Bosshart, Peter Buisseret, Torun Dewan, Catherine Hafer, Kun Heo, Rafael Hortala-Vallve, Dimitri Landa, Roxanne Rahnama, Arduino Tomasi, Leeat Yariv and Hye Young You as well as conference and seminar participants at the LSE, NYU, MPSA, EPSA, Nottingham, Harvard CPFT and three anonymous referees for useful feedback. The author gratefully acknowledges support from the Spanish Ministry of Science and Innovation (grants CNS2022-135749 and PID2022-137707NBI00), the Spanish Agencia Estatal de Investigaci´on (AEI), and the Severo Ochoa Programme for Centres of Excellence in R&D (Barcelona School of Economics CEX2024-001476-S), funded by MCIN/AEI/10.13039/501100011033. Declarations of interest: none.

1 Introduction

Across democracies, voters are concerned about the influence of special interest groups (hereafter SIGs) on policymaking. In response, lobbying transparency regulations – which record and publicly disclose interactions between politicians and SIGs – have gained substantial popular support. Beyond their "fire alarm" purpose on non-salient issues, lobbying transparency regulations can help voters understand what led to the final policy decision on salient issues, and in so doing help them keep their elected officials accountable.[1] Yet, a large theoretical literature has shown that more transparency need not benefit voters, once one accounts for the strategic incentives of politicians (Prat, 2005; Fox and Van Weelden, 2012). Further, modern democracies still widely differ in their adoption and enforcement of lobbying transparency.[2]

This paper provides a theoretical framework to (i) help understand the effect of lobbying transparency regulations on policy-making and accountability, (ii) study the determinants of institutional change and (iii) inform the design of "institutions" of transparency.

Formally, I augment a political agency model with the possibility of informational lobbying by a SIG. In a common-value environment, politicians are policy and career-motivated and vary in competence. The representative voter wants the (publicly chosen) policy – $y \in \{0, 1\}$ – to match the state of the world – $\omega \in \{0, 1\}$ – and is screening motivated when choosing whether to retain the incumbent at the end of the game. A competent incumbent observes the state of the world, while an incompetent one is imperfectly informed. With some strictly positive probability, a SIG favoring $y = 0$ gets a chance to engage in informational lobbying – i.e. they gain access to the politician – by designing an experiment to influence the incumbent's policy-choice. With lobbying transparency the voter knows whether lobbying did take place.

In equilibrium, a competent incumbent always implements the correct policy. Thus, since $y = 1$ is more likely to be the correct policy, it signals competence. Absent lobbying, an incompetent incumbent has an incentive to *pander* by implementing $y = 1$ too often to bolster his electoral chances. With lobbying, the SIG ensures that an incompetent incumbent instead implements $y = 0$ too often. Crucially, these two forces pull in opposite directions, which complicates the voter's updating. If the voter observes lobbying, she knows that an incompetent incumbent implements $y = 0$ too often, and thus retains him if and only if

[1] For concerns about influence and support for lobbying transparency bills see Hardoon and Heinrich (2013); Alter-Citizens-Project (2013); Gallup (2011, 2016); Rainie and Perrin (2019); Data-for Progress (2021); Arias Echeverría (2024). In their review of the empirical literature, De Figueiredo and Richter (2014) highlight that lobbying activity increases on salient issues. Recent prominent examples of intense lobbying on salient issues include the EU Green Deal (Brzeziński, 2023) and AI Act (Coulter, 2024) or the Affordable Care Act in the US (McFadden, 2021).

[2] See OECD (2021*b*,*a*) for a comparison of lobbying transparency regulations across the world and the EU (Kergueno, 2021).

$y = 1$. If, instead, she observes no lobbying, she mixes to limit the extent of pandering.

Without lobbying transparency, the voter uses her limited knowledge on the likelihood of lobbying. If she expects lobbying to be likely she votes as if lobbying always took place. Then, the SIG's best-response is orthogonal to the institutional framework since the voter always fires the incumbent after $y = 0$, conditional on lobbying. The incumbent, however, now *always* panders absent lobbying, for the equilibrium voting rule does nothing to disincentivize pandering. If, instead, the voter expects no lobbying, she votes as if lobbying never took place, and mixes. This makes it easier to incentivize the incumbent to implement $y = 0$, and thus the SIG reveals less information. Further, absent lobbying, the incumbent can still pander more than with lobbying transparency, for this additional pandering is diluted in the voter's updating by the additional over-implementation of $y = 0$ when lobbying does occur.

Thus, lobbying transparency benefits the voter by helping her (i) better discipline her elected official and (ii) induce the SIG into revealing (weakly) more information. Crucially, this result relies on the change in the voter's equilibrium voting rule across institutions. Two key implications can be drawn for the design of "institutions" of transparency.

First, it suffices for voters to learn whether lobbying by a specific SIG occurred. Suppose that more stringent lobbying transparency standards – namely the SIG's report must now be disclosed – are introduced. Then, after a non followed SIG recommendation, the voter may infer that the incumbent is competent. Yet, conditional on observable lobbying, the voter already rewarded the $y = 1$ policy without learning the SIG's recommendation *and* lobbying must still ensure that the $y = 0$ is over-implemented by an incompetent incumbent. Thus, the voter's equilibrium ordering of her beliefs remains unaffected, and so does equilibrium play and welfare. Further, rather than just disclosing *whether* lobbying occurred, lobbying transparency, in some countries, also tells voters *who* lobbied. In an extension, the SIG's private type captures their preference for $y = 1$ or $y = 0$. Then, one SIG incentivizes an incompetent incumbent to implement $y = 0$, while the other incentivizes $y = 1$. I show that, as in the baseline version, lobbying transparency allows the voter to apply the appropriate burden of proof, and thus improves welfare.

Second, lobbying transparency interacts with other forms of transparency in non-trivial ways. I introduce *transparency of consequences* (Prat, 2005), modeled as the probability of the voter observing – after the policy choice but before voting – whether the policy-decision was correct. Introducing transparency of consequences reduces pandering incentives, for pandering entails likely policy mistakes which lead to certain electoral defeat. This has two implications. On the one hand, with sufficiently high transparency of consequences, pandering disappears, and an incompetent incumbent over-implements $y = 0$ both with lobbying – because of lobbying – and absent lobbying – because of the imprecision of his private signal. Then, the voter need not condition her voting on the observation of lobbying, and lobbying transparency standards lose their purpose. On the other, as long as pandering incentives exist, increasing transparency of consequences mitigates pandering incentives and in so doing facilitates the SIG's task; more transparency of consequences worsens policy-making and welfare. Thus welfare is non-monotonic in the level of transparency of consequences.[3]

To derive sharper implications for institutional design, consider a baseline environment without lobbying transparency nor any transparency of consequences, and where lobbying takes place whenever feasible. To maximize her welfare, if she could, the voter would increase transparency of consequences sufficiently. Absent this possibility, she would introduce lobbying transparency standards without any transparency of consequences. Since transparency of consequences is not necessarily institutionalizable, these findings suggest that a viable second-best is the introduction of minimalist lobbying transparency standards.

I then turn to the SIG's institutional preference in section 5. Whether the voter knows the SIG's policy preference proves decisive. In the baseline version of the game, lobbying transparency solves a commitment problem for the SIG: they benefit from it ex-ante, but not ex-post. Conditional on being able to lobby, the SIG would rather operate in the shadows for it (weakly) facilitates their problem. Ex-ante, their favorite policy is necessarily less implemented without lobbying transparency, because of the politician's excessive pandering. If, instead, there are two SIGs with opposite preferences, then the "strong" one – the one sufficiently more likely to gain access – is better off with lobbying transparency standards so that the voter knows when they are in fact *not* lobbying; and vice versa.

Finally, I provide a potential explanation – rooted in the politicians' career concerns – for the existing variation in lobbying transparency standards across democratic settings. In section 6, I augment the baseline game with a first institutional stage where the incumbent, knowing only his competence, chooses whether to introduce lobbying transparency standards. A competent incumbent's equilibrium payoff depends on the institutional setting only through its career concerns. In turn, the likelihood of the SIG's lobbying – which determines the equilibrium voting rule without lobbying transparency – and the incumbent's incumbency (dis-)advantage – which pins down how the voter mixes to contain pandering had she observed *no* lobbying – determine a competent incumbent institutional preference. When lobbying is likely, an electorally

[3]This non-monotonicity is *not* conditional on the presence of lobbying transparency standards.

advantaged incumbent benefits from informing voters when lobbying did *not* happen, so as to capitalize on his electoral advantage. When lobbying is unlikely, an electorally disadvantaged incumbent is better off informing the voter of when lobbying *did* take place, to limit the damages from his electoral disadvantage.

Related Literature. This paper builds on a large political agency literature where the policy-maker's career-concerns can generate a policy-making distortion, such as, in this case, *pandering*. Pandering can arise when the principal applies an asymmetric burden of proof and serves to signal congruence (Morris, 2001; Maskin and Tirole, 2004; Morelli and Van Weelden, 2013) or competence (Trueman, 1994; Canes-Wrone, Herron, and Shotts, 2001; Levy, 2004).

To understand how to mitigate the extent of these career-concerns driven distortions, attention has been paid to the effect of introducing different forms of transparency. A variety of scholars have argued that more transparency on *actions* (Prat, 2005; Fox, 2007) or *consequences* (Fox and Van Weelden, 2012; Blumenthal, 2023; Heo, 2024) or even voters being more intrinsically interested in politics (**?**) can backfire once one accounts for the strategic incentives of politicians.[4]

Another strand of the literature has focused on transparency of *processes*, that is, the disclosure of information about *how* politicians came to choose a policy.[5] Akin to the findings of papers on transparency of consequences, De Moragas (2022) shows that disclosing the bias of a politician can backfire by creating pandering incentives. Minaudier (2022) shows that disclosing the private information of a policy-maker (that maximizes the voter's welfare) is counter-productive for it facilitates the SIG's persuasion problem. By introducing a conflict of interest between the voter and the politician – through the politician's career concern – I show that this negative effect from transparency disappears. Closest to this paper, Li (2022) shows that disclosing the identity of a SIG lobbying the politician improves welfare by inducing SIGs to reveal more information.

I contribute to this literature in four ways. First, disclosing the information that politicians have access to helps the voter apply the appropriate burden of proof on their elected officials, which improves welfare by (i) better disciplining the politicians[6] and (ii) inducing more information revelation from SIGs. Second, I derive broader implications for institutional design by clarifying how different layers of transparency (namely lobbying and of consequences) are intertwined, in settings where politicians vary in competence. Ideally,

[4]For reviews of the transparency of consequences literature see Pande (2011) and Ashworth (2012).

[5]Scholars have also started to make use of the available lobbying transparency data; e.g., see You (2023) and Amodio et al. (2025).

[6]Relatedly, on campaign contributions, Sloof (1999) and Schnakenberg, Schumock, and Turner (2023) show that transparency facilitate the voters' learning and selection of the correct candidate.

the voter would institutionalize high levels of transparency of consequences. However, when this is not possible, lobbying transparency is strictly welfare-improving *and* the voter is better off not observing the policy's consequence. Third, I show that SIGs may benefit from lobbying transparency, for it can discipline politicians in their favor. Finally, I endogenize the (non-) existence of lobbying transparency institutions.

2 Model

Consider a game with a SIG L (they), a representative voter V (she), an incumbent I (he) and a non-strategic challenger C. V would like the chosen policy $y \in Y = \{0, 1\}$ to match the state of the world $\omega \in \Omega = \{0, 1\}$, with common prior $Pr(\omega = 1) = p > \frac{1}{2}$. At the end of the game, the voter chooses whom to elect: $e \in \{I, C\}$.

Politicians' Types. The incumbent's type – denoted by $\tau_I \in \{h, l\}$ – is his private information: with probability $\kappa \in (0, 1)$ he is a "competent" (or "high") type.[7] Upon entering office I receives policy-relevant information via a private signal $s^N \in S^N = \{0, 1\}$ from Nature. A competent I perfectly learns the state of the world while an incompetent I receives an informative yet noisy signal: $1 = Pr(s^N = \omega|\tau_I = h) > Pr(s^N = \omega|\tau_I = l) = q \in (p, 1)$.

Preferences. Let $\mathbb{1}_{\{\}}$ denote the indicator function. V is policy and screening motivated: $U_V(y, \omega, \tau_e) = \mathbb{1}_{\{y=\omega\}} + \mathbb{1}_{\{\tau_e=h\}}$.[8] The incumbent is policy and career-motivated and places a weight on re-election of $\delta \in (0, 1)$: $U_I(y, \omega) = \mathbb{1}_{\{y=\omega\}} + \delta\mathbb{1}_{\{e=I\}}$. L has state-independent preferences and prefers $y = 0$: $U_L(y) = \mathbb{1}_{\{y=0\}}$. That is, there is a conflict of interest between politicians (and the voter) and the SIG.

Lobbying. With probability $(1-\eta) \in (0, 1)$, L gets a chance to engage in informational lobbying. They do so by designing an *experiment*, which consists of a pair of probability distributions over signal realizations $s^L \in \{0, 1\}$ conditional on ω, i.e. $\boldsymbol{E} = \{\pi(s^L = 0|\omega = 0), \pi(s^L = 0|\omega = 1)\}$.

Lobbying Transparency. The policy-decision y is publicly observed. Conditional on lobbying, I always observes the realized signal s^L. Absent lobbying, I observes no signal. I denote by $\hat{s}^L \in \hat{S}^L = \{0, 1, \emptyset\}$ the signal from L observed by I, where $\hat{s}^L = \emptyset$ denotes I observing no signal from L. I study two institutional transparency settings: $t \in T = \{o, r\}$ where $t = r$ denotes a lobbying *register* regime (i.e. lobbying transparency) and $t = o$ denotes an *opaque* regime (no lobbying transparency). The voter observes some

[7] The challenger's type is also drawn from the same distribution, with prior $\kappa \in (0, 1)$.

[8] Or, equivalently, consider a two-periods model where a high-type politician makes better policy-decision in the second period, such that the voter is intrinsically policy motivated and instrumentally screening motivated.

information about the occurrence of lobbying: $\varrho \in O = \{i, n, \emptyset\}$ where i denotes the voter observing that lobbying did take place, n indicates the voter observing that no lobbying took place and $\emptyset$ denoting the voter not observing whether any lobbying did occur. With lobbying transparency ($t = r$), then $\varrho \in \{i, n\}$, and otherwise ($t = o$) then $\varrho = \emptyset$.

Timing.

1. Nature draws ω, and privately reveals τ_I and s^N to I. L privately learns whether they can engage in lobbying.
2. L decides whether to engage in lobbying and if so, publicly commits to $\{\pi(0|0), \pi(0|1)\}$. I privately observes $\hat{s}^L$.
3. I publicly chooses y.
4. V observes y and $\varrho \in \{i, n, \emptyset\}$ and chooses $e \in \{I, C\}$. Payoffs are realized. Game ends.

The equilibrium concept is weak Perfect Bayesian Equilibrium (wPBE) which requires that all players are best-responding and updating their beliefs according to Bayes' rule whenever possible. Let ΔS denote the set of probability distributions over the set S. Strategies are: for V, a re-election rule $v : Y \times O \times T \to \Delta\{0, 1\}$, for I a policy-decision $y_\tau : \{h, l\} \times S^N \times \hat{S}^L \times T \to \Delta\{0, 1\}$, and for L the decision to lobby and if so how $\boldsymbol{E} : \Omega \times T \to \Delta(\Delta(\Omega))$ where $\Delta(\Delta(\Omega))$ denotes the set of distributions of posterior beliefs. V's belief about I's type is denoted by $\theta(y, \varrho) = Pr(\tau_I = h|y, \varrho)$. I's belief about the state of the world is denoted by $\mu(s^N, \hat{s}^L) = Pr(\omega = 1|s^N, \hat{s}^L)$.

3 Equilibrium Analysis

Assumption 1. *(i) $\delta > 1 - 2\mu(0, \emptyset)$, (ii) I implements $y(s^N, \hat{s}^L) = s^L \forall \hat{s}^L \in \{0, 1\}$ whenever indifferent.*

(i) ensures that the incumbent has sufficiently strong career concerns, such that electoral incentives can create a distortion.[9] (ii) ensures upper semicontinuity of L's value function.

Lemma 1. *(i) Whenever lobbying takes place in equilibrium, $\pi^*(0|0) = 1$ and (ii) $y^*_H(s^N, s^L, \varrho) = s^N$ with probability 1, $\forall \varrho \in \{i, n, \emptyset\}$; $Pr(y = 0|\tau_I = h) < Pr(y = 1|\tau_I = h)$.*

Proof. All the proofs are collected in the online appendix. □

[9] This is for ease for exposition and to focus on the most interesting case. Equilibrium characterization for any $\delta \in (0, 1)$ is provided in section 4.

First, if engaging in lobbying, L does not hide true good news. Second, a competent incumbent knows which policy is correct *and* minimally discounts the future and thus always follows his private signal; since $p > 1/2$, a competent incumbent implements $y = 1$ more often than $y = 0$. Hereafter, I focus on an incompetent incumbent's strategy, which is denoted by $y(s^N, \hat{s}^L, \varrho)$. I denote the voter's re-election rule by $v(y, \varrho) = Pr(e = I|y, \varrho)$.

Irrespective of the institutional environment, to characterize equilibrium play, it is easiest to focus on the voter's beliefs ordering about the competence of I in equilibrium. To that end, note that $\theta(0, \varrho) = \frac{\kappa(1-p)}{\kappa(1-p)+(1-\kappa)Pr(y=0|\tau_I=l,\varrho)}$. Only three orderings of the voter's beliefs exist. We can directly rule out $\theta(0, \varrho) > \kappa > \theta(1, \varrho)$: such a beliefs ordering would imply $v(0, \varrho) = 1, v(1, \varrho) = 0$, yet this ordering presupposes $Pr(y = 0|\tau_I = l) < 1-p$. However, absent lobbying the voting rule ensures that $Pr(y = 0|\text{no lobbying}, \tau_I = l) \geq Pr(s^N = 0|\tau_I = l) > 1 - p$. Further, lobbying if any, must strictly increase the ex-ante likelihood of $y = 0$, leading to a contradiction. Thus, in equilibrium, either the voter mixes when $\theta(0, \varrho) = \kappa$, or she always (respectively never) re-elects the incumbent after $y = 1$ (respectively $y = 0$) when $\theta(0, \varrho) < \kappa$.

3.1 Equilibrium Play With Lobbying Transparency

To describe equilibrium play, denote $S_0 := Pr(s^N = 0|\tau_I = l) = p(1 - q) + (1 - p)q > 1 - p, C_1^0 := \frac{1-\delta}{1+\delta}$, $\Delta_{s^N} := \frac{1-\mu(s^N,\emptyset)}{\mu(s^N,\emptyset)} \forall s^N \in \{0, 1\}$.

Proposition 1. *Let $t = r$. There exists a continuum of equilibria which are all policy-choices and experiment equivalent. In any equilibrium, lobbying takes place whenever possible.*

(i) Absent lobbying, then $y^*(1, \emptyset, n) = 1$, $y^*(0, \emptyset, n) = 1$ with probability $\sigma_0 := 1 - \frac{1-p}{S_0}$ and $y^*(0, \emptyset, n) = 0$ with probability $1 - \sigma_0$; and $v^*(1, n) - v^*(0, n) = \frac{1-2\mu(0,\emptyset)}{\delta} := \overline{v} \in (0, 1)$.

(ii) Given lobbying, then $v^*(1, i) = 1, v^*(0, i) = 0$. There exists a unique $\overline{q} \in (p, 1]$ such that lobbying takes place with $\pi^*(0|1) = \Delta_1 C_1^0$ and $y^*(s^N, \hat{s}^L, i) = s^L$ if $q \leq \overline{q}$. Otherwise, $\pi^*(0|1) = min\{\Delta_0 C_1^0, 1\}$ and $y^*(0, \hat{s}^L, i) = s^L, y^*(1, \hat{s}^L, i) = 1$.

Observe first that V's equilibrium re-election rule is conditioned on her observation of lobbying. Absent lobbying, she mixes and re-elect I more often after $y = 1$ than after $y = 0$. If she did not mix, then, after $s^N = 0$, I would always *pander* to $y = 1$ to appear competent; V mixes to limit the extent of pandering. In turn, after $s^N = 1$, I follows his private signal, while he mixes after $s^N = 0$ and thus panders with probability σ_0, which ensures that $\theta(0, n) = \kappa$. Conditional on no lobbying, an incompetent I thus implements $y = 0$ as often as a competent one, with probability $1 - p$. Note that the equilibrium multiplicity only comes from V's mixing absent lobbying: across all equilibria the difference in re-election probabilities between the two policies is kept to a specific level which ensures that, absent lobbying, the incompetent incumbent is indifferent after $s^N = 0$.

If, instead, V observes lobbying, she anticipates that it must be beneficial to L. That is, in equilibrium $Pr(y = 0|\tau_I = l, \hat{s}^L \neq \emptyset) > 1-p$, which necessarily implies $\theta(0, i) < \kappa$. Thus I is never (respectively always) re-elected after implementing $y = 0$ (respectively $y = 1$).

Whether I follows L's recommendation depends on the type of lobbying and his private signal s^N. When I is poorly informed ($q \leq \overline{q}$) it is optimal to design an experiment that ensures that any incompetent I (meaning for any s^N) follows s^L, as convincing an I with $s^N = 1$ to implement $y = 0$ is feasible without being too truthful.[10] On the contrary, if an incompetent I is quasi-competent (as $q \to 1$), then L would have to pick a quasi-fully revealing experiment (yielding a payoff of $\approx 1 - p$) to persuade an I with $s^N = 1$ to change his mind. Instead, they are better off designing an experiment that only persuades an I with $s^N = 0$ to *not* pander; then, an incumbent with $s^N = 1$ disregards L's recommendation and follows his private signal.

3.2 Equilibrium Play Without Lobbying Transparency

Without lobbying transparency, V does not know if lobbying took place and must rely on her knowledge about the likelihood of lobbying $(1 - \eta)$. Consider the voter's belief following $y = 0$:

$$\theta(0, \emptyset) = \frac{(1-p)\kappa}{(1-p)\kappa + (1-\kappa)[\underbrace{\eta Pr(y=0|\tau_I = l, \hat{s}^L = \emptyset)}_{\text{no lobbying and pandering incentives}} + \underbrace{(1-\eta)Pr(y=0|\tau_I = l, \hat{s}^L \neq \emptyset)}_{\text{lobbying}}]}$$

Recall that, in equilibrium $\theta(0, \emptyset) \leq \kappa$. Thus, absent lobbying, an incompetent I has an incentive to pander to $y = 1$ to get re-elected. Further, given lobbying, an incompetent I is incentivized to over-implement $y = 0$. Crucially, these two forces pull in opposite directions.

Denote $\gamma_{s^N}(\eta) = Pr(y = 1|s^N, \hat{s}^L = \emptyset, \varrho = \emptyset),\ \forall s^N \in \{0, 1\}$ and $C^0_\emptyset = max\{C^0_1, \frac{p}{1-p}\frac{1-q}{q}\}$. Equilibrium play is delineated in six regions by the precision of an incompetent I's private signal q and the likelihood of lobbying being feasible η.

[10] Notice that this implies that an incompetent I is never re-elected, conditional on $s^L = 0$. Yet, no profitable deviation exists since the incumbent is career *and* policy-motivated. With the introduction of transparency of consequences in Section 4, an incompetent I is still re-elected with positive probability after following $s^L = 0$.

Proposition 2. *Let $t = o$, such that $\varrho = \emptyset$. In any equilibrium, lobbying takes place whenever feasible and an incompetent incumbent with $s^N = 1$ implements $y = 1$ absent lobbying: $\gamma_1^*(\eta) = 1$. There exists a unique $\hat{q} \in (p, \overline{q}]$ such that*

1. *If $q \leq \hat{q}$, then $y^*(s^N, \hat{s}^L, \emptyset) = s^L \, \forall \, s^N \in \{0,1\}, \hat{s}^L \in \{0,1\}$. There exists a unique $\eta_\emptyset(1) \in (0,1)$ such that if (i) $\eta \leq \eta_\emptyset(1)$ then $v^*(1,\emptyset) = 1, v^*(0,\emptyset) = 0, \pi^*(0|1) = \Delta_1 C_1^0, \gamma_0^*(\eta) = 1$ and otherwise (ii) $v^*(1,\emptyset) - v^*(0,\emptyset) = \overline{v}, \pi^*(0|1) = \Delta_1 C_\emptyset^0, \gamma_0^*(\eta) = min\{1, \sigma_0 + \frac{1-\eta}{\eta}\frac{p\Delta_1 C_\emptyset^0}{S_0}\}$.*

2. *If $q \in (\hat{q}, \overline{q})$, then there exists a unique $\eta_\emptyset(1,0) \in (0,1)$ such if (i) $\eta \leq \eta_\emptyset(1,0)$ then $v^*(1,\emptyset) = 1, v^*(0,\emptyset) = 0, \pi^*(0|1) = \Delta_1 C_1^0, y^*(s^N, \hat{s}^L, \emptyset) = s^L \, \forall \, s^N \in \{0,1\}, \hat{s}^L \in \{0,1\}, \gamma_0^*(\eta) = 1$ and otherwise (ii) $v^*(1,\emptyset) - v^*(0,\emptyset) = \overline{v}, \pi^*(0|1) = 1,\ y^*(0, \hat{s}^L, \emptyset) = s^L \ \forall \hat{s}^L \in \{0,1\},\ y^*(1, \hat{s}^L, \emptyset) = 1, \gamma_0^*(\eta) = min\{1, \frac{\sigma_0}{\eta}\}$.*

3. *If $q \geq \overline{q}$ then $y^*(0, \hat{s}^L, \emptyset) = \hat{s}^L \forall \hat{s}^L \in \{0,1\}, y^*(1, \hat{s}^L, \emptyset) = 1$. There exists a unique $\eta_\emptyset(0) \in (0,1)$ such that if (i) $\eta \leq \eta_\emptyset(0)$ then $v^*(1,\emptyset) = 1, v^*(0,\emptyset) = 0, \pi^*(0|1) = min\{\Delta_0 C_1^0, 1\}, \gamma_0^*(\eta) = 1$ and otherwise (ii) $v^*(1,\emptyset) - v^*(0,\emptyset) = \overline{v}, \pi^*(0|1) = 1,\ \gamma_0^*(\eta) = min\{1, \frac{\sigma_0}{\eta}\}$.*

Whenever $v^*(1,\emptyset) - v^*(0,\emptyset) = \overline{v}$, there exists a continuum of policy choices and experiments equivalent equilibria. Otherwise there exists a unique equilibrium.

It is easiest to unpack Proposition 2 in two classes of cases.[11] Consider first the subcases (i) (sufficiently low η) of Proposition 2. There, as lobbying is very likely (e.g., $\eta \to 0$), then, even if an incompetent I with $s^N = 0$ *always* panders ($\gamma_0^*(\eta) = 1$), $y = 0$ remains a signal of incompetence because of the overwhelming likelihood of lobbying. Thus $v^*(1,\emptyset) - v^*(0,\emptyset) = 1$. Since this voting rule matches that of the game with lobbying transparency (conditional on lobbying), L's equilibrium strategy is unaffected by the institutional environment.

Suppose instead that lobbying is sufficiently unlikely. When lobbying never takes place ($\eta \to 1$) then equilibrium play converges to that of Proposition 1 absent lobbying, with $\theta(0,\emptyset) = \kappa$ and an interior pandering probability of σ_0. For high but interior η, in equilibrium we must have $\theta(0,\emptyset) = \kappa \iff Pr(y = 0|\varrho = \emptyset, \tau_I = l) = 1 - p$, and recall that $Pr(y = 0|\varrho = \emptyset, \hat{s}^L \neq \emptyset) > 1 - p$, for otherwise there would not be lobbying in equilibrium. In turn, pandering must be strictly higher than in the game with lobbying transparency: $\gamma_0^*(\eta) \in (\sigma_0, 1]$. To complete the equilibrium, an incompetent I with $s^N = 0$ must be indifferent, and thus V votes as if lobbying never took place by mixing with $v^*(1,\emptyset) - v^*(0,\emptyset) = \overline{v}$. Notice

[11] See Figure 3 for an illustration of Proposition 2.

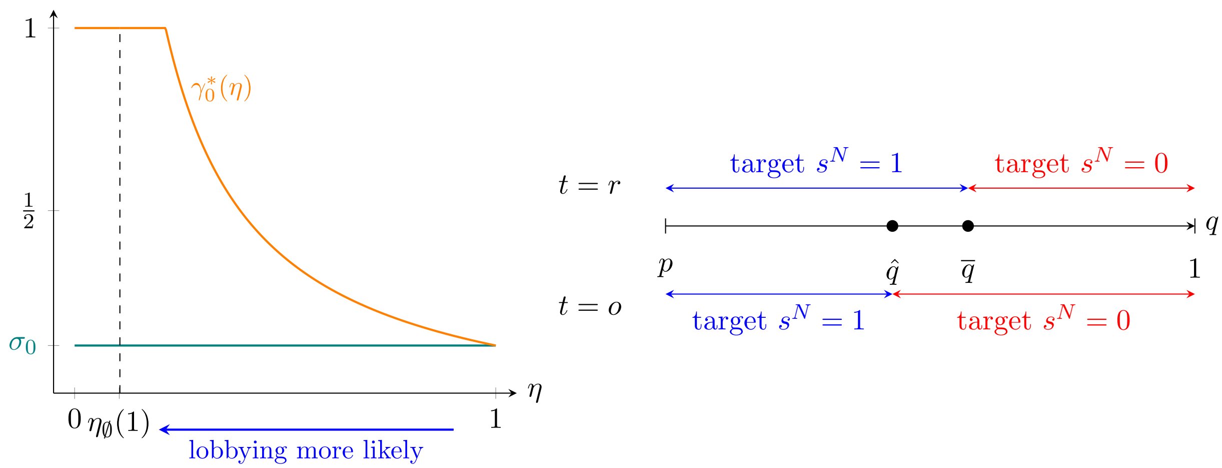

Figure 1: Parameter values selected for the left panel illustration are $p = 0.6, q = 0.7$, which imply $q \in (p, \hat{q}]$. The orange (respectively green) curve plots the likelihood of pandering absent lobbying with (respectively without) lobbying transparency. In the right panel L's equilibrium target is plotted, conditional on an equilibrium with $\theta(0, \emptyset) = \kappa$ (i.e., large enough η).

that this suffices to pin down equilibrium play *given* some strategy for L. An explanation of L's equilibrium strategy as a function of the precision of the incumbent's private signal (q) is provided below.

3.3 Effect of Lobbying Transparency

Lobbying transparency affects the voter's welfare through two channels: the behavior of an incompetent I (i) absent lobbying – i.e., the likelihood of pandering – and (ii) given lobbying – i.e., the informativeness of L's experiment. The first effect is always at play (for any $\eta \in (0, 1)$): lobbying transparency helps V discipline her elected official.

Corollary 1. $\gamma_0^*(\eta) - \sigma_0 \in (0, 1 - \sigma_0)$ *decreases in* η *with* $\lim_{\eta \to 1} \gamma_0^*(\eta) - \sigma_0 = 0$.

Since lobbying (respectively no lobbying and thus pandering) leads to the over-implementation of $y = 0$ (respectively of $y = 1$), without lobbying transparency, I's pandering is "diluted" in the voter's updating. This distortion increases in the voter's expectation of lobbying taking place $(1 - \eta)$, which is illustrated in the left panel of Figure 1.

The second welfare enhancing effect of lobbying transparency is not always at play. Define the "quality" of lobbying as the likelihood of correct policy-making by a lobbied incumbent. Then denote $Q^r = Pr(y = \omega | \hat{s}^L \neq \emptyset, t = r), Q^o = Pr(y = \omega | \hat{s}^L \neq \emptyset, t = o)$.

Corollary 2. *Lobbying transparency induces L into revealing (weakly) more information:* $Q^r \geq Q^o$.

To understand when the second welfare-enhancing effect is at play, focus on the equilibrium re-election rule. When without lobbying transparency V votes as if lobbying was observed (i.e. when $\theta(0, \emptyset) < \kappa$), then L's problem is unaffected by the institutional environment and thus $Q^r = Q^o$.

Suppose, instead, that V votes as if she observed no lobbying (i.e. $\theta(0, \emptyset) = \kappa$) and mixes. In so doing, she facilitates L's task by punishing the $y = 0$ policy less than she did with lobbying transparency. Any incompetent incumbent is now easier to persuade, which directly worsens information provision by L. Further, the absence of lobbying transparency also worsens information provision indirectly, by affecting the "target" of L's experiment. While L does not observe s^N, in equilibrium they either design an experiment that ensures an incumbent with $s^N = 1$ follows its recommendation (and thus an incumbent with $s^N = 0$ too) – their target is $s^N = 1$ – *or* instead design an experiment whose recommendation is only followed by an incumbent with $s^N = 0$ – their target is $s^N = 0$. More information is revealed when the target is an incumbent with $s^N = 1$, and this welfare-improving effect is at play for any $q \in [\hat{q}, \overline{q}]$ (see the right panel of Figure 1). To see this, note that an incumbent with $s^N = 0$ is now made indifferent between either policy (absent additional information) by V's mixing. Thus, he can be persuaded by revealing (almost) no information ($\pi^*(0|1) = 1$). In turn, L now targets a $s^N = 0$ type for a weakly larger set of parameter values: $\hat{q} \leq \overline{q}$.

Corollary 3. *$Pr(y = \omega | t = r) > Pr(y = \omega | t = o)$.*

Taken together, these two forces imply that the incumbent is more likely to implement the correct policy with lobbying transparency than without. Notice that this does not imply that screening always improves with lobbying transparency. However, by selecting the welfare maximizing voting rule for the voter, the net effect on screening – and thus necessarily on welfare – is always strictly positive.[12]

4 Institutional Design

To derive implications for institutional design, in this section I study how varying different layers of transparency affects equilibrium play, and the voter's welfare.

[12] See Proposition A.9 for details.

4.1 Lobbying Transparency vs Transparency of Consequences

So far V could never learn whether the chosen policy matched the state of the world. I now relax this assumption: after observing y and before the election, with probability $\rho \in [0,1]$ the voter perfectly learns the state of the world ω; I write $s_v \in S_v = \{0, 1, \emptyset\}$ and denote a strategy for V by $v(y, s_v, \varrho)$. *Transparency of consequences* is thus formalized by ρ, the likelihood of the voter observing the policy's outcome prior to voting.

Assumption 2. *If lobbying takes place and $y = 0$ and $\theta(0, 0, i) = \kappa$, then V re-elects I with probability 1.*

This is the counterpart of Assumption 1-(ii) once V can observe whether a policy was a success, given that lobbying was observed.[13]

Proposition 3. *There exists a unique $\overline{\rho} := max\{0, \frac{2\mu(0,\emptyset)-1+\delta}{2\delta(1-\mu(0,\emptyset))}\}$ such that, $v^*(y \neq \omega, \varrho) = 0, v^*(y = \omega, \varrho) = 1$ and:*

- *For any $\rho < \overline{\rho}$, equilibrium play is given by Proposition 1 for $t = r$ and by Proposition 2 for $t = o$.*
- *For any $\rho \geq \overline{\rho}$, equilibrium play is independent of $t \in \{o, r\}$. $v^*(1, \emptyset, \varrho) = 1, v^*(0, \emptyset, \varrho) = 0$ and there exists a unique $\overline{\overline{q}} \in (p, \overline{q}]$ such that (i) if $q < \overline{\overline{q}}$ lobbying takes place whenever feasible with $\pi^*(0|1) = \Delta_1 C_1$ and $y^*(s^N, \hat{s}^L, \varrho) = \hat{s}^L \; \forall \hat{s}^L \in \{0, 1\}$ and (ii) otherwise no lobbying takes place. Absent lobbying, $y^*(s^N, \emptyset, \varrho) = s^N$.*

Whenever $v^*(1, \emptyset, \varrho) - v^*(0, \emptyset, \varrho) = \overline{v}$ there exists a continuum of policy choices and experiments equivalent equilibria. Otherwise there exists a unique equilibrium.

First, introducing transparency of consequences simplifies V's problem when she observes ω: mistakes lead to certain dismissal while successes are always sufficient to ensure re-election.

Second, introducing transparency of consequences mitigates I's pandering incentives, because pandering entails (likely) policy mistakes, which lead to certain dismissal. With a low ρ, equilibrium play is unaffected (relative to the $\rho = 0$ baseline). If, instead, ρ is high, then lobbying transparency does not have any effect on equilibrium play, and welfare. To see this, consider the extreme case of $\rho = 1$. Conditional on pandering, a policy mistake is very likely, which leads to both a null policy payoff *and* certain dismissal. At $\rho = \overline{\rho}$, an incompetent I with $s^N = 0$ is indifferent between following her signal and not doing so, assuming the

[13] Otherwise, L would want to design an experiment which, with some strictly positive probability $\epsilon > 0$, recommends $y = 1$ when $\omega = 0$, to ensure that $\theta(0, 0, i) > \kappa$. Note that this is not needed when $t = o$ or to ensure that $\theta(1, 1, i) > \kappa$.

"worst" voting rule of $v(1, \emptyset, \varrho) - v(0, \emptyset, \varrho) = 1$. In turn, for $\rho \geq \overline{\rho}$, the incumbent always follows his private signal. This implies that an incompetent I over-implements $y = 0$ when lobbying happens, but also when it does not, since his private information is noisy: he receives a $s^N = 0$ signal with probability $S_0 > 1 - p$. Thus, $y = 0$ always signals incompetence and V does not need to condition her voting on the observation of lobbying.

Having characterized equilibrium play in a game with transparency of consequences, I now study the effect of varying these two layers of transparency. The effect of transparency of consequences on welfare is less straightforward than that of lobbying transparency. Denote $P(t, \rho) := Pr(y = \omega | t, \rho)$.

Proposition 4. *(i) $P(t = r, \rho = 0) > P(t = o, \rho = 0)$. (ii) For any $\rho \in (0, \overline{\rho})$, $P(t = r, \rho)$ strictly decreases in ρ and $P(t = o, \rho)$ weakly decreases in ρ. (iii) If lobbying takes place whenever feasible, then $P(t, \rho \geq \overline{\rho}) > P(t = r, \rho = 0) > P(t = o, \rho = 0)$.*

As a baseline, consider an environment without lobbying transparency nor any transparency of consequences (i.e. $t = o$ and $\rho = 0$) and where lobbying takes place in equilibrium whenever feasible. Then, increasing ρ sufficiently (beyond $\overline{\rho}$) improves policy-making more than introducing lobbying transparency ever could. To see this, note first, that given $\rho \geq \overline{\rho}$, pandering incentives vanish. Second, absent pandering incentives, V votes as if lobbying always took place and thus L's experiment is as informative as in the game with lobbying transparency. Put differently, if she could, V would rather increase transparency of consequences (sufficiently) than introduce lobbying transparency.

Crucially, if transparency of consequences cannot be increased sufficiently (i.e., only up to any $\rho' \in (0, \overline{\rho})$), then any increase in ρ is (weakly) counter-productive. Indeed, as a marginal increase in ρ decreases pandering incentives (towards $y = 1$), it makes it easier for L to persuade I to implement $y = 0$. Put differently, if pandering incentives cannot be shut down, then welfare decreases in transparency of consequences. In that case, V would ideally introduce lobbying transparency standards and commit to not observing the state of the world. This result is illustrated in the left panel of Figure 2.[14]

Consider now the effect of varying transparency of consequences on L's welfare.

Corollary 4. *$Pr(y = 0 | t, \varrho)$ weakly increases in ρ.*

[14] On the importance of lobbying taking place in equilibrium whenever feasible: if, with $\rho \geq \overline{\rho}$, L's best-response entails not engaging in lobbying, then $P(t, \rho \geq \overline{\rho}) > P(t = r, \rho = 0)$ need not hold. Intuitively, if an increase of transparency of consequences leads to the absence of lobbying, an incompetent politician makes more policy mistakes. Lobbying taking place in equilibrium whenever feasible (i.e. $q \leq \overline{\overline{q}}$) is one simple sufficient condition to avoid this second channel through which increasing the level of transparency of consequences can backfire; more general conditions are given in Proposition A.2.

Irrespective of the institutional setting, L benefits from more transparency of consequences because it reduces pandering incentives against their favored policy.

4.2 Different Kinds of Lobbying Transparency

I now consider the implications of varying the exact form of lobbying transparency.

Lobbying transparency reveals s^L. So far, lobbying transparency only reveals whether lobbying happened. Suppose instead that with lobbying transparency V can observe whether lobbying did happen *and* s^L. I show in Proposition A.3 that making lobbying transparency more demanding – by forcing the disclosure of s^L – does not affect equilibrium play.

Notice first that absent lobbying transparency, the game is obviously unchanged. Second, with lobbying transparency, the voter can now learn about the incumbent's competence when she observes the incumbent going against L's recommendation.[15] Importantly, in the baseline lobbying transparency game, V already rewarded $y = 1$ conditional on lobbying. Thus, irrespective of whether she can observe s^L, conditional on lobbying, V rewards $y = 1$ because it signals competence. In turn, equilibrium play and welfare is unaffected. Put differently, it is without loss for voters not to be able to observe the exact content of communication between lobbyists and politicians, conditional on being able to observe whether lobbying happened.

Two-sided lobbying and learning the SIG's identity. On many policy issues, SIGs with diverging preferences fight for access to politicians to influence policy-making (Baumgartner et al., 2009). In an extended version of the game, V is uncertain of the identity of the SIG lobbying the politician. Let the SIG's type be denoted by $L \in \{L_1, L_0\}$. With probability η, $L = L^1$ and $U_L(y) = \mathbb{1}_{\{y=1\}}$. With probability $1-\eta$, $L = L^0$ and $U_L(y) = \mathbb{1}_{\{y=0\}}$. η can be interpreted as V's belief about L_1's ability to win the battle for access, or L_1's strength. I denote the institutional setting in this two-sided lobbying game by $t_2 \in \{o, r\}$. With $t_2 = r$, V observes both *whether* lobbying occurs and *by whom*: $\varrho \in \{L_1, L_0, \emptyset\}$.

For tractability, I impose one restriction on each SIG's action set: they can design any experiment which persuades both types (in terms of s^N) of incompetent incumbent. That is, if $L = L_1$ (respectively $L = L_0$), their experiment must be incentive compatible for a $s^N = 0$ (respectively $s^N = 1$) incumbent.

Equilibrium play closely mirrors that of the baseline game.[16] With lobbying transparency V con-

[15] Note that this also requires that L targets a $s^N = 1$ incompetent incumbent in equilibrium.
[16] See Propositions A.4 and A.5.

ditions her voting on the identity of the SIG. If $L = L_1$ (respectively $L = L_0$), $y = 1$ (respectively $y = 0$) is over-implemented by an incompetent incumbent, and $v^*(1, L_1) = 0, v^*(0, L_1) = 1$ (respectively $v^*(1, L_0) = 1, v^*(0, L_0) = 0$). Without lobbying transparency, there exists two cutoffs $\underline{\eta}$ and $\overline{\eta}$ such that, for any $\eta < \underline{\eta}$ (respectively $\eta > \overline{\eta}$) V votes as if she observed that $L = L_0$ (respectively $L = L_1$) and for intermediary η, she mixes. There is no room for pandering as lobbying always takes place. In turn, without lobbying transparency, V's re-election rule is always "inappropriate" with some positive probability and either SIG can always provide less precise information, resulting in more policy mistakes than with lobbying transparency.

To recap, by observing who or what influenced policy-making, the voter can secure (weakly) better policy-making by her elected official.[17]

5 Special Interest Group Institutional Preference

I now consider the SIG's preference for lobbying transparency.

Corollary 5. $Pr(y = 0|t = r, \hat{s}^L \neq \emptyset) \leq Pr(y = 0|t = o, \hat{s}^L \neq \emptyset)$.

Ex-post, *conditional on lobbying*, the SIG is always weakly better off without lobbying transparency. If, the equilibrium re-election rule responds to the observation of lobbying, then, absent lobbying transparency, there always is a chance that the voter punishes $y = 0$ less than she otherwise would, thus facilitating L's task. Since this result relies on the change in equilibrium re-election rules across institutional settings, it also holds if lobbying is two-sided.[18] However, this does not imply that ex-ante the SIG is better off without lobbying transparency.

Proposition 5. *(i) Baseline game:* $Pr(y = 0|t = r) > Pr(y = 0|t = o)$. *(ii) Two-sided lobbying game: there exists a unique* $\hat{\eta} \in (\underline{\eta}, \overline{\eta})$ *such that* $Pr(y = 0|t_2 = r) > Pr(y = 0|t_2 = o)$ *if and only if* $\eta \leq \hat{\eta}$.

In the baseline version of the game, ex-ante, L is always strictly better off with lobbying transparency. Ex-post, absent lobbying, L is better off with lobbying transparency, since it limits "excessive" pandering;

[17] In additional extensions, I provide conditions under which lobbying transparency may still benefit voters if lobbying takes the form of quid-pro-quo contributions (Grossman and Helpman, 1994) by reducing the extent of pandering (see Proposition A.6), and derive empirical implications for testing the effect of the introduction of lobbying transparency regulations (see Section 8.6.1).

[18] In this latter case, it is the SIG who does gain access that is better off ex-post.

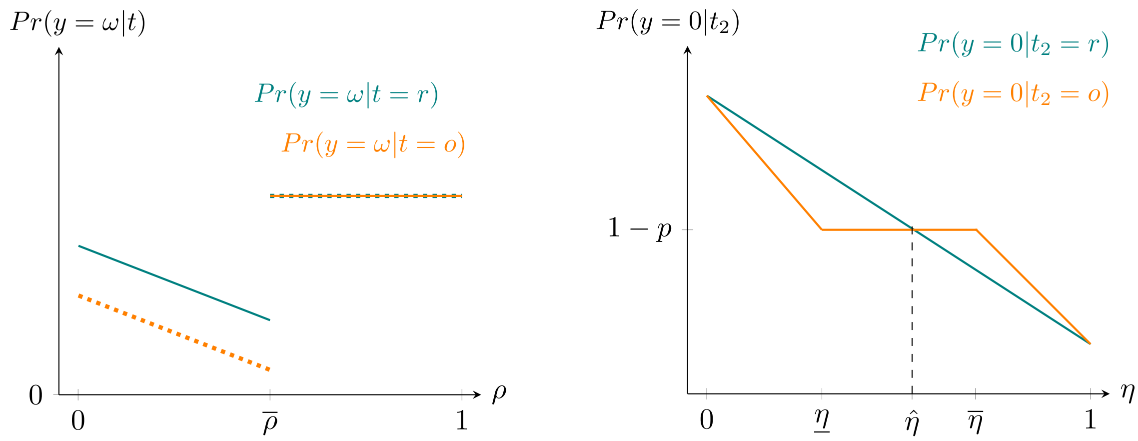

Figure 2: The left-panel illustrates the likelihood of correct policy-making, in the baseline game, when lobbying takes place in equilibrium whenever feasible ($q < \overline{\overline{q}}$). The right panel illustrates the ex-ante probability of $y = 0$, in the two-sided lobbying version of the game.

this effect always dominates the benefit from lobbying in the shadows conditional on access.[19] Lobbying transparency thus resolves L's commitment problem by preventing any (relevant) informational asymmetry between L and V.

Crucially, whether a SIG benefits ex-ante from lobbying transparency, depends on what happens when they are unable to lobby I. In the two-sided lobbying version of the game, there always is one SIG that prefers lobbying transparency – the "stronger" one – while the other does not.

To understand this result, consider the right panel of Figure 2. The ex-ante likelihood of $y = 0$ being implemented with lobbying transparency (plotted in teal) decreases linearly in η – L_1's "strength" – since the interest groups equilibrium experiments are independent of η. Instead, without lobbying transparency (plotted in orange), when L_1 is weak ($\eta < \underline{\eta}$) then $y = 0$ is *always* punished by the voter and thus is implemented less than with lobbying transparency; and vice versa when L_1 is strong ($\eta > \overline{\eta}$). At intermediary levels of η, in equilibrium $\theta(0, \emptyset) = \kappa$ and thus $y = 0$ is implemented as often as the prior. In turn, the sufficiently stronger SIG prefers lobbying transparency, as it helps them avoid excessive punishment of their preferred policy.

[19]To see this formally, suppose that in equilibrium $\theta(0, \emptyset) < \kappa$. Then absent lobbying there is full pandering: $\gamma_0^*(\eta) = 1$ and $Pr(y = 0|\tau_I = l, \hat{s}^L \neq \emptyset, t = r) = Pr(y = 0|\tau_I = l, \hat{s}^L \neq \emptyset, t = o)$. This implies that $Pr(y = 0|\tau_I = l, t = r) = \eta S_0(1 - \sigma_0) + (1 - \eta)Pr(y = 0|\tau_I = l, \hat{s}^L \neq \emptyset, t = r) > 0 + (1 - \eta)Pr(y = 0|\tau_I = l, \hat{s}^L \neq \emptyset, t = o) = (1 - \eta)Pr(y = 0|\tau_I = l, \hat{s}^L \neq \emptyset, t = r) = Pr(y = 0|\tau_I = l, t = o)$. If, instead, in equilibrium $\theta(0, \emptyset) = \kappa$ then $Pr(y = 0|\tau_I = l, t = r) > 1 - p = Pr(y = 0|\tau_I = l, t = o)$.

6 Institutional Change

In this section, I augment the game with a first stage where the incumbent, having privately observed his competence $\tau_I \in \{h, l\}$, *chooses* whether to introduce lobbying transparency $t \in \{o, r\}$. The ensuing game is as given in the baseline model of Section 2, without transparency of consequences $\rho = 0$.

Prior to doing so, I consider the institutional preference of a competent incumbent. Note that the institutional environment only affects a competent incumbent's payoff through his career concerns. Consider the ex-ante probability of re-election of the competent-type, as a function of the institution t, absent any signaling through the choice of t. Denote $p(h,n) := Pr(e = I|\tau_I = h, \varrho = n) = pv^*(1,n) + (1-p)v^*(0,n)$ where recall that $v^*(1,n) - v^*(0,n) = \overline{v} \in (0,1)$, and $p(h,i) := Pr(e = I|\tau_I = h, \varrho = i) = p$. With lobbying transparency a competent I is re-elected with probability $\eta p(h,n) + (1-\eta)p(h,i)$. Without lobbying transparency, he is re-elected with probability $p(h,n)$ if V votes as if lobbying never took place – abusing notation, denote this case by $\eta \geq \eta^\dagger$ – or with probability $p(h,i)$ if V votes as if lobbying always took place – denote this case by $\eta < \eta^\dagger$. Recall that whenever in equilibrium $v^*(1,\varrho) - v^*(0,\varrho) = \overline{v}$, many re-election rules can be part of an equilibrium. The specific selected pair determines a competent incumbent's preference for lobbying transparency. Formally,

$$p(h,n) \leq p(h,i) \iff v^*(0,n) \leq \frac{p}{1-p}(1 - v^*(1,n))$$

For instance, if we select $v^*(1,n) = 1, v^*(0,n) = 1 - \overline{v}$ then $p(h,n) > p(h,i)$. In turn, hereafter I only consider equilibria that survive small perturbations to the common prior on the incumbent and challenger's competence: $\kappa = Pr(\tau_I = h)$ and $\gamma = Pr(\tau_C = h)$.[20] This pins down a unique equilibrium re-election rule in these cases.

Lemma 2. *Incumbency advantage: let $\kappa = \gamma + \epsilon, \epsilon > 0$. If in the baseline game in equilibrium $v^*(1,\varrho) - v^*(0,\varrho) = \overline{v}$ then $\lim_{\epsilon\to 0} v^*(1,\varrho) = 1, \lim_{\epsilon\to 0} v^*(0,\varrho) = 1 - \overline{v}$.*
Incumbency disadvantage: let $\kappa = \gamma - \epsilon, \epsilon > 0$. If in the baseline game in equilibrium $v^*(1,\varrho) - v^*(0,\varrho) = \overline{v}$ then $\lim_{\epsilon\to 0} v^*(1,\varrho) = \overline{v}, \lim_{\epsilon\to 0} v^*(0,\varrho) = 0$.

Intuitively, if the incumbent is advantaged, the voter picks the most favorable voting rule and vice versa. This then pins down the institutional preference of a competent incumbent.

[20] Without any such perturbation, then one can always select a voting rule such that lobbying transparency standards are always preferred by a competent incumbent and thus (generally) introduced in the equilibrium of the institutional game.

Lemma 3. *$Pr(e = I|\tau_I = h, t = r) \geq Pr(e = I|\tau_I = h, t = o)$ if and only if (i) the incumbent has a (small) incumbency advantage and $\eta \leq \eta^\dagger$ or (ii) the incumbent has a (small) incumbency disadvantage and $\eta > \eta^\dagger$.*

With lobbying transparency, an electorally strong incumbent is more likely to be re-elected absent *observable* lobbying (with probability $p(h, n) = p + (1 - p)\overline{v}$) rather than with lobbying (with probability $p(h, i) = p$). Thus, if the voter votes as if no lobbying ever took place without lobbying transparency ($\eta > \eta^\dagger$), then he is against introducing lobbying transparency standards. In contrast, if the voter votes as if lobbying always took place without lobbying transparency, a strong incumbent benefits from lobbying transparency so as to be "rewarded" for his incumbency advantage absent observable lobbying; and vice versa for an electorally weak incumbent. We can now characterize equilibrium play of the institutional game.[21]

Proposition 6. *(i) If $Pr(e = I|\tau_I = h, t = r) \geq Pr(e = I|\tau_I = h, t = o)$ then in the unique equilibrium of the institutional game $t^*(h) = t^*(l) = r$ and ensuing equilibrium play is given by Proposition 1.*
(ii) Otherwise, in any equilibrium of the institutional game $t^*(h) = o$ and either (ii.i) $t^*(l) = o$ and equilibrium play is given by Proposition 2 or (ii.ii) $t^*(l) = r$ and a competent (respectively incompetent) I is always (respectively never) re-elected, there exists a unique $\underline{q} \in [p, 1)$ such that lobbying takes place if and only if $q \leq \underline{q}$ with $\pi^*(0|0) = 1, \pi^*(0|1) = \Delta_1$ and $y^*(s^N, \emptyset, r) = s^N$.

Suppose first that a competent incumbent benefits from lobbying transparency. Then, equilibrium play features pooling by both incumbents on introducing lobbying transparency; in turn subsequent equilibrium play is as given in Proposition 1. If the incompetent type deviated to not introducing lobbying transparency, he would obtain a less informative recommendation from L, and would reveal himself to being incompetent, thus forfeiting any chance of re-election.

Suppose instead that a competent incumbent does not benefit from lobbying transparency. Then in any equilibrium, he does not introduce it. In "most cases", for the same reasons as in the first case, it is also optimal for the incompetent incumbent to pool on the competent-type institutional preference and to not introduce lobbying transparency. Then, subsequent equilibrium is as given in Proposition 2.

However, for some parameter values (sufficiently high prior p and precision q, low career-concerns δ), the incompetent incumbent is better off implementing lobbying transparency standards, in so doing revealing his incompetence, and thus forfeiting any chance of re-election. This only occurs when L provides very little information to I absent lobbying transparency. This is only optimal with sufficiently small career-concerns:

[21] To select among *pooling* equilibria I impose an equilibrium refinement in the spirit of the Intuitive Criterion. See Proposition A.8 for details.

then, I focuses on implementing the correct policy by following his signal absent lobbying, and that of L given lobbying.

More generally, lobbying transparency standards are introduced by politicians when it helps them be elected, or when it improves policy-making. They are introduced by electorally strong incumbents who face strong interest groups or by electorally weak incumbents who face weak interest groups.[22] A strong incumbent introduces lobbying transparency standards so as to ensure that the voter knows when lobbying did not happen, so that he may reap the benefits of his electoral advantage. A weak incumbent introduces lobbying transparency standards so as to ensure that the voter sees when lobbying does happen, to limit the damages from his electoral disadvantage.

7 Conclusion

This paper studies how lobbying transparency regulations affect accountability through the strategic interaction between politicians, voters and SIGs. By disclosing (some of) the interactions between politicians and SIGs, lobbying transparency informs voters about why a policy was implemented and allows them to condition their voting on the observation of lobbying. In turn, lobbying transparency helps voters both hold their politicians accountable, and under some conditions, induce SIGs into revealing more information. Interestingly, SIGs need not oppose lobbying transparency. By reducing the informational asymmetry between voters, politicians and SIGs, it helps SIGs avoid excessive blame and thus electoral punishment of the politicians they *do* lobby.

The results also suggest that where high levels of transparency of outcomes are not accessible (or institutionalizable), minimal lobbying transparency standards suffice. However, politicians are in charge of institutional reforms and need not benefit from voters learning about how they choose policies, potentially explaining the unequal implementation of lobbying transparency standards across democracies. Finally, since strong SIGs have a preference for lobbying transparency in this paper's theoretical framework, understanding how and when they may lobby to overcome politicians' resistance and obtain the introduction of lobbying transparency standards may prove fruitful for future work.

[22] As well as, in some particular cases, by politicians who forego their electoral future to make better policy-decisions today.

Bibliography

Alter-Citizens-Project. 2013. "EU citizens opinion survey on transparency, ethics and lobbying in the EU.".

Amodio, Francesco, Fadzayi Chingwere, Jonas Hjort, and Anton Reinicke. 2025. Demand for tariff change: causes and consequences for trade lobbying. Technical report World Institute for Development Economic Research (UNU-WIDER).

Arias Echeverría, Pablo. 2024. "Briefing: EU Legislation in Progress. Making representation of third countries' interests more transparent." European Parliament.

Ashworth, Scott. 2012. "Electoral accountability: Recent theoretical and empirical work." *Annual Review of Political Science* 15: 183–201. Publisher: Annual Reviews.

Baumgartner, Frank R, Jeffrey M Berry, Marie Hojnacki, Beth L Leech, and David C Kimball. 2009. *Lobbying and policy change: Who wins, who loses, and why.* University of Chicago Press.

Blumenthal, Benjamin. 2023. "Political agency and implementation subsidies with imperfect monitoring." *The Journal of Law, Economics, and Organization* 39(3): 775–800.

Brzeziński, Bartosz. 2023. "Conservative backlash kills off EU's Green Deal push to slash pesticide use." Politico.

Canes-Wrone, Brandice, Michael C. Herron, and Kenneth W. Shotts. 2001. "Leadership and pandering: A theory of executive policymaking." *American Journal of Political Science* , 532–550. Publisher: JSTOR.

Coulter, Martin. 2024. "Tech giants push to dilute Europe's AI Act." Reuters.

Data-for Progress, DFP. 2021. "67 Percent of Americans Support H.R.1 For The People Act." Open Secrets.

De Figueiredo, John M, and Brian Kelleher Richter. 2014. "Advancing the empirical research on lobbying." *Annual review of political science* 17(1): 163–185.

De Moragas, Antoni-Italo. 2022. "Disclosing decision makers' private interests." *European Economic Review* 150(C). Publisher: Elsevier.

Fox, Justin. 2007. "Government transparency and policymaking." *Public Choice* 131(1): 23–44.

Fox, Justin, and Richard Van Weelden. 2012. "Costly transparency." *Journal of Public Economics* 96(1): 142–150.

Gallup. 2011. "Gallup, 2011, Americans Decry Power of Lobbyists, Corporations, Banks, Feds.".

Gallup. 2016. "Majority of Americans Dissatisfied With Corporate Influence.".

Grossman, Gene M., and Elhanan Helpman. 1994. Technology and trade. Technical report National Bureau of Economic Research.

Hardoon, Deborah, and Finn Heinrich. 2013. "Transparency International: Global Corruption Barometer.".

Heo, Kun. 2024. "Discretionary Disclosure, Transparency, and Accountability." OSF.

Kergueno, Raphaël. 2021. "Lobby Transparency Across the EU." Transparency International.

Levy, Gilat. 2004. "Anti-herding and strategic consultation." *European Economic Review* 48(3): 503–525. Publisher: Elsevier.

Li, Hanzhe. 2022. "Transparency and policymaking with endogenous information provision." *The RAND Journal of Economics* .

Maskin, Eric, and Jean Tirole. 2004. "The politician and the judge: Accountability in government." *American Economic Review* 94(4): 1034–1054.

McFadden, Alyce. 2021. "The long, costly battle over Obamacare might be over." Open Secrets.

Minaudier, Clement. 2022. "The value of confidential policy information: Persuasion, transparency, and influence." *The Journal of Law, Economics, and Organization* 38(2): 570–612.

Morelli, Massimo, and Richard Van Weelden. 2013. "Ideology and information in policymaking." *Journal of Theoretical Politics* 25(3): 412–439. Publisher: SAGE Publications Sage UK: London, England.

Morris, Stephen. 2001. "Political correctness." *Journal of political Economy* 109(2): 231–265. Publisher: The University of Chicago Press.

OECD. 2021*a*. "Global Initiative to galvanize the private sectors as partners in combatting corruption." Transparency International.

OECD. 2021*b*. *Lobbying in the 21st Century: Transparency, Integrity and Access*. OECD.

Pande, Rohini. 2011. "Can Informed Voters Enforce Better Governance? Experiments in Low-Income Democracies." *Annual Review of Economics* 3(1): 215–237. _eprint: https://doi.org/10.1146/annurev-economics-061109-080154.

Prat, Andrea. 2005. “The wrong kind of transparency.” *American economic review* 95(3): 862–877.

Rainie, Lee, and Andrew Perrin. 2019. “Key findings about Americans’ declining trust in government and each other.”.

Schnakenberg, Keith, Collin Schumock, and Ian Turner. 2023. “Dark Money and Voter Learning.”. Publisher: OSF.

Sloof, Randolph. 1999. “Campaign Contributions and the Desirability of Full Disclosure Laws.” *Economics & Politics* 11(1): 83–107. _eprint: https://onlinelibrary.wiley.com/doi/pdf/10.1111/1468-0343.00054.

Trueman, Brett. 1994. “Analyst Forecasts and Herding Behavior.” *The Review of Financial Studies* 7(1): 97–124. Publisher: [Oxford University Press, Society for Financial Studies].

You, Hye Young. 2023. “Dynamic lobbying: Evidence from foreign lobbying in the U.S. Congress.” *Economics & Politics* 35(2): 445–469.

8 Appendix: Online Publication

The online appendix contains all the proofs of the results presented in the paper, as well as additional results.

Contents

Notation:

- $S_0 \equiv Pr(s^N = 0|\tau_I = l)$, $S_1 \equiv Pr(s^N = 1, \tau_I = l)$
- $\Delta_{s^N} \equiv \frac{1-\mu(s^N)}{\mu(s^N)}$
- $C_1 \equiv \frac{1+\delta(2\rho-1)}{1+\delta}, C_\emptyset = max\{C_1, \frac{p}{1-p}\frac{1-q}{q}\}$
- $v(y, s_v, \varrho) \equiv Pr(e = I|y, s_v, \varrho)$
- "w.p." refers to "with probability". $\tau_I = h$ is referred to as a "high" or "competent" incumbent, $\tau_I = l$ is referred to as a "low" or "incompetent" incumbent.
- $p_l = Pr(y = 0|\tau_I = l, \text{lobbying}), p_{nl} = Pr(y = 0|\tau_I = l, \text{no lobbying})$
- $\gamma_0(\eta) = Pr(y(s^N = 0, s^L = \emptyset) = 1|\varrho = \emptyset)$ and $\gamma_1(\eta) = Pr(y(s^N = 1, s^L = \emptyset) = 1|\varrho = \emptyset)$.

8.1 Preliminary Lemmas

Lemma A.1. *Proof of Lemma 1.*

Proof. (ii) Follows directly from $u_I(y, \omega) = \mathbf{1}_{\{y=\omega\}} + \delta\mathbf{1}_{\{e=I\}}$ and $\delta < 1$. (i) The proof of Lemma 1-(i) is contained in the proof of Lemma A.4. □

Now that the best-response of a competent incumbent is characterized in any equilibrium, $y(s^N, \hat{s}^L, \varrho)$ denote the best-response of an *incompetent* I.

8.2 Baseline Model

8.2.1 Equilibrium Play with Lobbying Transparency

I prove Proposition 1 for any $\rho \in [0, 1]$. That is, a strategy for V is $v(y, s_v, \varrho)$; simply input $\rho = 0, s_v = \emptyset$ to obtain the special case described in Proposition 1.

Lemma A.2. *Let $t = r$ and consider the subgame generated by the observation of no lobbying ($\varrho = n$). There exists a continuum of policy choices equivalent equilibria. In any equilibrium, $v^*(y \neq \omega, n) = 0, v^*(y = \omega, n) = 1$ and there exists a unique $\overline{\rho} \equiv max\{0, \frac{2\mu(0,\emptyset)-1+\delta}{2\delta(1-\mu(0,\emptyset))}\}$ such that*

1. *for all* $\rho \geq \overline{\rho}$*:* $y^*(s^N, \emptyset, n) = s^N \ \forall s^N \in \{0,1\}$ *and* $v^*(1, \emptyset, n) = 1$ *and* $v^*(0, \emptyset, n) = 0$*. Then* $p^*_{nl} = S_0 > 1 - p$*.*

2. *for all* $\rho < \overline{\rho}$ *there exists a unique* $\sigma_0 = 1 - \frac{1-p}{S_0}$ *and a (not necessarily unique)* $\overline{v}$ *such that:* $y^*(1, \emptyset, n) = 1$ *w.p.* 1*,* $v^*(1, \emptyset, n) - v^*(0, \emptyset, n) = \overline{v} \equiv \frac{(1-2\mu(0))(1+\delta\rho)}{\delta(1-\rho)}$*, and*

$$y^*(0, \emptyset, n) = \begin{cases} 1 & w.p. \quad \sigma_0 \in (0, \frac{1}{2}) \\ 0 & w.p. \quad 1 - \sigma_0 \end{cases}$$

Then $p^*_{nl} = 1 - p$*.*

Proof. This proof is a reformulation of Canes-Wrone, Herron, Shotts (2001) Proposition 1 with the simplification that $Pr(\tau_I = h) = \kappa = \gamma = Pr(\tau_C = h)$ and the second-period being replaced by a concern for screening for V. $\overline{\rho}$ is the unique and interior solution to $EU_I[y = 0 | s^N = 0, \varrho = n, v(1, \emptyset, n) = 1, v(0, \emptyset, n) = 0] = EU_I[y = 1 | s^N = 0, \varrho = n, v(1, \emptyset, n) = 1, v(0, \emptyset, n) = 0]$. By definition for any $\rho > \overline{\rho}$, the incumbent strictly prefers to follow his signal. At $\rho = \overline{\rho}$ I assume that he follows his signal w.p. 1. Notice that Assumption (1) ensures that $\overline{\rho}$ is strictly positive. Since $q < 1$, $\theta(y \neq \omega, n) < \theta(0, \emptyset, n) < \kappa < min\{\theta(1, \emptyset, n), \theta(y = \omega, n)\}$ which implies the equilibrium voting rule.

For any $\rho < \overline{\rho}$ the equilibrium is in mixed strategies; in any equilibrium where the voter does not mix we would have $\theta(0, \emptyset, n) < \kappa < \theta(1, \emptyset, n) \implies v(1, \emptyset, n) = 1 > 0 = v(0, \emptyset, n)$ but then a $s^N = 0$ incompetent I has a profitable deviation to $y = 1$ (there are pandering incentives).[23]
A unique $\sigma_0 = 1 - \frac{1-p}{S_0}$ is derived by solving for $\theta(0, \emptyset, n) = \kappa = \theta(1, \emptyset, n)$ while the pairs of $(v^*(0, \emptyset, n), v^*(1, \emptyset, n)$ are obtained by solving for

$$EU_I[0 | s^N = 0, \varrho = n] = EU_I[1 | s^N_1 = 0, \varrho = n]$$
$$\iff v(1, \emptyset, n) - v(0, \emptyset, n) = \frac{(1 + \delta\rho)(1 - 2\mu(0, \emptyset))}{\delta(1 - \rho)} := \overline{v} \in (0, 1)$$

and ensuring that $1 \geq v(1, \emptyset, n) > v(0, \emptyset, n) \geq 0$, which also implies that $Pr(y = 1 | \tau_I = l, s^N = 1) = 1$ in equilibrium. Observe that $\overline{v} \in (0, 1)$ for all $\rho < \overline{\rho}$. Hence equilibrium multiplicity only arises from the way in which V mixes, conditional on the following event: $\varrho = n, y = 0, s_v = \emptyset$. □

Lemma A.3. *Let* $t = r$*. In any equilibrium, (i)* $v(y = \omega, \varrho) = 1$ *and (ii)* $v(y \neq s_v, \varrho) = 0$*.*

[23]No equilibrium with $\theta(0, \emptyset, n) > \kappa > \theta(1, \emptyset, n) \implies v(1, \emptyset, n) = 0 < v(0, \emptyset, n) = 1$ exists. Suppose not: then we have $Pr(y = 0 | \tau_I = l, s^N = 0) = 1$ which contradicts $\theta(0, \emptyset, n) > \kappa$.

Proof. (i) $v(y \neq s_v, \varrho) = 0$ is obvious: competent politicians never make policy-mistakes and there is a strictly positive probability of C being competent.

(ii) If $v(1,1,\varrho) < 1$ we must have $\theta(1,1,\varrho) = \frac{\kappa}{\kappa+(1-\kappa)Pr(y=1|\tau_I=l,\omega=1)} = \kappa$ which implies $Pr(y = 1|\tau_I = l, \omega = 1) = 1$. Notice that if lobbying takes place in equilibrium with strictly positive probability, it has to induce some strictly positive probability of $y = 0$ given that $\omega = 1$ for an incompetent politician (otherwise L could simply not engage in lobbying); a contradiction. If no lobbying takes place in equilibrium, then we know from Lemma A.2 that there always exists a non-zero probability that a $\tau_I = l$ incumbent implements $y = 0$ when $\omega = 1$ (either after an incorrect $s^N = 0$ or after a correct $s^N = 0$ signal but when pandering); a contradiction.

Next suppose that $v(0,0,\varrho) < 1$. Then we must have $\theta(0,0,\varrho) = \frac{\kappa}{\kappa+(1-\kappa)Pr(y=0|\tau_I=l,\omega=0)} = \kappa$ which implies $Pr(y = 0|\tau_I = l, \omega = 0) = 1$. Absent lobbying, there is always a strictly positive probability of $y = 1$ given $s^N = 0$ by an incompetent incumbent (see Lemma A.2). With lobbying, without Assumption 2, V could be indifferent, but then L could always deviate to a "nearby" experiment with $\pi(0|0) = 1 - \epsilon$ for any $\epsilon > 0$. Assumption 2 thus rules out this instability by ensuring that $v(0,0,\varrho) = 1$. □

Lemma A.4. *Let $t = r$. Absent lobbying, equilibrium play for V and I is given by Lemma A.2. Whenever lobbying takes place in equilibrium, $v^*(1,\emptyset,i) = 1, v^*(0,\emptyset,i) = 0$. If lobbying is feasible then, there exists a unique $\overline{q}$ and $\overline{\overline{q}}$ such that $\overline{q} \geq \overline{\overline{q}} \in [p,1]$ such that in any equilibrium*

- *if $\rho \geq \overline{\rho}$ then lobbying takes place with $\boldsymbol{E}_1^* := \{\pi^*(0|0) = 1, \pi^*(0|1) = \Delta_1 C_1\}$ if $q \leq \overline{\overline{q}}$ with $y^*(s^N, s^L, i) = s^L$, and no lobbying takes place otherwise.*
- *if $\rho < \overline{\rho}$ then lobbying always takes place and*
  - *if $q \leq \overline{q}$ then lobbying takes place with $\boldsymbol{E}_1^* := \{\pi^*(0|0) = 1, \pi^*(0|1) = \Delta_1 C_1\}$ and $y^*(s^N, s^L, i) = s^L$,*
  - *otherwise, $\boldsymbol{E}_0^* := \{\pi^*(0|0) = 1, \pi^*(0|1) = min\{\Delta_0 C_1, 1\}\}$ and $y^*(0, s^L, i) = s^L, y^*(1, s^L, i) = 1$*

Proof. There are three "classes" of experiments L may choose from. I consider the two must intuitive ones first. An experiment is misaligned-incentive-compatible - denoted by $\boldsymbol{E} \in \boldsymbol{E}_1$ - if and only if, for some induced posteriors beliefs $\mu(1,0)$ and $\mu(1,1)$

$$EU_I[0|s_1^N = 1, s^L = 0] \geq EU_I[1|s_1^N = 1, s^L = 0] \iff \mu(1,0) \leq \mathcal{C} \iff \pi(0|1) \leq \frac{1-\mu(1,\emptyset)}{\mu(1,\emptyset)} \frac{\mathcal{C}}{1-\mathcal{C}} \pi(0|0) \quad \text{(IC-1.0)}$$

$$EU_I[0|s_1^N = 1, s^L = 1] \leq EU_I[1|s_1^N = 1, s^L = 1] \iff \mu(1,1) \geq \mathcal{C} \iff \pi(1|1) \geq \frac{1-\mu(1,\emptyset)}{\mu(1,\emptyset)} \frac{\mathcal{C}}{1-\mathcal{C}} \pi(1|0) \quad \text{(IC-1.1)}$$

where $\mathcal{C} \equiv \frac{1+\delta[(1-\rho)(v(0,i)-v(1,i))+\rho]}{2(1+\delta\rho)}$. Notice that $\frac{\mathcal{C}|_{v(0,\emptyset,i)=0,v(1,\emptyset,i)=1}}{1-\mathcal{C}|_{v(0,\emptyset,i)=0,v(1,\emptyset,i)=1}} = C_1$.

Similarly an experiment is aligned-incentive-compatible - denoted by $\boldsymbol{E} \in \boldsymbol{E}_0$ - if and only if

$$EU_I[0|s^N = 0, s^L = 0] \geq EU_I[1|s^N = 0, s^L = 0] \iff \mu(0,0) \leq \mathcal{C} \iff \pi(0|1) \leq \frac{1-\mu(0,\emptyset)}{\mu(0,\emptyset)} \frac{\mathcal{C}}{1-\mathcal{C}} \pi(0|0) \quad \text{(IC-0.0)}$$

$$EU_I[0|s^N = 0, s^L = 1] \leq EU_I[1|s^N = 0, s^L = 1] \iff \mu(0,1) \geq \mathcal{C} \iff \pi(1|1) \geq \frac{1-\mu(0,\emptyset)}{\mu(0,\emptyset)} \frac{\mathcal{C}}{1-\mathcal{C}} \pi(1|0) \quad \text{(IC-0.1)}$$

The voters' belief conditional on lobbying and $s_v = \emptyset$ are given by $\theta(0,\emptyset,i) = \frac{\kappa(1-p)}{\kappa(1-p)+(1-\kappa)p_l}, \theta(1,\emptyset,i) = \frac{\kappa p}{\kappa p+(1-\kappa)(1-p_l)}$. Three orderings of the voter's beliefs may be sustained in equilibrium: (abusing notation) (a) $\theta(0) < \kappa < \theta(1)$, (b) $\theta(0) = \kappa = \theta(1)$ and (c) $\theta(0) > \kappa > \theta(1)$. Whenever there is lobbying then (a) must be sustained since lobbying necessitates $p_l > p^*_{nl} \geq 1-p$.

Consider now the third class of experiments. L may want to design an experiment that ensures (i) that any $s^L = 0$ recommendation is incentive-compatible for any type of incumbent and (ii) that an $s^N = 0$ incumbent sticks to following her private signal after $s^L = 1$. These two conditions require

$$(i) \quad \mu(1,0) \leq \mathcal{C} \iff \pi(0|0) \geq \pi(0|1)\Delta_1^{-1}C_1^{-1} \tag{1}$$

$$(ii) \quad \mu(0,1) \leq \mathcal{C} \iff \pi(0|0) \leq \pi(0|1)\Delta_0^{-1}C_1^{-1} \tag{2}$$

which cannot be simultaneously met since $\Delta_1^{-1} > \Delta_0^{-1}$ and $C_1^{-1} > 1$.

Equilibrium experiment. Notice that with lobbying transparency, conditional on lobbying, it is observed and thus $v^*(1,\emptyset,i) = 1, v^*(0,\emptyset,i) = 0$ since $\theta(1,\emptyset,i) > \kappa > \theta(0,\emptyset,i)$ (this follows from $p^*_l > p^*_{nl} \geq 1-p$). Thus we have, conditional on $t = r$ and $\varrho = i$ (abusing notation), $\frac{\mathcal{C}}{1-\mathcal{C}} = C_1$.

If L choose $\boldsymbol{E} \in \boldsymbol{E}_1$, they make (IC-1.0) bind, by setting $\pi^*_1(0|1) = \Delta_1 C_1$ and $\pi^*(0|0)$. Similarly, if L choose $\boldsymbol{E} \in \boldsymbol{E}_0$, then $\pi^*_0(0|1) = min\{1, \Delta_0 C_1\}, \pi^*(0|0) = 1$. I.e. we can write

$$\boldsymbol{E}^*_1 := (\pi^*_1(0|1) = \Delta_1 C_1, \pi^*(0|0) = 1), \quad \boldsymbol{E}^*_0 := (\pi^*_0(0|1) = min\{1, \Delta_0 C_1\}, \pi^*(0|0) = 1) \tag{3}$$

Recall that[24] $p^*_{nl} = \begin{cases} 1-p & \text{if} \quad \rho < \overline{\rho} \\ S_0 & \text{if} \quad \rho \geq \overline{\rho} \end{cases}$.

Case 1: if $\rho \geq \overline{\rho}$ then there exists a unique $\overline{\overline{q}} \in [p,1]$ such that $p_l(\boldsymbol{E}^*_1) \geq S_0 \iff q \leq \overline{\overline{q}}$. Lobbying with $\boldsymbol{E}^*_1$

[24] Restrict attention to the behavior of a low-type incumbent since a high-type's behavior is unaffected by lobbying.

is optimal iff

$$p_l(\boldsymbol{E}_1^*) \equiv (1-p) + pC_1 \frac{1-p}{p}\frac{1-q}{q} \geq p(1-q) + (1-p)q = S_0 = p_{nl} \tag{4}$$

Notice that

$$\frac{\partial LHS(4)}{\partial q} = \frac{-(1-p)C_1}{q^2} < 1-2p = \frac{\partial RHS(4)}{\partial q} \iff 2p < \frac{(1-p)C_1}{q^2} + 1 \tag{5}$$

Note that (4) holds with equality at $q = 1$.

Claim 1: for any $q \in [p, 1)$, there exists at most a unique $\overline{\overline{q}} \in [p, 1)$ such that (4) holds with equality. Since (i) (4) holds with equality at $q = 1$ (and both the RHS(4) and LHS(4) are continuous in q), (ii) the LHS of (4) decreases and is convex in q while the RHS decreases linearly in q and (iii) the sign of $\frac{\partial LHS(4)}{\partial q} - \frac{\partial RHS(4)}{\partial q}$ changes at most once, there cannot exist more than a single solution to (4) in the $[p, 1)$ interval.

Claim 2: there exists a unique $\overline{\overline{q}} \in [p, 1]$ such that $p_l(\boldsymbol{E}_1^*) \geq S_0 \iff q \leq \overline{\overline{q}}$. There are two cases to consider. If at $p = q$, (4) holds strictly then $\overline{\overline{q}} \in (p, 1]$; indeed, either $p_l(\boldsymbol{E}_1^*) > S_0 \forall q \in [p, 1)$ and then $\overline{\overline{q}} = 1$, or, if not, there exists a unique $\overline{\overline{q}} \in [p, 1)$ (since there cannot be multiple ones). If at $p = q$, (4) holds with equality or strictly does not hold, then $\overline{\overline{q}} = p$.

Case 2: if $\rho < \overline{p}$ then there exists a unique $\overline{q} \in [\overline{\overline{q}}, 1]$ s.t. $p_l(\boldsymbol{E}_1^*) \geq p_l(\boldsymbol{E}_0^*) \iff q \leq \overline{q}$. Notice that there exists a unique $\tilde{q} = \frac{C_1^{-1}\frac{p}{1-p}}{C_1^{-1}\frac{p}{1-p}+1}$ s.t $\Delta_0 C_1 = 1 \forall q \geq \tilde{q}$. In turn, $p_l(\boldsymbol{E}_0^*)$ increases in q iff $q \leq \tilde{q}$ and $p_l(\boldsymbol{E}_0^*) = S_0 \forall q \geq \tilde{q}$ (which decreases in q). The proof then follows that from Case 1. If $\overline{\overline{q}} \geq \tilde{q}$ then $\overline{q} = \overline{\overline{q}}$. Otherwise $\overline{q} \in (\overline{\overline{q}}, \tilde{q}]$ because $S_0 > p_l(\boldsymbol{E}_0^*)$.

□

Note: Lemma A.2, A.3 and A.4 jointly provide the proof of Proposition 1 and all of Proposition 3 except for the part with $t = o$, for which we provide the proof below.

Notation: let $\boldsymbol{E}^r$ denotes L's equilibrium strategy in the game with $t = r$: i.e. $\boldsymbol{E}^r \in \{\boldsymbol{E}_1^*, \boldsymbol{E}_0^*, \emptyset\}$ where $\boldsymbol{E}^r = \emptyset$ is used to denote situations where it is optimal for L not to engage in lobbying. $\boldsymbol{E}^o$ denotes L's equilibrium strategy when $t = o$.

8.2.2 Equilibrium Play Without Lobbying Transparency

Recall that $C_\emptyset = max\{\frac{p}{1-p}\frac{1-q}{q}, C_1\}$.

Proposition A.1. *Let $t = o$ such that $\varrho = \emptyset$. There exists a continuum of policy and experiment equivalent equilibria. In any equilibrium, $v^*(y = \omega, \emptyset) = 1, v^*(y \neq \omega, \emptyset) = 0$ and, whenever lobbying takes place,*

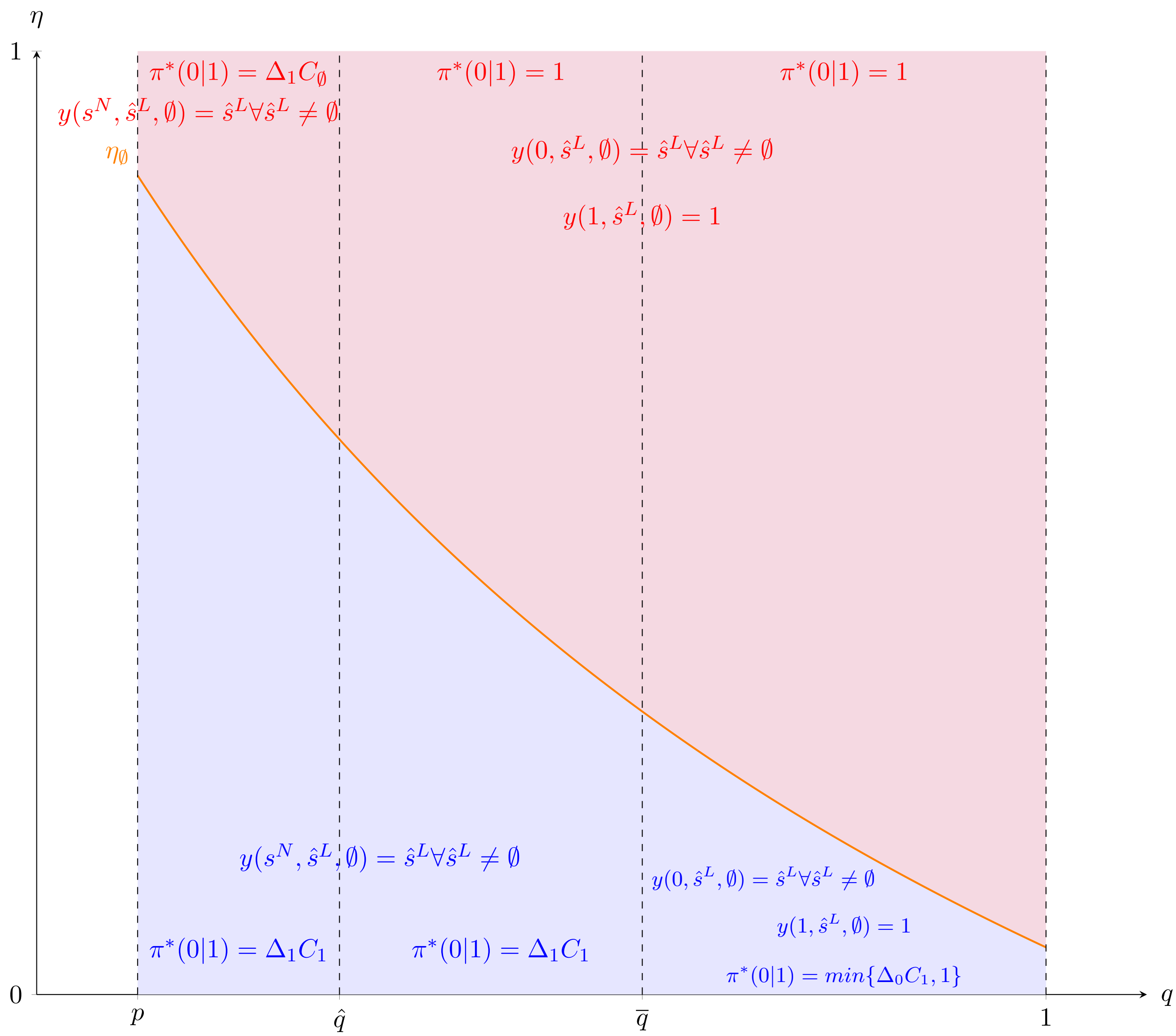

Figure 3: Illustration of equilibrium play in the baseline game with $t = o$. In any region $\pi^*(0|0) = 1, Pr(y = s^N|\tau_I = h) = 1$. In the shaded blue region, $v^*(1, \emptyset) = 1, v^*(0, \emptyset) = 0$ and $\gamma_0^*(\eta) = 1$. In the shaded red region, $v^*(1, \emptyset) - v^*(0, \emptyset) = \overline{v} \in (0, 1)$ and $\gamma_0^*(\eta) \in (\sigma_0, 1]$

$\pi^*(0|0) = 1$.

If $\rho \geq \overline{\rho}$ *then* $v^*(1,\emptyset,\emptyset) = 1, v^*(0,\emptyset,\emptyset) = 0$, $y^*(s^N, s^L \neq \emptyset) = s^L$ *w.p. 1,* $y^*(s^N,\emptyset) = s^N$ *and lobbying takes place with* $\boldsymbol{E}_1^* := \{\pi^*(0|1) = \Delta_1 C_1\}$ *if* $q \leq \overline{\overline{q}}$ *and no lobbying takes place otherwise.*

If $\rho < \overline{\rho}$ *then lobbying always takes place and there exists a unique* $\hat{q} \in (p, \overline{q}]$ *such that*

1. *If* $q \leq \hat{q}$ *then* $y^*(s^N, s^L) = s^L \forall s^N \in \{0,1\}$*. There exists a unique* $\eta_\emptyset(1) \in (0,1)$ *such that if* $\eta \leq \eta_\emptyset(1)$ *then* $v^*(1,\emptyset,\emptyset) = 1, v^*(0,\emptyset,\emptyset) = 0, \pi^*(0|1) = \Delta_1 C_1, \gamma_1^* = 1, \gamma_0^*(\eta) = 1$ *and otherwise* $v^*(1,\emptyset,\emptyset) - v^*(0,\emptyset,\emptyset) = \overline{v}, \pi^*(0|1) = \Delta_1 C_\emptyset, \gamma_1^* = 1, \gamma_0^*(\eta) = min\{1, 1 - \frac{1-p}{\eta S_0} + \frac{1-\eta}{\eta}\frac{(1-p)(1+\frac{1-q}{q}C_\emptyset)}{S_0}\}$.

2. *If* $q \in (\hat{q}, \overline{q})$*, then there exists a unique* $\eta_\emptyset(1,0)$ *such if* $\eta \leq \eta_\emptyset(1,0)$ *then* $v^*(1,\emptyset,\emptyset) = 1, v^*(0,\emptyset,\emptyset) = 0, \pi^*(0|1) = \Delta_1 C_1, y^*(s^N, s^L) = s^L \forall s^N \in \{0,1\}, \gamma_1^* = 1, \gamma_0^*(\eta) = 1$ *and otherwise* $v^*(1,\emptyset,\emptyset) - v^*(0,\emptyset,\emptyset) = \overline{v}, \pi^*(0|1) = 1$, $y^*(0, s^L) = s^L, y^*(1, s^L) = 1, \gamma_1^* = 1, \gamma_0^*(\eta) = min\{1, 1 - \frac{1-p}{\eta S_0} + \frac{1-\eta}{\eta}\}$.

3. *If* $q \geq \overline{q}$*, then* $y^*(0, s^L) = s^L, y^*(1, s^L) = 1$*. There exists a unique* $\eta_\emptyset(0)$ *such that if* $\eta \leq \eta_\emptyset(0)$ *then* $v^*(1,\emptyset,\emptyset) = 1, v^*(0,\emptyset,\emptyset) = 0, \pi^*(0|1) = min\{\Delta_0 C_1, 1\}, \gamma_1^* = 1, \gamma_0^*(\eta) = 1$ *and otherwise* $v^*(1,\emptyset,\emptyset) - v^*(0,\emptyset,\emptyset) = \overline{v}, \pi^*(0|1) = 1$, $\gamma_1^* = 1, \gamma_0^*(\eta) = min\{1, 1 - \frac{1-p}{\eta S_0} + \frac{1-\eta}{\eta}\}$.

Proof. Case 1: $\rho \geq \overline{\rho}$*.* Then notice that by Lemma A.2, $y^*(s^N,\emptyset,\emptyset) = s^N$ which implies that $p_{nl}^* = S_0$. In turn irrespective of whether lobbying does take place, $\theta(0,\emptyset,\emptyset) < \kappa < \theta(1,\emptyset,\emptyset)$ which implies the voter's equilibrium re-election rule. This then implies that the lobby faces the same problem as when $t = r, \varrho \in \{i, n\}$ which implies its equilibrium lobbying strategy.

Case 2: $\rho < \overline{\rho}$*.* First, we note that for any strategy for L, since both V and I have finite action sets (and there are a finite number of stages), there exists an equilibrium.

Then, we show that given some equilibrium, L has an almost everywhere unique best-response. Note that, in equilibrium, there can only exist three orderings of the voter's beliefs after $s_v = \emptyset$. The proof then proceeds in four steps.

1. Fix a belief ordering and in turn derive the best response of the voter when not observing ω: $\{v^*(0,\emptyset,\emptyset), v^*(1,\emptyset,\emptyset)\}$[25]

2. Given 1 find the best-response of each type of incumbent both when lobbying does occur and does not occur, i.e, p_{nl}^*,

3. Given 1 and 2 find the best-response of L, that is whether to engage in lobbying, and if so, how; this yields p_l^*,

[25] The best-response of V when observing ω will be straightforwardly characterized; see below.

4. Given 1, 2 and 3 check that the assumed beliefs ordering is indeed sustained.

Ruling out Equilibria with $\theta(1,\emptyset,\emptyset) < \kappa < \theta(0,\emptyset,\emptyset)$. This would require $\eta p_{nl} + (1-\eta)p_l < 1-p$. Notice that $p_l \geq p_{nl}$ in equilibrium. Further, $p_{nl} \geq S_0 > 1-p$ here since the belief ordering implies $v(0,\emptyset,\emptyset) = 1, v(1,\emptyset,\emptyset) = 0$. I.e. $p_l \geq p_{nl} > 1-p$; a contradiction.

For any other equilibria, we have $\theta(1,1,\emptyset) > \kappa > \theta(y \neq \omega, \varrho) = 0$ which implies $v^*(1,1,\emptyset) = 1 > v^*(y \neq \omega, \emptyset) = 0$. The $y \neq \omega$ case is trivial. For $y = \omega = 1$ observe that $Pr(y = 1|\omega = 1, \tau_I = l) < 1$ since $p_l > 1-p \implies 1-p_l < p < 1$ which implies $\theta(1,1,\emptyset) > \kappa$.

Equilibria with $\theta(0,\emptyset,\emptyset) < \kappa < \theta(1,\emptyset,\emptyset) \iff \eta < \frac{p_l-(1-p)}{p_l}$. In any such equilibrium, $v^*(0,\emptyset,\emptyset) = 0, v^*(1,\emptyset,\emptyset) = 1$. This implies (i) that $\gamma_0^* = \gamma_1^* = 1$ (which then implies that $\theta(0,0,\emptyset) > \kappa$ and thus $v^*(0,0,\emptyset) = 1$) and (ii) $\boldsymbol{E}^o = \boldsymbol{E}^r$.

Equilibria with $\theta(0,\emptyset,\emptyset) = \kappa = \theta(1,\emptyset,\emptyset)$. This requires $\eta p_{nl} + (1-\eta)p_l = 1-p$. Denote $\overline{v}(\eta) = Pr(e = I|y = 1,\emptyset,\emptyset) - Pr(e = I|y = 0,\emptyset,\emptyset) \in [-1,1]$. Notice that in any such equilibrium $\overline{v}(\eta) \geq 0$; suppose not. By $\overline{v}(\eta) < 0$ we have $\gamma_0 = 1$ and thus $p_{nl} \geq S_0 \implies p_l \geq S_0$ and thus $\theta(0,\emptyset,\emptyset) < \kappa$, a contradiction. Thus we have $\overline{v}(\eta) \geq 0$ which then implies that $\gamma_1^* = 1$. Next, notice that this also implies that $\theta(0,0,\emptyset) > \kappa \implies v^*(0,0,\emptyset) = 1$:

$$\theta(0,0,\emptyset) > \kappa \iff Pr(y = 0|\omega = 0, \tau_I = l) = \eta[q(1-\gamma_0(\eta)) + (1-q)(1-\gamma_1(\eta))] + (1-\eta)p_l < 1$$

which follows from $\gamma_1(\eta)) = \gamma_1^* = 1$.

Such an equilibrium exists iff

$$\eta = \frac{p_l - (1-p)}{p_l - S_0(1-\gamma_0)} \iff \gamma_0(\eta) = min\{1, 1 - \frac{1-p}{\eta S_0} + \frac{1-\eta}{\eta}\frac{p_l}{S_0}\} \tag{6}$$

Notice that $\gamma_0(\eta)$ decreases in η and $\gamma_0(\eta) \leq 1 \iff \eta \geq \frac{p_l}{1-p+p_l} \iff \eta \geq \frac{p_l-(1-p)}{p_l}$; further, $\gamma_0(\eta) > \sigma_0$. I.e., this class of equilibria exists whenever the other does not. We then need to have $\overline{v}(\eta) = \overline{v}$ such that $\gamma_0(\eta) \in (0,1)$.[26] This then implies that $p_l(\boldsymbol{E}_0^o) = S_0$ while with $\boldsymbol{E}_1^o$ we have $\pi^o(0|1) = \Delta_1 C_\emptyset$ where $C_\emptyset = max\{\frac{1+\delta\rho-\delta(1-\rho)\overline{v}}{1+\delta\rho+\delta(1-\rho)\overline{v}} = \frac{p}{1-p}\frac{1-q}{q}, C_1\}$ and thus $p_l(\boldsymbol{E}_1^o) \geq p_l(\boldsymbol{E}_1^*)$. Further, note that $\frac{p}{1-p}\frac{1-q}{q} \geq C_1 \iff q \leq \tilde{q} = \frac{\frac{p}{1-p}}{\frac{p}{1-p}+C_1} \in (p,1)$ (recall that $C_1 = \frac{1+\delta(2\rho-1)}{1+\delta}$).

Note that since $p_l(\boldsymbol{E}_0^o) = S_0 > p_{nl} = 1-p$, lobbying always takes place.

[26] Notice that while $\overline{v}$ increases in q, $\overline{v} < 1 \forall q \in (p,1)$ follows from the assumption that $\overline{\rho} > 0 \iff 2\mu(0) > 1-\delta$. Absent this assumption, we do not have to consider the case of $\rho \leq \overline{\rho}$.

Next, there exists a unique $\hat{q} \in [p, \overline{q}]$ such that, $p_l(\boldsymbol{E}_0^o) = S_0 > p_l(\boldsymbol{E}_1^o) \iff q > \hat{q}$. $p_l(\boldsymbol{E}_0^o) = S_0$ decreases linearly in q while $p_l(\boldsymbol{E}_1^o)$ is continuous, decreasing and convex in q (same argument as for the proof of existence and uniqueness of $\overline{q}$ in Lemma A.4).

Claim: $\hat{q} \leq \overline{q}$. Recall that $p_l(\boldsymbol{E}_0^*) = S_0 \iff \frac{1-p}{p}\frac{q}{1-q}C_1 > 1 \iff q > \tilde{q}$. Suppose by contradiction that $\hat{q} > \overline{q}$. First, suppose first that $\overline{q} < \tilde{q}$. Given that $\pi_1^o(0|1) = (\frac{1-q}{q})^2$, then, at $q = \hat{q}$ we must have

$$S_0 = p_l(\boldsymbol{E}_1^o) \iff S_0 - p[\frac{1-q}{q}]^2 = 1 - p \tag{7}$$

which we can use along with the additional requirement that at $q = \hat{q}$

$$p_l(\boldsymbol{E}_0^*) > p_l(\boldsymbol{E}_1^*) \iff (1-p)q + (1-p)qC_1 > \underbrace{S_0 - p[\frac{1-q}{q}]^2}_{=1-p} + p\frac{(1-p)}{p}\frac{1-q}{q}C_1$$

$$\iff (1-p)C_1\frac{q^2-(1-q)}{q} > p(1-q)\frac{q^2-(1-q)}{q^2} \iff \frac{1-p}{p}\frac{q}{1-q}C_1 > 1$$

However we know that by $q < \tilde{q}$ we have $p_l(\boldsymbol{E}_0^*) < S_0 \iff \frac{1-p}{p}\frac{q}{1-q}C_1 < 1$, leading to a contradiction.

Suppose instead that $\overline{q} > \tilde{q}$. *Observation 1:* for any $\overline{q} > \tilde{q}$, we must have, at $q = \overline{q}$, $p_l(\boldsymbol{E}_1^o) > S_0$. Using the fact that $\pi_1^o(0|1) = (\frac{1-q}{q})^2$, we must have, if $\overline{q} < \hat{q}$

$$S_0 < (1-p) + p(\frac{1-q}{q})^2 \iff p < 1 - p + p\frac{1-q}{q^2} \iff \frac{2p-1}{p} < \frac{1-q}{q^2} \tag{8}$$

Observation 2: By $q > \tilde{q}$, we have at $q = \overline{q}, p_l(\boldsymbol{E}_0^*) = S_0 \iff C_1 > \frac{1-q}{q}\frac{p}{1-p}$.
Observation 3: at $q = \overline{q}$ we also have $p_l(\boldsymbol{E}_1^*) = S_0 \iff (1-p) + p\Delta_1 C_1 = S_0 \iff C_1 = \frac{2p-1}{1-p}q$.
Thus, if we can show that $\frac{1-q}{q}\frac{p}{1-p} > \frac{2p-1}{1-p}q$ then we have a contradiction. Note that

$$\frac{1-q}{q}\frac{p}{1-p} > \frac{2p-1}{1-p}q \iff \frac{p}{2p-1} > \frac{q^2}{1-q} \iff \frac{2p-1}{p} < \frac{1-q}{q^2} \tag{9}$$

I.e., whenever $\overline{q} < \hat{q}$ such that (8) holds, then we have a contradiction, since (9) holds. Thus we have shown that $\hat{q} \leq \overline{q}$.

Further, if $\overline{q} = \tilde{q}$, then $\hat{q} = \overline{q}$. Suppose not; then we have $\hat{q} < \overline{q}$, but then notice that for $q \in [\hat{q}, \tilde{q} = \overline{q}]$, we would have $p_l(\boldsymbol{E}_0^o) > p_l(\boldsymbol{E}_1^o)$. However, notice that we have, instead for $q \in [\hat{q}, \tilde{q} = \overline{q}]$: $p_l(\boldsymbol{E}_1^o) > p_l(\boldsymbol{E}_1^*) \geq S_0 \geq p_l(\boldsymbol{E}_0^o)$; a contradiction.

To fully characterize equilibrium behavior, we must show that, given some q, there exists a unique cutoff $\eta_{\emptyset} \in (0,1)$ such that $\gamma_0(\eta) < 1 \iff \eta > \eta_{\emptyset}$ (and the unique equilibrium features $\theta(0,\emptyset,\emptyset) = \kappa$) and $\gamma_0(\eta) = 1$ otherwise (and the unique equilibrium features $\theta(0,\emptyset,\emptyset) < \kappa$). First, notice that given such a unique $\eta_{\emptyset} \in (0,1)$, there exists a unique equilibrium with $\theta(0,\emptyset,\emptyset) < \kappa$ for any $\eta < \eta_1$ and a unique $\theta(0,\emptyset,\emptyset) = \kappa$ equilibrium for any $\eta \geq \eta_1$. Further, this cutoff is given by $\eta_{\emptyset} = \frac{p_l-(1-p)}{p_l} \in (0,1)$. That is, at least one such cutoff exists.

Second, suppose now by contradiction that there exists two cutoffs $\underline{\eta} < \overline{\eta}$ such that $\gamma_0(\eta) < 1$ if $\eta > \overline{\eta}$ (and the unique equilibrium features $\theta(0,\emptyset,\emptyset) = \kappa$), $\gamma_0(\eta) = 1$ if $\eta < \underline{\eta}$ (and the unique equilibrium features $\theta(0,\emptyset,\emptyset) < \kappa$), and some other equilibrium behavior for any $\eta \in [\underline{\eta}, \overline{\eta}]$. Over this non-empty $[\underline{\eta}, \overline{\eta}]$ interval, it cannot be the case that $\gamma_0(\eta)$ decreases, for then at $\overline{\eta}$ we reach a contradiction, since $\gamma_0(\eta|\eta = \overline{\eta}) = 1$. By the same logic it cannot be the case that γ is constant at some $\gamma' \neq 1$. Further, $\gamma_0(\eta)$ cannot increase since $\gamma_0(\eta) \leq 1$. Thus there exists such a unique $\eta_{\emptyset}$. Then, for each case of the proposition (in terms of q), such a unique cutoff on η exists. Finally, notice that each $\eta_{\emptyset} = \frac{p_l-(1-p)}{p_l}$ cutoff is continuous and decreasing in q. To see this, consider $q \leq \hat{q}$. Then we find $\eta_{\emptyset}(1)$ by solving for $\eta * 0 + (1-\eta_{\emptyset}(1))p_l(\boldsymbol{E}_1^*) = (1-p)$. Since $p_l(\boldsymbol{E}_1^*)$ decreases in q, $\eta_{\emptyset}(1)$ decreases in q. Similarly we find $\eta_{\emptyset}(1,0)$ by solving for $\eta * 0 + (1-\eta_{\emptyset}(1))p_l(\boldsymbol{E}_1^*) = (1-p)$ (for $q \in (\hat{q}, \overline{q})$) and for $\eta_{\emptyset}(1,0)$ by solving for $\eta * 0 + (1-\eta_{\emptyset}(1))p_l(\boldsymbol{E}_0^*) = (1-p)$ (for $q \geq \overline{q}$]). This also implies continuity: obviously at $q = \hat{q}$, and by recalling that at $q = \overline{q}$, $p_l(\boldsymbol{E}_0^*) = p_l(\boldsymbol{E}_1^*)$.[27]

□

8.2.3 Quality Of Lobbying

Lemma A.5. *The quality of lobbying is highest when the SIG targets a $s^N = 1$ incumbent: $Pr(y = \omega|\boldsymbol{E}_1, \varrho) > Pr(y = \omega|\boldsymbol{E}_0, \varrho)$.*

Proof. We need only consider $\rho < \overline{\rho}$ since for $\rho > \overline{\rho}$ the SIG never targets a $s^N = 0$ incumbent. $Pr(y = \omega|\boldsymbol{E}_1) > Pr(y = \omega|\boldsymbol{E}_0)$ obviously holds when an aligned incumbent is indifferent between following her signal and not, that is, when in equilibrium $v(1,\emptyset,\varrho) - v(0,\emptyset,\varrho) = \bar{v}$, since that implies that L's experiment reveals no information if $s^N = 0$ is targeted.

Instead suppose that $v(0,\emptyset,\varrho) = 0, v(1,\emptyset,\varrho) = 1$ and $\Delta_0 \frac{\mathcal{C}}{1-\mathcal{C}} < 1$ (otherwise we are back in the previous case). Notice that in any equilibrium experiment, $\pi(0|0) = 1$. Given some beliefs ordering and thus voting rule $\tilde{v} = v(1,\emptyset,\varrho) - v(0,\emptyset,\varrho) \in [\overline{v}, 1]$(notice that this is more general than need be); denote $C(\tilde{v}) :=$

[27]We could also find these $\eta_{\emptyset}$ equilibrium cutoffs by solving for $\eta_{\emptyset} S_0(1-\gamma_0(\eta)) + (1-\eta_{\emptyset})p_l = (1-p)$.

$\frac{\mathcal{C}}{1-\mathcal{C}}|_{v(1,\emptyset,\varrho)-v(0,\emptyset,\varrho)=\tilde{v}}$. Then (IC-1.0) requires $\pi(0|1) \leq \Delta_1 C(\tilde{v})$ and (IC-0.0) requires $\pi(0|1) \leq \Delta_0 C(\tilde{v})$. Note that by $\tilde{v} \in [\overline{v}, 1]$, we have $C(\tilde{v}) \in (0, 1)$.

Then, $Pr(y = \omega|\boldsymbol{E}_1, \varrho) > Pr(y = \omega|\boldsymbol{E}_0, \varrho) \iff pC(\tilde{v})(\Delta_1 - (1-q)\Delta_0) < (1-p)(1-q)$. Notice that $\Delta_1 - (1-q)\Delta_0 < \Delta_1 - (1-q)\Delta_1 = \Delta_1 q$ thus it suffices to show that $pC(\tilde{v})\Delta_1 q < (1-p)(1-q)$ which holds by $C(\tilde{v}) < 1$. □

8.3 Institutional Design

Proposition A.2. *(i) For any $\rho \in (0, \overline{\rho})$, $P(t = r, \rho)$ strictly decreases in ρ and $P(t = o, \rho)$ weakly decreases in ρ. (ii) $P(t = r, \rho = 0) > P(t = o, \rho = 0)$, (iii) If $q \in (p, \overline{\overline{q}}) \cup [\tilde{q}, 1)$ or $(1-p)C_1[p + (1-p)C_1] \geq p(2p-1)$ then $P(t, \rho \geq \overline{\rho}) > P(t = r, \rho = 0) > P(t = o, \rho = 0)$.*

Proof. I first define some important quantities. The probability of a mistake by an incompetent politician absent lobbying is given by $Pr(y \neq \omega|t = r, c = c_h) = \sigma_0[q-p] + (1-q) \equiv m(\sigma_0)$ with lobbying transparency and without lobbying transparency $Pr(y \neq \omega|t = o, \text{no lobbying}, \gamma_0^*(\eta)) = \gamma_0^*(\eta)(q-p) + (1-q) \equiv m(\gamma_0^*(\eta))$. Observe that $m(\sigma_0) - m(\gamma_0^*(\eta)) = (q-p)(\sigma_0 - \gamma_0^*(\eta)) < 0$. Next, the likelihood of a policy-mistake given lobbying with lobbying transparency $Pr(y \neq \omega|\boldsymbol{E}_1^*, t = r, \varrho = i) = p\Delta_1 C_1 \equiv m(\boldsymbol{E}_1^*)$ and $Pr(y \neq \omega|\boldsymbol{E}_0^*, t = r, \varrho = i) = (1-p)(1-q) + p(1-q)\Delta_0 C_1 \equiv m(\boldsymbol{E}_0^*)$.

Without lobbying transparency $Pr(y \neq \omega|\boldsymbol{E}_1^o, t = o, \hat{s}^L \neq \emptyset) = p\pi_1^o(0|1) \equiv m(\boldsymbol{E}_1^o)$ where $\pi_1^o(0|1) \in \{\Delta_1 C_1, \Delta_1(\frac{1-q}{q})^2\}$ and $Pr(y \neq \omega|\boldsymbol{E}_0^o, t = o, \hat{s}^L \neq \emptyset) = 1 - q \equiv m(\boldsymbol{E}_0^o)$. Note that $m(\sigma_0) > p\pi_1(0|1)$: an incompetent incumbent makes more mistakes without lobbying, conditional on lobbying transparency.

First observe that the ex-ante likelihood of $y = \omega$ (weakly) decreases in the level of transparency of consequences ρ, for sufficiently low ρ.

$$\frac{\partial P(t = r, \rho \leq \overline{\rho})}{\partial \rho} \propto -\frac{\partial C_1}{\partial \rho} < 0$$

$$\frac{\partial P(t = o, \rho \leq \overline{\rho})}{\partial \rho} \propto \begin{cases} -\frac{\partial C_1}{\partial \rho} & \text{if} \quad \pi^o(0|1) = \Delta_1 C_1 \\ 0 & \text{otherwise} \end{cases} \leq 0$$

Next observe that

$$P(t=r,\rho=0)=1-\eta(1-q+\sigma_0(q-p))-(1-\eta)Pr(y\neq\omega|\text{lobbying},t=r,\rho=0)>$$
$$P(t=o,\rho=0)=1-\eta(1-q+\gamma_0^*(\eta)(q-p))-(1-\eta)Pr(y\neq\omega|\text{lobbying},t=o,\rho=0)$$

This follows directly from $\gamma_0^*(\eta)>\sigma_0$ and the fact that $Pr(y\neq\omega|\text{lobbying},\ t=o)\geq Pr(y\neq\omega|\text{lobbying},\ t=r)$ (see Proposition A.1).

Next, we aim to compare $P(t=r,\rho=0)$ with $P(t,\rho\geq\overline{\rho})$. There are two cases to consider.

1. $q\leq\overline{\overline{q}}$: lobbying always takes place, whenever feasible. In turn we have

$$\begin{aligned}P(t,\rho\geq\overline{\rho})=&1-\eta(1-q)-(1-\eta)Pr(y\neq\omega|\text{lobbying},t,\rho\geq\overline{\rho})>\\&1-\eta(1-q+\sigma_0(q-p))-(1-\eta)Pr(y\neq\omega|\text{lobbying},t=r,\rho=0)=P(t=r,\rho=0)\end{aligned}$$

   because $Pr(y\neq\omega|\text{lobbying},t,\rho\geq\overline{\rho})=Pr(y\neq\omega|\text{lobbying},t=r,\rho<\overline{\rho})$ (since the voter votes (in equilibrium) as if she knew lobbying always took place when $\rho\geq\overline{\rho}$).

2. $q>\overline{\overline{q}}$. Here, with $\rho>\overline{\rho}$, no lobbying takes place. (2.i) If $\overline{\overline{q}}\geq\tilde{q}\implies p_l(\boldsymbol{E}_0^*)=S^0\ \forall q\geq\tilde{q}$, then we can show that

$$\begin{aligned}P(t,\rho\geq\overline{\rho})=1-(1-q)=q>1-\eta(1-q+\sigma_0(q-p))-(1-\eta)(1-q)=P(t=r,\rho=0)\\\iff\eta\sigma_0(q-p)>0\end{aligned}$$

   (2.ii) If, instead $\overline{\overline{q}}<\tilde{q}\implies p_l(\boldsymbol{E}^*0)<S_0\ \forall q<\tilde{q}$ then for any $q\in[\overline{\overline{q}},\overline{q}]$, lobbying takes place with $\boldsymbol{E}_1^*$ if $\rho=0,t=r$ and no lobbying takes place if $\rho\geq\overline{\rho}$. Next note that in such a case, we must have $S_0\geq p_l(\boldsymbol{E}_1^*)\geq p_l(\boldsymbol{E}_0^*)\forall q\in[\overline{\overline{q}},\overline{q}]$. Notice that

$$\begin{aligned}S_0\geq p_l(\boldsymbol{E}_1^*)&\iff(1-p)(1-q)+p\Delta_1C_1\leq p(1-q)\\&\iff(1-p)+\frac{1-p}{q}C_1\leq p\\&\iff\frac{1-p}{2p-1}C_1\leq q\end{aligned}\qquad\text{(NEC-1)}$$

We study

$$P(t, \rho \geq \overline{\rho}) = q > 1 - \eta(1 - q + \sigma_0(q-p)) - (1-\eta)p\Delta_1 C_1 = P(t = r, \rho = 0)$$

$$\iff \eta\sigma_0(q-p) + (1-\eta)p\Delta_1 C_1 > (1-\eta)(1-q)$$

Observe that $p\Delta_1 C_1 > (1-q) \iff (1-p)C_1 > q$. Since we have from (NEC-1) $\frac{1-p}{2p-1}C_1 \leq q$, we must have $(1-p)C_1 > \frac{1-p}{2p-1}C_1$ (which can never hold), and thus $p\Delta_1 C_1 < (1-q)$. This implies that $\lim_{\eta\to 0} \eta\sigma_0(q-p) + (1-\eta)p\Delta_1 C_1 < \lim_{\eta \to 0}(1-\eta)(1-q)$. I.e. there exists (q, η) values such that $P(t, \rho \geq \overline{\rho}) < P(t = r, \rho = 0)$, provided that $q \in [\overline{\overline{q}}, \overline{q}] \cap q < \tilde{q}$.[28]

□

Corollary A.1. *$Pr(y = 0|\rho, t)$ weakly increases in ρ.*

Proof. σ_0, $\gamma_0^*(\eta)$ and $\gamma_1^*(\eta)$ are independent of ρ while $\pi^*(0|1)$ increases weakly in ρ. □

8.3.1 LT reveals s^L

Suppose $\rho < \overline{\rho}$. We still denote $t \in \{o, r\}$ but now we have $\varrho \in \{s^L, n\}$ with $t = r$ and $\varrho = \emptyset$ with $t = o$.

Proposition A.3. *If $t = o$ then equilibrium play is given by Proposition A.1. If $t = r$ then equilibrium play is given by Lemma A.2 given $\varrho = n$ and Lemma A.4 given $\varrho = s^L$.*

Proof. Game with $t = o$. With $t = o$ the game is unchanged relative to the baseline since the voter never gets to observe whether $y \neq s^L$.

Game with $t = r$. Suppose $\rho < \overline{\rho}$. If $\varrho = n$ such that no lobbying took place, then equilibrium play is unchanged relative to the baseline game.

Let $\boldsymbol{E}^*$ denote the equilibrium experiment of L. If $\varrho = s^L$, then note that $Pr(y = 1 = s^L|\boldsymbol{E}^*) > p$ conditional on lobbying ever taking place and recall that $S_1 < p$. Equilibrium beliefs conditional on

[28] Notice that this further requires that $\overline{\overline{q}} = \frac{1-p}{2p-1}C_1 < \tilde{q} \iff p(1-p)C_1 + (1-p)^2 C_1^2 < p(2p-1)$ which holds for sufficiently low p.

lobbying are given by

$$
\begin{aligned}
\theta(y \neq s_v, \cdot) &= 0 < \kappa \\
\theta(0,0,0) &= \frac{\kappa}{\kappa + (1-\kappa)Pr(y = s^L = 0|\omega = 0, \boldsymbol{E}^*)} \geq \kappa \\
\theta(1,1,1) > \theta(1,\emptyset,1) &= \frac{p\kappa}{p\kappa + (1-\kappa)Pr(y = 1 = s^L|\boldsymbol{E}^*)} > \kappa \\
\theta(1,s_v,0) &= \frac{p\kappa}{p\kappa + (1-\kappa)\underbrace{Pr(y=1, s^L = 0|\boldsymbol{E}^*)}_{\in\{0,S_1\}<p}} > \kappa \\
\theta(0,\emptyset,0) &= \frac{(1-p)\kappa}{(1-p)\kappa + (1-\kappa)Pr(y = s^L = 0|\boldsymbol{E}^*)} < \kappa
\end{aligned}
$$

In turn, whenever lobbying is feasible, if lobbying does happen we must have $v^*(0,0,0) = v^*(1,s_v,1) = v^*(1,s_v,0) = 1$ and $v^*(0,\emptyset,0) = 0$.[29] Then, an experiment is incentive-compatible for a $s^N = 1$ (incompetent) incumbent after $s^L = 0$ iff (we omit repeating the non-binding constraints after $s^L = 1$)

$$\mu(1,0)(1+\delta\rho) + \delta(1-\rho)\underbrace{v(1,\emptyset,0)}_{=1} \leq (1-\mu(1,0))(1+\delta\rho) + \delta(1-\rho)v(0,\emptyset,0) \tag{10}$$

$$\mu(1,0) \leq \frac{1+\delta(2\rho-1)}{2(1+\delta\rho)} \tag{11}$$

and thus $\pi_1^*(0|1) = \Delta_1 C_1$ as in the baseline game. Further, an experiment is incentive-compatible for a $s^N = 0$ after $s^L = 0$ iff

$$\mu(0,0)(1+\delta\rho) + \delta(1-\rho)\underbrace{v(1,\emptyset,0)}_{=1} \leq (1-\mu(0,0))(1+\delta\rho) + \delta(1-\rho)v(0,\emptyset,0) \tag{12}$$

$$\mu(0,0) \leq \frac{1+\delta(2\rho-1)}{2(1+\delta\rho)} \tag{13}$$

and thus $\pi_0^*(0|1) = \Delta_0 C_1$. Thus the ex-ante likelihood of $y = 0$ is unchanged w.r.t to the baseline game and so is equilibrium play. To verify that this is an equilibrium, notice that in equilibrium

- a competent incumbent is best-responding since his equilibrium behavior is characterized by Lemma 1
- an incompetent incumbent is best-responding since he follows incentive-compatible recommendations by L given lobbying and best-responds as in Lemma A.2 absent lobbying.

[29]Notice that for $v^*(0,0,0) = 1$ we make use of Assumption 2.

- L selects the optimal incentive-compatible experiment and engages in lobbying whenever it is feasible (which is optimal for $\rho = 0$).

- V votes optimally given $\varrho = s^L$ and according to Lemma A.2 absent lobbying.

Thus, equilibrium play in this modified game is payoff-equivalent to that of the baseline game. □

8.3.2 LT reveals L's preference

I restrict L's action set and assume that the lobby always target a misaligned incumbent when engaging in lobbying; i.e. each lobby either designs an experiment that persuades both types of incumbents or does not engage in lobbying. The proof is provided for any $\rho \leq \overline{\rho}$ such that pandering incentives exist absent lobbying.

Proposition A.4. *Let $t_2 = r$. There exists a unique equilibrium. Lobbying always take place, $v^*(y \neq \omega, \varrho) = 0, v^*(y = \omega, \varrho) = 1$ and $y^*(s^N, s^L, \varrho) = s^L$.*

- *If $\varrho = L_1$, then $v^*(1, \emptyset, L_1) = 0, v^*(0, \emptyset, L_1) = 1$ with $\pi^*(1|1) = 1, \pi^*(1|0) = \Delta_0^{-1} C_1$.*

- *If $\varrho = L_0$, then $v^*(1, \emptyset, L_1) = 1, v^*(0, \emptyset, L_1) = 0$ with $\pi^*(0|0) = 1, \pi^*(0|1) = \Delta_1 C_1$.*

Proof. Let π_1 (π_0) denote the L_1 (L_0) misreporting probability conditional on $\omega = 0$ ($\omega = 1$). Notice that for an L_1 experiment to be incentive-compatible for an incompetent incumbent after $s^N = 0$ and $s^L = 1$ we must have (again ignoring the non-binding constraints)

$$\mu(0,1) > \frac{1 + \delta\rho - \delta(1-\rho)(v(1,\emptyset,\varrho) - v(0,\emptyset,\varrho)))}{2(1+\delta\rho)} \tag{14}$$

$$\iff \pi_1(1|0) < \Delta_0^{-1} \frac{1 + \delta\rho + \delta(1-\rho)(v(1,\emptyset,\varrho) - v(0,\emptyset,\varrho))}{1 + \delta\rho - \delta(1-\rho)(v(1,\emptyset,\varrho) - v(0,\emptyset,\varrho)))} \tag{15}$$

If $L = L_0$ the subgame reduces to the baseline game with $\varrho = i$ and is given by Lemma A.4.

If $L = L_1$ the subgame also reduces to the baseline game with $\varrho = i$ with the difference that now L_1 aims for $y = 1$ to be over-implemented relative to the subgame without any lobbying, i.e. with probability $p_l > p$. In turn, they engage in lobbying with $\pi_1^*(1|1) = 1, \pi_1^*(1|0) = \Delta_0^{-1} C_1$ and $v^*(1, \emptyset, L_1) = 0, v^*(0, \emptyset, L_1) = 1 = v^*(y = s_v, L_1)$.

Off-path, if $\varrho = \emptyset$ then equilibrium play for V and I is given by Lemma A.2 which ensures that $Pr(y = 0|\text{no lobbying}, \varrho = \emptyset) = 1 - p$.

Finally, it is straightforward to verify that there cannot exist any equilibria without both SIGs engaging in lobbying whenever they can. E.g., if neither engages in lobbying, equilibrium play is given by Lemma A.2 which ensures that $Pr(y = 0|\text{no lobbying}, \varrho = \emptyset) = 1 - p$. But then L_0 has a profitable deviation to picking the optimal incentive-compatible experiment to generate $p_l > 1 - p$. The same contradiction logic applies to any candidate equilibrium with only one type of SIG engaging in lobbying. $\square$

Denote $\mathcal{C}_\eta \equiv \sqrt{\frac{1-p}{p}\frac{\eta}{1-\eta}}$.

Proposition A.5. *Let $t_2 = o$. There exists a unique equilibrium. Lobbying always take place, $v^*(y \neq \omega, \varrho) = 0, v^*(y = \omega, \varrho) = 1$ and $y^*(s^N, s^L, \varrho) = s^L$. There exists a unique $\overline{\eta} \equiv \frac{(1-p)}{(1-p)+pC_1^2} \in (0,1)$ and $\underline{\eta} \equiv \frac{(1-p)}{(1-p)+pC_1^{-2}} \in (0, \overline{\eta})$ such that*

- *if $\eta > \overline{\eta}$ then $v^*(1, \emptyset, L_1) = 0, v^*(0, \emptyset, L_1) = 1$. If $L = L_1$ then $\pi^*(1|1) = 1, \pi^*(1|0) = \Delta_0^{-1}C_1$. If $L = L_0$ then $\pi^*(0|0) = 1, \pi^*(0|1) = \Delta_1 C_1^{-1}$.*

- *if $\eta < \underline{\eta}$ then $v^*(1, \emptyset, L_1) = 1, v^*(0, \emptyset, L_1) = 0$. If $L = L_1$ then $\pi^*(1|1) = 1, \pi^*(1|0) = \Delta_0^{-1}C_1^{-1}$. If $L = L_0$ then $\pi^*(0|0) = 1, \pi^*(0|1) = \Delta_1 C_1$.*

- *if $\eta \in [\underline{\eta}, \overline{\eta}]$ then $v^*(1, \emptyset, L_1) - v^*(0, \emptyset, L_1) = \frac{(1+\delta\rho)}{\delta(1-\rho)}\frac{1-\sqrt{\mathcal{C}_\eta}}{1+\sqrt{\mathcal{C}_\eta}}$. If $L = L_1$ then $\pi^*(1|1) = 1, \pi^*(1|0) = \Delta_0^{-1}\mathcal{C}_\eta^{-1}$. If $L = L_0$ then $\pi^*(0|0) = 1, \pi^*(0|1) = \Delta_1 \mathcal{C}_\eta$.*

Proof. The proof proceeds in a similar way to that of Proposition A.1, with cutoffs on η and no cutoffs on q since the SIGs are forced to target a misaligned incumbent by assumption.

There exists two unique cutoffs $\underline{\eta}$ and $\overline{\eta}$ such that

1. $\forall \eta > \overline{\eta} \equiv \frac{(1-p)}{(1-p)+pC_1^2}$ where recall that $C_1 \equiv \frac{1+\delta(2\rho-1)}{1+\delta}$, then $\theta(1, \emptyset, \emptyset) < \kappa$, $v^*(1, \emptyset, \emptyset) = 0, v^*(0, \emptyset, \emptyset) = 1, v^*(y = s_v, \emptyset) = 1$. If $L = L_1$ then $\pi_1^*(1|0) = \Delta_0^{-1}C_1$. If $L = L_0$ then $\pi_0^*(0|1) = \Delta_1 C_1^{-1}$.

   To derive $\overline{\eta}$ solve for

$$\eta Pr(y = 0|L = L_1) + (1 - \eta)Pr(y = 0|L = L_0) < 1 - p \tag{16}$$

$$\eta > \frac{Pr(y = 0|L_0) - (1 - p)}{Pr(y = 0|L_0) - Pr(y = 0|L_1)} \equiv \overline{\eta} \tag{17}$$

   such that $\theta(1) < \kappa$. Given this belief ordering plug in the equilibrium experiment's signal probabilities to derive $\overline{\eta} \equiv \frac{(1-p)}{(1-p)+pC_1^2}$.

2. $\forall \eta < \underline{\eta} \equiv \frac{(1-p)}{(1-p)+pC_1^{-2}}$ then $\theta(1,\emptyset,\emptyset) > \kappa$, $v^*(1,\emptyset,\emptyset) = 1, v^*(0,\emptyset,\emptyset) = 0, v^*(y = s_v,\emptyset) = 1$. Same proof as in the previous case but with reversed beliefs ordering and thus lower bound on η. Note that $\overline{\eta} > \underline{\eta}$ follows from $0 < C_1 < 1 < C_1^{-1}$. If $L = L_1$ then $\pi_1^*(1|0) = \Delta_0^{-1}C_1^{-1}$. If $L = L_0$ then $\pi_0^*(0|1) = \Delta_1 C_1$.

3. $\forall \eta \in [\underline{\eta}, \overline{\eta}]$ then $\theta(1,\emptyset,\emptyset) = \kappa$. Denote $\overline{V}(\eta) \equiv v(1,\emptyset,\emptyset) - v(0,\emptyset,\emptyset), \overline{V}^*(\eta) \equiv v^*(1,\emptyset,\emptyset) - v^*(0,\emptyset,\emptyset)$. In this range we have $\pi_0(0|1) = \Delta_1 \frac{1+\delta[\rho-\overline{V}(\eta)(1-\rho)]}{1+\delta[\rho+\overline{V}(\eta)(1-\rho)]}, \pi_1(1|0) = \Delta_0^{-1}\frac{1+\delta[\rho+\overline{V}(\eta)(1-\rho)]}{1+\delta[\rho-\overline{V}(\eta)(1-\rho)]}$. Then

$$\eta Pr(y = 0|L_1) + (1-\eta)Pr(y = 0|L_0) = 1 - p \tag{18}$$

$$\iff \frac{\pi_0(0|1)}{\pi_1(1|0)} = \frac{\eta}{1-\eta}\frac{1-p}{p} \tag{19}$$

$$\iff \frac{1+\delta[\rho-\overline{V}(\eta)(1-\rho)]}{1+\delta[\rho+\overline{V}(\eta)(1-\rho)]} = \sqrt{\frac{1-p}{p}\frac{\eta}{1-\eta}} \tag{20}$$

$$\frac{(1+\delta\rho)}{\delta(1-\rho)}\frac{1-\sqrt{\frac{1-p}{p}\frac{\eta}{1-\eta}}}{1+\sqrt{\frac{1-p}{p}\frac{\eta}{1-\eta}}} = \overline{V}^*(\eta) \tag{21}$$

Notice that $\overline{V}^*(\eta)$ decreases in η and that at $\eta = \overline{\eta}$ and $\eta = \underline{\eta}$ then (19) holds with equality. Denote $\mathcal{C}_\eta \equiv \sqrt{\frac{1-p}{p}\frac{\eta}{1-\eta}}$. Then, $\pi_0^*(0|1) = \Delta_1\mathcal{C}_\eta, \pi_1^*(1|0) = \Delta_0^{-1}\mathcal{C}_\eta^{-1}$.

In turn, as η increases, $Pr^*(y = 0|L_0)$ and $Pr^*(y = 0|L_1)$ increase, as the voter punishes more $y = 1$. Still, ex-ante, $Pr(y = 0) = 1 - p$ in equilibrium for any $\eta \in [\underline{\eta}, \overline{\eta}]$.

As in the game with $t = r$, there does not exist equilibria where it is not the case that both types of SIG engage in lobbying whenever feasible.

Compare equilibrium play with vs without LT. Notice that for any $\eta \in (0,1)$, the voter's equilibrium voting rule is always "unadapted" with some positive probability. If $\eta > \overline{\eta}$, with probability $1-\eta, L = L_0$ while $v^*(0,\emptyset,\emptyset) = 1$ and thus $\pi_0^*(0|1) = \Delta_0^{-1}\mathcal{C}^{-1}(0) > \Delta_0^{-1}\mathcal{C}(0)$; and similarly for the $\eta < \underline{\eta}$ case. For the intermediary case, notice that $\frac{1+\delta[\rho-\overline{V}(1-\rho)]}{1+\delta[\rho+\overline{V}(1-\rho)]} > C_1$ since $C_1 = argmin_{\overline{V}\in[-1,1]}\frac{1+\delta[\rho-\overline{V}(1-\rho)]}{1+\delta[\rho+\overline{V}(1-\rho)]}$ and similarly for $\frac{1+\delta[\rho-\overline{V}(1-\rho)]}{1+\delta[\rho+\overline{V}(1-\rho)]} > C_1$. Thus, the ex-ante likelihood of $y = \omega$ is always strictly higher under lobbying transparency. □

8.3.3 Quid-Pro-Quo Lobbying

In this extension the SIG can *commit* to pay a compensation $b \in \mathbb{R}^+$ to the incumbent conditional on the status quo being upheld, after the policy-decision is made. With $t = r$ the voter can observe whether a lobbying meeting took place prior to the policy-decision but not the amount of the compensation, which can however be perfectly anticipated in equilibrium. With $t = o$ the voter does not know whether any meeting took place. For simplicity I assume that a competent incumbent still always follows his private signal s^N, but will not refuse compensation for upholding the status quo when this is the right policy. L's utility function is now given by $u_L(y, b) = R\mathbf{1}_{\{y=0,\tau_I=l\}} - b$ with $R \in \mathbf{R}_+$.[30] Finally, as in the two-sided lobbying extension, L is constrained to either offering a compensation that ensures that any s^N-type incompetent incumbent implements $y = 0$ conditional on accepting it, or offering no compensation at all.

Proposition A.6. *Suppose that $\rho \leq \overline{\rho}$. Then, in any equilibrium, $Pr(y \neq \omega|t = o) > Pr(y \neq \omega|t = r)$.*

Proof. For the same reason as before, an equilibrium always exists, conditional on L's strategy, and the same simplifications using the ordering of the voter's beliefs can be used. Denote by $b_1 = (2\mu(1) - 1)(1 + \delta\rho) + \delta(1 - \rho)$ the minimal compensation ensuring that a $s^N = 1$ incompetent incumbent implements $y = 0$ with probability 1 conditional on receiving a compensation of b_1.

Let $t = r$. If L never engages in lobbying then equilibrium play is given by Lemma A.2. In turn, a compensation is paid in equilibrium iff

$$R - b_1 > 1 - p \tag{22}$$

Thus, if (22) holds, equilibrium play for V is given by Lemma A.4, an incompetent incumbent accepts b_1 and implements $y = 0$ conditional on lobbying and otherwise plays according to Lemma A.4.

Let $t = o$. As before, in equilibrium, either (i) $\theta(0, \emptyset, \emptyset) < \kappa$ in which case $b_1^o = b_1$ or (ii) $\theta(0, \emptyset, \emptyset) = \kappa$ in which case $b_1^o = (2\mu(1) - 1)(1 + \delta\rho) + \delta(1 - \rho)\overline{v} < b_1$.

In (i), since $v^*(1, \emptyset, \emptyset) = 1, v^*(0, \emptyset, \emptyset) = 0$, we have $\gamma_1^*(\eta) = \gamma_0^*(\eta) = 1$ while $Pr(y \neq \omega|\text{lobbying}, t = o) = Pr(y \neq \omega|\text{lobbying}, t = r) = p$.

In (ii), since $v^*(1, \emptyset, \emptyset) - v^*(0, \emptyset, \emptyset) = \overline{v}$ we have $\gamma_0^*(\eta) \in (\sigma_0, 1]$ as in Proposition A.1 (the η cutoffs are constructed analogously), and, as in case (i), conditional on lobbying. $Pr(y \neq \omega|\text{lobbying}, t = o) = Pr(y \neq \omega|\text{lobbying}, t = r) = p$. Finally, we note that $b_o^1 < b_1$ and lobbying takes place iff

$$R - b_1^o > 1 - p \tag{23}$$

That is there exists parameter values for which no lobbying takes place with $t = r$ – which is associated

[30]The behavior of $\tau_I = h$ types is irrelevant to L's problem.

with $Pr(y \neq \omega | t = r, \text{no lobbying}) = (1-q) + \sigma_0(q-p)$ but lobbying does take place with $t = o$, which is associated with $Pr(y \neq \omega | \text{lobbying}, t = o) = p > (1-q) + \sigma_0(q-p)$.

Thus, either way, $Pr(y \neq \omega | t = o) > Pr(y \neq \omega | t = r)$, due to $\gamma_0^*(\eta) > \sigma_0$, and (for some parameter values), more policy-mistakes being induced by lobbying that only occurs because of the lack of lobbying transparency.

□

8.4 Interest Group Welfare

Proposition A.7. *(i) Baseline game: $Pr(y = 0 | t = r) > Pr(y = 0 | t = o)$. (ii) Two-sided lobbying game: there exists a unique $\hat{\eta} \in (\underline{\eta}, \overline{\eta})$ such that $Pr(y = 0 | t = r) > Pr(y = 0 | t - o)$ if and only if $\eta \leq \hat{\eta}$.*

Proof. **Baseline game.** With lobbying transparency, ex-ante, L derives a payoff of $\eta(1-p) + (1-\eta)[p_l^*]$. Without lobbying transparency, ex-ante, if $\theta(0, \emptyset) = \kappa$, the SIG derives a payoff of $\eta * S_0(1 - \overline{\gamma_0(\eta)}) + (1 - \eta)[p_l^\dagger] = 1 - p < \eta(1-p) + (1-\eta)[p_l^*]$. If instead $\theta(0, \emptyset) < \kappa$ then $\gamma_0^*(\eta) = 1$ and $\boldsymbol{E}^o = \boldsymbol{E}^D$ (since V votes as if lobbying always took place). Then the SIG derives a payoff of $\eta * 0 + (1-\eta)[p_l^*] < \eta(1-p) + (1-\eta)[p_l^*]$.

Two-sided lobbying game. Notice that for any $\eta \geq \overline{\eta}$ (respectively $\eta \leq \underline{\eta}$) then $1 - p \geq Pr(y = 0 | t = o) > Pr(y = 0 | t = r)$ (respectively $1 - p \leq Pr(y = 0 | t = o) < Pr(y = 0 | t = r)$).

For any $\eta \in [\underline{\eta}, \overline{\eta}]$, we must have $Pr(y = 0 | t = o) = 1 - p$. These probabilities are continuous in η, and thus by the intermediate value theorem such a unique $\hat{\eta}$ must exist.

□

8.5 Institutional Change

For this extension of the game we must assume that $\delta > 1 - 2\mu(0, \emptyset) \implies \overline{\rho} > 0$ (such that an equilibrium with pandering exists) and $\rho < \overline{\rho}$ (such that V's equilibrium strategy and welfare depend on the choice of t). I assume that if a competent incumbent is indifferent between either institutional setting, he chooses $t = r$. Further, recall that as in the baseline model, we assume $\rho = 0$ (no transparency of consequences).

Lemma A.6. *Incumbency advantage: let $\kappa = \gamma + \epsilon, \epsilon > 0$. If in the baseline game in equilibrium $v^*(1, \varrho) - v^*(0, \varrho) = \overline{v}$ then $\lim_{\epsilon \to 0} v^*(1, \varrho) = 1, \lim_{\epsilon \to 0} v^*(0, \varrho) = 1 - \overline{v}$.*

Incumbency disadvantage: let $\kappa = \gamma - \epsilon, \epsilon > 0$. If in the baseline game in equilibrium $v^*(1, \varrho) - v^*(0, \varrho) = \overline{v}$

then $\lim_{\epsilon\to 0} v^*(1,\varrho) = \overline{v}, \lim_{\epsilon\to 0} v^*(0,\varrho) = 0$.

Proof. Suppose that $\kappa = \gamma + \epsilon$ with $\epsilon > 0$ small. Then, with LT and absent lobbying $\sigma_0(\kappa,\gamma) := 1 - \frac{1-p}{S_0}\frac{\kappa}{1-\kappa}\frac{1-\gamma}{\gamma}$ ensures that $\gamma = \theta(0,n)$ and since $\sigma_0(\kappa,\gamma) < 1 - \frac{1-p}{S_0}$ this implies that $\theta(1,n) = \kappa > \gamma \implies v^*(1,n) = 1, v^*(0,n) = \overline{v}$ (and vice versa for $\kappa = \gamma - \epsilon$ with $\epsilon > 0$ small). See the proof of Proposition 1 of Canes-Wrone, Herron, and Shotts (2001) for a full equilibrium description of the case where $\gamma \neq \kappa$, absent the possibility of any lobbying. □

Lemma A.7. *If at the institutional stage the equilibrium features pooling on* $t^* = r$ *(respectively* $t^* = o$*) then ensuing equilibrium play is given by Lemmas A.2 and A.4 (respectively Proposition A.1).*

Proof. Conditional on pooling at the institutional stage, no players obtain any new information and the ensuing game is equivalent to the baseline game, with the chosen institutional setting. □

Notation: let $\eta \geq \eta^\dagger$ denote the cases where without lobbying transparency $v^*(1,\emptyset) - v^*(0,\emptyset) = \overline{v}$ and $\eta < \eta^\dagger$ denote the cases where without lobbying transparency $v^*(1,\emptyset) - v^*(0,\emptyset) = 1$.

Proof of Lemma 3.

Proof. Competent-type preference for lobbying transparency. For a competent incumbent, the institutional stage decision only affect his electoral prospects. I first characterize under which conditions a competent incumbent is more likely to be re-elected with rather than without lobbying transparency. Note that, conditional on an equilibrium voting rule, the type of lobbying does not matter for the payoffs of a competent incumbent. In turn let $\eta \geq \eta^\dagger$ denote the cases where without lobbying transparency $v^*(1,\emptyset) - v^*(0,\emptyset) = \overline{v}$ and $\eta < \eta^\dagger$ denote the cases where without lobbying transparency $v^*(1,\emptyset) - v^*(0,\emptyset) = 1$.

With lobbying transparency, ex-ante, a competent incumbent probability of re-election is given by

$$\eta p(h,n) + (1-\eta)p(h,i) \tag{24}$$

Without lobbying transparency, ex-ante, the electoral prospects of a competent incumbent depends on the equilibrium voting rule. A competent incumbent is re-elected w.p. (i) $p(h,i)$ if lobbying is unlikely to take place $\eta \geq \eta^\dagger$ and (ii) $p(h,n)$ otherwise $\eta < \eta^\dagger$. At $\gamma \equiv Pr(\tau_C = h) = Pr(\tau_I = h) \equiv \kappa$, whether a competent incumbent prefers to introduce lobbying transparency standards depends on the pair of $(v^*(1,\emptyset), v^*(0,\emptyset))$

that can be chosen s.t. $v^*(1,\emptyset) - v^*(0,\emptyset) = \overline{v}$:

$$p(h,n) \leq p(h,i) \iff v^*(0,\emptyset) \leq \frac{p}{1-p}(1 - v^*(1,\emptyset))$$

Notice that if $v^*(0,\emptyset) = 0$ and $v^*(1,\emptyset) = \overline{v}$ ($\kappa < \gamma$ case) then $p(h,n) < p(h,i)$. If $v^*(0,\emptyset) = 1 - \overline{v}$ and $v^*(1,\emptyset) = 1$ ($\kappa > \gamma$ case) then $p(h,n) > p(h,i)$.

Hereafter I consider small perturbations of $\epsilon > 0$ to the prior on the challenger γ and incumbent κ. Let $\eta \geq \overline{\eta}$ denote the cases where without lobbying transparency $v^*(1,\emptyset) - v^*(0,\emptyset) = \overline{v}$ and

- (small) incumbency advantage: if $\kappa = \gamma + \epsilon, \epsilon > 0$, then, $v^*(1,n) - v^*(0,n) = \overline{v}$ with $v^*(1,n) = 1, v^*(0,n) = 1 - \overline{v}$. This implies that $p(h,n) = p + (1-p)(1-\overline{v}) > p = p(h,i)$ and thus an advantaged incumbent prefers lobbying transparency if and only if $\eta \leq \eta^\dagger$ (that is when $v^*(1,\emptyset) - v^*(0,\emptyset) = 1 \implies \eta p(h,n) + (1-\eta)p(h,i) > p(h,i)$)
- (small) incumbency disadvantage: if $\kappa = \gamma - \epsilon, \epsilon > 0$, then, $v^*(1,n) - v^*(0,n) = \overline{v}$ with $v^*(1,n) = \overline{v}, v^*(0,n) = 0$. This implies that $p(h,i) = p > p\overline{v} = p(h,n)$ and thus a disadvantaged incumbent prefers lobbying transparency if and only if $\eta > \eta^\dagger$ (that is when $v^*(1,\emptyset) - v^*(0,\emptyset) = \overline{v} \implies \eta p(h,n) + (1-\eta)p(h,i) > p(h,n)$)

□

Proposition A.8. *If $Pr(e = I|\tau_I = h, t = r) \geq Pr(e = I|\tau_I = h, t = o)$ then in the unique equilibrium of the game $t^*(h) = t^*(l) = r$ and ensuing equilibrium play is given by Proposition 1.*
If $Pr(e = I|\tau_I = h, t = r) < Pr(e = I|\tau_I = h, t = o)$ then in any equilibrium of the game $t^*(h) = o$. Further, if condition (POOL-EX) holds, then $t^*(l) = o$ and ensuing equilibrium play is given by Proposition 2. Otherwise, $t^*(l) = r$ and in turn

1. *Only high-types are re-elected: $v^*(t^* = r, y, \varrho \in \{i,n\}) = 0, v^*(t^* = o, y, \varrho = \emptyset) = 1$.*
2. *High-types follow their private signal $y^*(s^N, \hat{s}^L, t^* = o) = s^N$, low-types too absent lobbying $y^*(s^N, \emptyset, t^* = r) = s^N$,*
3. *Lobbying never takes place after $t^* = o$. There exists a unique $\underline{q} \in [p,1)$ such that after $t^* = r$ lobbying takes place with $\pi^*(0|0) = 1, \pi^*(0|1) = \Delta_1$ if and only if $q < \underline{q}$. Given lobbying, I follows L's recommendation: $y^*(s^N, s^L, t^* = r) = s^L$.*

Proof. First, we characterize equilibrium play conditional on I's type being revealed, in equilibrium, that is when $t^*(h) = o, t^*(l) = r$; the revelation of I's type implies the equilibrium voting rule, the decision of $\tau_I = l$ to always follow his private signal absent lobbying, and the choice of L *not* to lobby after $t^* = o$. Further, after $t^* = r$, L chooses between not lobbying – which yields $p^*_{nl} = S_0$ – and lobbying with $\pi^*(0|0) = 1, \pi^*(0|1) = \Delta_1$ – which yields $p_l = 1 - p + p\Delta_1$ which in turn pins down a unique $\underline{q} = max\{\frac{1-p}{2p-1}, p\}$ such that lobbying takes place if and only if $q < \underline{q}$. To see this note that at $q = 1$, L is indifferent. Further S_0 decreases linearly in q while $p_l = 1 - p + p\Delta_1$ decreases and is convex in q. Both probabilities are continuous in q, thus by the intermediate value theorem such a unique $\underline{q} \in [p, 1)$ exists. Note that $\frac{1-p}{2p-1} \leq 1 \iff p \geq 2/3$. I.e. for any $p < 2/3$ or $q > \underline{q}$, no lobbying ever takes place in equilibrium.

Equilibrium Refinement for pooling equilibria. To characterize the set of pooling equilibria, we make use of the fact that, at the beginning of the game, by common knowledge, all players know whether I is better-off electorally with $t = r$ or with $t = o$. In turn, we impose the following "sensible" restriction on off-paths beliefs: (i) if the high-type preferred institution is played in the pooling equilibrium, then, following a deviation, V either does not update or update negatively on the deviating I, (ii) if the high-type preferred institution is not played in the pooling equilibrium, then, either V does not update, or she updates positively on the deviating I. Formally:

1. Given some pooling equilibrium on $t^* \in \{o, r\}$, if $Pr(e = I|\tau_I = h, t^*) \geq Pr(e = I|\tau_I = h, t' \neq t^*)$, then $Pr(\tau_I = h|t' \neq t^*) \leq \kappa$.

2. Given some pooling equilibrium on $t^* \in \{o, r\}$, if $Pr(e = I|\tau_I = h, t^*) < Pr(e = I|\tau_I = h, t' \neq t^*)$, then $Pr(\tau_I = h|t' \neq t^*) \geq \kappa$.

In turn, we can rule out any pooling equilibrium on the high-type least favourite institution. Suppose that $t^*(h) = t^*(l) = o$ while $Pr(e = I|\tau_I = h, o) < Pr(e = I|\tau_I = h, r)$. Then, as long as following a deviation to $t' = r$, V does not update negatively on I's type, there exists a profitable deviation. To see this, suppose that V does not update at all following $t' = r$.[31] Then a profitable deviation exists for $\tau_I = h$ as long as $1 + \delta Pr(e = I|\tau_I = h, r) > 1 + \delta Pr(e = I|\tau_I = h, o)$ which, by assumption, holds.[32] The same argument holds for ruling out a pooling equilibrium with $t^*(h) = t^*(l) = r$ while $Pr(e = I|\tau_I = h, r) < Pr(e = I|\tau_I = h, o)$. *Note:* Importantly however, without such an equilibrium refinement, there simply exists more pooling

[31] Note that the following argument implies that a profitable deviation must exist for any positive updating following $t' = r$.

[32] Notice that our refinement is in the spirit of the Intuitive Criterion, but stronger, as the Intuitive Criterion would not suffice here. In the best-case scenario, the voter updates positively following a deviation to $t' = r$, so that $t' = r$ is not equilibrium dominated for any type. In the worst case scenario, the voter updates sufficiently negatively, such that even for the high-type, deviating to $t' = r$ is not profitable.

equilibria (with ensuing play given by Proposition 1 or 2). Qualitatively the results would not be affected – politicians introduce lobbying transparency when they benefit from it electorally – but these equilibria are perhaps "less sensible", since they involve pooling by both types on the institution least preferred by the competent type.

Non-existence of a separating equilibrium with $t^*(h) = r, t^*(l) = o$. In such an equilibrium, $Pr(e = I|r) = 1, Pr(e = I|o) = 0$. Consider $t'(l) = r$. There exists a profitable deviation for the l type iff

$$Pr(e = I|r)\delta + (1-\eta)Pr(y = \omega|\text{lobbying}, t'(l) = r = t^*(h)) + \eta Pr(y = \omega|\text{no lobbying}, t'(l) = r = t^*(h)) >$$
$$0 + (1-\eta)Pr(y = \omega|\text{lobbying}, t^*(l) = o) + \eta Pr(y = \omega|\text{no lobbying}, t^*(l) = o)$$

Notice that (i) $Pr(y = \omega|\text{lobbying}, t'(l) = r) \geq Pr(y = \omega|\text{lobbying}, t^*(l) = o)$ since on-path $\tau_I = l$ is never re-elected, she is cheaper to persuade, and more information is revealed by L, ceteris paribus, under lobbying transparency. Further, in equilibrium, conditional on no lobbying, a low-type reveals himself, loses the election for sure, and thus always implements $y^*(s^N) = s^N$ which implies that $Pr(y = \omega|\text{no lobbying}, o) = q > Pr(y = \omega|\text{no lobbying}, r) = pq + p(1-q)\sigma_0 + (1-p)q(1-\sigma_0)$. In turn we have (ii) $Pr(y = \omega|\text{no lobbying}, r) - Pr(y = \omega|\text{no lobbying}, o) = -\sigma_0(q-p)$. Finally, conditional on no lobbying and deviating to $t' = r$, we have (iii) $Pr(e = I|\tau_I = l, r) \geq \delta\overline{v}[S_1 + S_0\sigma_0]$.[33] Then observe that $\delta\overline{v}[S_1 + S_0\sigma_0] = \frac{q-p}{S_0}[S_1 + S_0\sigma_0] > (q-p)\sigma_0$ which implies that a profitable deviation exists for the $\tau_I = l$ type.

Note: this argument also implies that there does not exist any semi-separating equilibrium with $\tau^*(h) = r$ and $\tau_I = l$ mixing.

Existence of a pooling equilibrium on $t^*(h) = t^*(l) = r$ when $Pr(e = I|\tau_I = h, r) \geq Pr(e = I|\tau_I = h, o)$.[34] Notice that, by our refinement, following a deviation to $t' = o$, at best V does not update on I's type. But since the high-type preferred institution is played in equilibrium, there is no profitable deviation for this type. I.e., following some deviation to $t' = o$, V knows that $\tau_I = l$, and thus places zero weight on the deviating type potentially being a high-type. In turn, conditional on deviating an incompetent incumbent is *never* re-elected, and since he reveals himself as incompetent, he gets less information from L; if L targets $s^N = 1$ then $\pi'(0|1) = \Delta_1 > \Delta_1 C_1$ and if L targets $s^N = 0$ then $\pi'(0|1) = \Delta_0 > \Delta_0 C_1$.

Then the proof resembles that of non-existence of a (semi-)separating equilibrium with $t^*(h) = r$. A

[33] Notice that we write $\geq$ since we are inputting the worst re-election rule for the incumbent, conditional on deviating.
[34] I assume that when indifferent between either institutional setting, a high-type introduces lobbying transparency.

low-type's deviation payoff $\eta q + (1-\eta)Pr(y = \omega|\text{lobbying}, o)$. His equilibrium *policy* payoff is instead given by $\eta[pq + p(1-q)\sigma_0 + (1-p)q(1-\sigma_0)] + (1-\eta)Pr(y = \omega|\text{lobbying}, r)$. Conditional on lobbying there is no profitable deviation. Conditional on no lobbying there is a profitable deviation, absent any additional electoral payoff, since $q - pq - p(1-q)\sigma_0 = (1-p)q(1-\sigma_0) = \sigma_0(q-p) > 0$. Next, notice that his equilibrium electoral payoff conditional on no lobbying is at least as large as $\delta\overline{v}[S_1 + S_0\sigma_0] = (1 - 2\mu(0))[S_1 + S_0\sigma_0] = \frac{q-p}{S_0}[S_1 + S_0\sigma_0] > (q-p)\sigma_0$.

Equilibrium characterization when $Pr(e = I|\tau_I = h, r) < Pr(e = I|\tau_I = h, o)$.

1. Consider a separating equilibrium on $t^*(h) = o, t^*(l) = r$. No profitable deviation exists for a high-type, as his favorite institution is implemented, he is re-elected with probability 1 and he implements the correct policy.

The low-type reveals himself as $\tau_I = l$ and thus is never re-elected. In turn, he always follows his private signal (of precision q) absent lobbying. In turn no profitable deviation to $t'(l) = o$ exists for the low-type as long

$$\begin{aligned}
&\delta \times 0 + \eta q + (1-\eta)Pr(y = \omega|\text{lobbying, revealed as low-type}, t^*(l) = r) \geq \\
&\delta[\eta(S_1 + S_0\gamma_0(\eta)v^*(1,\emptyset) + S_0 v^*(0,\emptyset)) + (1-\eta)Pr(e = I|\text{lobbying, not revealed as low-type}, t'(l) = o)] \\
&+\eta(q - \gamma_0(\eta)(q-p)) + (1-\eta)Pr(y = \omega|\text{lobbying, not revealed as low-type}, t'(l) = o) \qquad \text{(SEP-EX)}
\end{aligned}$$

2. Consider a pooling equilibrium on $t^*(h) = t^*(l) = o$. Then, in such an equilibrium, by deviating to $t'(l) = r$, by our refinement, a low-type reveals himself, is never re-elected, and thus always follows his private signal (of precision q) absent lobbying. In turn no profitable deviation to $t'(l) = r$ exists for the low-type as long

$$\begin{aligned}
&\delta \times 0 + \eta q + (1-\eta)Pr(y = \omega|\text{lobbying, revealed as low-type}, t'(l) = r) \leq \\
&\delta[\eta(S_1 + S_0\gamma_0(\eta)v^*(1,\emptyset) + S_0 v^*(0,\emptyset)) + (1-\eta)Pr(e = I|\text{lobbying, not revealed as low-type}, t^*(l) = o)] \\
&+\eta(q - \gamma_0(\eta)(q-p)) + (1-\eta)Pr(y = \omega|\text{lobbying, not revealed as low-type}, t^*(l) = o) \qquad \text{(POOL-EX)}
\end{aligned}$$

The exact values of

$$Pr(y = \omega|\text{lobbying, revealed as low-type}, t'(l) = r)$$
$$Pr(e = I|\text{lobbying, not revealed as low-type}, t^*(l) = o)$$
$$Pr(y = \omega|\text{lobbying, not revealed as low-type}, t'(l) = o)$$

depend on whom L "targets" with their lobbying, which depends on the primitives (most prominently q and η). Crucially however, these quantities are held fixed, given an institutional environment (and possibly signaling through the institutional choice). Thus, whenever (POOL-EX) holds, then (SEP-EX) does not, and vice versa. That is, when $Pr(e = I|\tau_I = h, r) < Pr(e = I|\tau_I = h, o)$, then $t^*(h) = o$ and if (POOL-EX) holds then $t^*(l) = o$ and otherwise $t^*(l) = r$.

Note that, (SEP-EX) only holds when all these four conditions (i) $p > 2/3$ and (ii) $q \leq \overline{q} = \frac{1-p}{2p-1}$ such that, conditional on separation, lobbying takes place and (iii) δ is not too high, and (iv) with $t = o$, lobbying targets a $s^N = 0$ incumbent. Otherwise, equilibrium play at the institutional stage always implies pooling on the competent-type preferred institution. □

8.6 Additional Results

8.6.1 Empirical Implications and Interpretation

I now provide some theoretical guidance for scholars interested in evaluating empirically the effect of the introduction of lobbying transparency standards. To do so, empirical scholars should first subset their analysis to a particular policy environment – e.g., energy policy – where there exists a status quo policy that benefits a clearly identifiable interest group.

Empirical variables of interest. Recall that the institutional environment affects the quality of policy-making and lobbying – which need not be empirically observable – as well as the likelihood of the pro-lobby policy being upheld or maintained, which is observable within a policy dimension with an established SIG.

Denote the observable policy in unit i in region r in period t by $Y_{i,r,t} \in \{0, 1\}$ with $Y_{i,r,t} = 0$ denoting the pro-lobby status quo policy.[35] Further, denote by $L_{i,r,t} \in \{0, 1\}$ the underlying (possibly unobservable) occurrence of lobbying with $L_{i,r,t} = 1$ denoting that lobbying did take place. Denote by $\hat{L}_{i,r,t} \in \{\emptyset, 0, 1\}$ what voters can observe about the occurrence of lobbying. With lobbying transparency, $\hat{L}_{i,r,t} = L_{i,r,t}$. Without lobbying transparency the public may learn ex-post that $\hat{L}_{i,r,t} = 1$, for instance when a lobbying scandal is revealed ex-post. Finally, the institutional setting is denoted by $D_{i,r,t} \in \{0, 1\}$ with $D_{i,r,t} = 1$ for regions with lobbying transparency standards in place.

Theoretical Expectations and Interpretation. One may be interested in estimating the *ex-ante* effect of institutional change on the likelihood of the pro-lobby policy being upheld, that is,

$$\beta_{ex-ante} \equiv E[Y_{i,r,t}|\rho, D_{i,r,t} = 1] - E[Y_{i,r,t}|\rho, D_{i,r,t} = 0]$$

[35] All that is required is that a given policy can be clearly interpreted as pro- or anti-IG.

It follows from Proposition A.1 and Lemmas A.4 and A.2 that lobbying transparency only affects policy-making when voters can expect to learn whether the policy implemented is indeed the correct one.

Observation 1. *$\beta_{ex-ante} \leq 0$ if $\rho \leq \overline{\rho}$ and $\beta_{ex-ante} = 0$ otherwise: the pro-lobby policy is more likely to be upheld in environments with lobbying transparency standards only if policy outcomes are hard to observe pre-elections. Otherwise, empirical scholars should expect a null effect.*

Given that lobbying transparency both benefits voters and the IG, one may wonder whether this first observation implies that lobbying transparency "backfires". It is important to note that $Y_{i,r,t}$ can be used as a proxy for the quality of policy-making *because* it captures observed policy-making, with *and* without lobbying. Indeed, recall from Proposition A.7 that lobbying transparency benefits the IG ex-ante (hence Observation 1) but not ex-post. Hereafter, we subset the analysis to cases where lobbying transparency does affect policy-making ($\rho \leq \overline{\rho}$) such that $\beta_{ex-ante} < 0$.

To make this distinction more concrete, recall that, conditional on lobbying transparency standards being in place ($D_{i,r,t} = 1$) then lobbying is observable. Further, absent lobbying transparency standards, empirical scholars can sometimes observe whether lobbying did occur ex-post, thanks to scandals revealed, for instance, by the press. That is, empirical scholars can subset their analysis to cases with lobbying ($L_{i,r,t} = 1$) and estimate

$$\beta_{ex-post} \equiv E[Y_{i,r,t}|\rho \leq \overline{\rho}, D_{i,r,t} = 1, L_{i,r,t} = 1] - E[Y_{i,r,t}|\rho \leq \overline{\rho}, D_{i,r,t} = 0, L_{i,r,t} = 1]$$

Observation 2. *$\beta_{ex-post} > 0$: conditional on lobbying taking place, the pro-lobby policy is less likely to be upheld with lobbying transparency standards in place.*

That is, to evaluate the effect of lobbying transparency standards, one must account for their impact on policy-making, when lobbying happens, but also when it does not. Crucially, only the former can (sometimes) be observed empirically in the absence of lobbying transparency standards.

8.6.2 Selection and 2-Periods Welfare

To obtain a measure of welfare, I assume that the elected official gets to make a second policy decision (as if there was a second period with no further election). In turn, a competent incumbent always picks the correct policy, while an incompetent one chooses the correct policy w.p. q. Then, note that the second-period office holder is a competent one if (i) $\tau_I = h$ and $e = I$, (ii) $\tau_I = h$ and $e = C$ and $C = h$ or (iii)

$\tau_I = l$ and $e = C$ and $C = h$. The effect of LT on selection is denoted by

$$\begin{aligned}\Delta_\tau &= Pr(\tau_e = H|t = r, \cdot) - Pr(\tau_e = H|t = o, \cdot)\\ &= \kappa(1-\kappa)[P_H(t=r) - P_L(t=r) - (P_H(t=o) - P_L(t=o))]\\ &= \kappa(1-\kappa)[\underbrace{P_H(t=r) - P_H(t=o)}_{\equiv \Delta_\tau^h} + \underbrace{P_L(t=o) - P_L(t=r)}_{\equiv \Delta_\tau^l}]\end{aligned}$$

Denote $\Delta_y = Pr(y = \omega|t = r, \cdot) - Pr(y = \omega|t = o, \cdot)$. The effect of LT on welfare can then be defined as

$$\Delta_W = \Delta_y + (1-q)\Delta_\tau$$

Proposition A.9. *There exists a non-empty set of equilibrium pairs of* $\{v^*(1, \emptyset, n), v^*(0, \emptyset, n)\}$ *(meaning such that* $v^*(1, \emptyset, n) - v^*(0, \emptyset, n) = \overline{v}$*) such that* $\Delta_\tau \geq 0 \implies \Delta_W > 0$.

Corollary A.2. *Given the voter-welfare-maximizing voting rule,* $\Delta_\tau \geq 0 \implies \Delta_W > 0$.

While LT need not improve selection, one can always select an equilibrium voting rule such that it does (weakly), which ensures that net welfare improves with LT.

Proof. I first define key terms to evaluate control (first policy payoff) and selection (the likelihood that the second-period office holder is competent). For control the focus is on the likelihood of a policy mistake by an incompetent incumbent (a competent one does not make policy mistakes).

The probability of a mistake by an incompetent politician absent lobbying is given by $Pr(y \neq \omega|t = r, c = c_h) = \sigma_0[q-p] + (1-q) \equiv m(\sigma_0)$ with lobbying transparency and without lobbying transparency $Pr(y \neq \omega|t = o, \text{no lobbying}, \gamma_0(\eta)) = \gamma_0(\eta)(q-p) + (1-q) \equiv m(\gamma_0(\eta))$. Observe that $m(\sigma_0) - m(\gamma_0(\eta)) = (q-p)(\sigma_0 - \gamma_0(\eta)) < 0$. Next, the likelihood of a policy-mistake given lobbying with lobbying transparency $Pr(y \neq \omega|\boldsymbol{E}_1^*) = p\Delta_1 C_1 \equiv m(\boldsymbol{E}_1^*)$ and $Pr(y \neq \omega|\boldsymbol{E}_0^*) = (1-p)(1-q) + p(1-q)\Delta_0 C_1 \equiv m(\boldsymbol{E}_0^*)$. Without lobbying transparency $Pr(y \neq \omega|\boldsymbol{E}_1^o) = p\pi_1^o(0|1) \equiv m(\boldsymbol{E}_1^o)$ and $Pr(y \neq \omega|\boldsymbol{E}_0^o) = 1 - q \equiv m(\boldsymbol{E}_0^o)$ Note that $m(\sigma_0) > p\pi_1(0|1)$: an incompetent incumbent makes more mistakes without lobbying, conditional on lobbying transparency.

Ex-post (vis-a-vis lobbying occurring), for a competent incumbent, re-election probabilities given lobbying transparency are given by $Pr(e = I|\tau = h, t = r, \text{no lobbying}) = \rho + (1-\rho)[v(0) + p\overline{v}] \equiv p(h, n)$ and $Pr(e = I|\tau = h, t = r, \text{lobbying}, c = c_l) = \rho + (1-\rho)p \equiv p(h, i)$.

Then, the ex-ante re-election probability is given by

$$Pr(e = I|\tau_I = h, t = r) = \eta p(h, n) + (1 - \eta)p(h, i) \tag{25}$$

Note that these probabilities are independent of whom L targets in equilibrium. Similarly, the re-election probabilities of a low-type are given by $Pr(e = I|\tau_I = l, t = r, \text{no lobbying}) = \rho[q - \sigma_0(q - p)] + (1 - \rho)[v(1)(S_1 + S_0\sigma_0) + S_0(1 - \sigma_0)v(0)] \equiv p(l, n)$ and $Pr(e = I|\tau_I = l, t = o, \text{no lobbying}) = \rho[q - \gamma_0(\eta)(q - p)] + (1 - \rho)[v(1)(S_1 + S_0\gamma_0) + S_0(1 - \sigma_0)v(0)] \equiv p(l, n, \gamma_0(\eta))$. Notice that $p(l, n) < p(l, n, \gamma_0(\eta))$ by $\gamma_0 > \sigma_0$.

Further observe that with $\boldsymbol{E}_1^o$ then $\gamma_0(\eta) - \sigma_0 = \frac{1-\eta}{\eta}\frac{p\overline{\pi_1^o(0|1)}}{S_0}$ and with $\boldsymbol{E}_0^o$ then $\gamma_0(\eta) - \sigma_0 = \frac{1-\eta}{\eta}\sigma_0$.

With lobbying, and with lobbying transparency we obtain (i) $Pr(e = I|\tau_I = l, \varrho = i, q \leq \overline{q}) = \rho[(1 - p) + p(1 - \Delta_1 C_1)] + (1 - \rho)p(1 - \Delta_1 C_1)$ and (ii) $Pr(e = I|\tau_I = l, \varrho = i, q \geq \overline{q}) = \rho[pq + (1 - p)q + p(1 - q)(1 - \Delta_0 C_1)] + (1 - \rho)(S_1 + p(1 - q)(1 - \Delta_0 C_1))$.

With lobbying, and without lobbying transparency we obtain (i) $Pr(e = I|\tau_I = l, t = o, q \leq \hat{q}) = \rho[(1 - p) + p(1 - \Delta_1 C_\emptyset)] + (1 - \rho)[((1 - p) + p\Delta_1 C_\emptyset)v(0) + p(1 - \Delta_1 C_\emptyset)v(1)]$ and (ii) $Pr(e = I|\tau_I = l, t = o, q \geq \hat{q}) = \rho q + (1 - \rho)[(S_1 v(1) + S_0 v(0)]$.

Case 1: First notice that, if with $t = o$ then $\theta(0, \emptyset) < \kappa$ then the quality of lobbying is unaffected. Only the pandering level (lower control) and potentially the electoral prospects are affected.

Notice that for a low-type incumbent, the only difference is conditional on no lobbying happening and since $p(l, n, \gamma_0) > p(l, n)$ for any $v(1) - v(0) \geq \overline{v}$, a low-type is more likely to be re-elected without LT.

Further, a high-type is re-elected more often with LT as long as $p(h, n) > p(h, i))$, and there always exists a pair of $v^*(1, \cdot) - v^*(0, \cdot) = \overline{v}$ such that this holds. I.e. we can always select a voting rule that is part of the equilibrium and such that lobbying transparency cannot backfire.

Case 2: Suppose instead that if with $t = o$ then $\theta(0, \emptyset) = \kappa$.

There are three cases to consider.

Case 2.1: $q \geq \overline{q}$**.** Then (ignoring for now the $\kappa(1-\kappa)$ multiplier)

$$\begin{aligned}
\Delta_\tau \propto \quad & \eta[pv(1)+(1-p)v(0)]+(1-\eta)p-[p(v(1))+(1-p)v(0)] \\
& +\eta[S_1v(1)+S_0(\gamma_0 v(1)+(1-\gamma_0)v(0))]+(1-\eta)[S_1v(1)+S_0v(0)] \\
& -\eta[v(1)(S_1+S_0\sigma_0)+S_0(1-\sigma_0)v(0)]-(1-\eta)[S_1+p(1-q)(1-\Delta_0C_1)] \\
\Delta_\tau \propto \quad & (1-\eta)[(S_1+p)v(1)+(1-q)(2p-1)v(0)-p(1-q)(1-\Delta_0)C_1]+\eta v(1)S_0(\gamma_0-\sigma_0) \\
\Delta_\tau \propto \quad & (1-\eta)[(S_1+p)v(1)+(1-q)(2p-1)v(0)-p(1-q)(1-\Delta_0C_1)+v(1)S_0]
\end{aligned}$$

notice that depending on the values of $\{v(1), v(0)\}$, it need not be the case that $\Delta_\tau \geq 0$. However, notice that

$$\Delta_y = (1-\eta)\sigma_0(q-p)+(1-\eta)p(1-q)(1-\Delta_0C_1)$$

which implies that $\Delta_y > p(1-q)(1-\Delta_0C_1)$ which implies that $\Delta_W > 0$. Further, with $v(1)=1, v(0)=\overline{v}$, then $\Delta_\tau > 0$.

Case 2.2: $q \in (\hat{q}, \overline{q})$**.** Almost the same as Case 2.1 except conditional on lobbying *and* lobbying transparency.

$$\begin{aligned}
\Delta_\tau \propto \quad & \eta[pv(1)+(1-p)v(0)]+(1-\eta)p-[p(v(1))+(1-p)v(0)] \\
& +\eta[S_1v(1)+S_0(\gamma_0 v(1)+(1-\gamma_0)v(0))]+(1-\eta)[S_1v(1)+S_0v(0)] \\
& -\eta[v(1)(S_1+S_0\sigma_0)+S_0(1-\sigma_0)v(0)]-(1-\eta)p[1-\Delta_1C_1] \\
\Delta_\tau \propto \quad & (1-\eta)[p(1-v(1))-(1-p)v(0)+(v(1)-v(0))S_0\sigma_0+v(0)S_0+v(1)S_1-p(1-\Delta_1C_1)]
\end{aligned}$$

Then let $v(1)=\overline{v}, v(0)=0$ and then the above reduces to

$$p(1-\overline{v})+\overline{v}(S_0\sigma_0+S_1) > p(1-\Delta_1C_1) \iff p(1-\overline{v})+\overline{v}p > p(1-\Delta_1C_1)$$

which holds since $\overline{v} \in (0,1)$.

Case 2.3: $q \leq \hat{q}$**.** Similarly,

$$\begin{aligned}\Delta_\tau \propto \quad & \eta[pv(1) + (1-p)v(0)] + (1-\eta)p - [p(v(1)) + (1-p)v(0)] \\ & + \eta[S_1 v(1) + S_0(\gamma_0 v(1) + (1-\gamma_0)v(0))] + (1-\eta)p(1-\Delta_1 C_\emptyset) \\ & - \eta[S_1 v(1) + S_0(\sigma_0 v(1) + (1-\sigma_0)v(0))] - (1-\eta)p[1-\Delta_1 C_1] \\ \Delta_\tau \propto \quad & (1-\eta)\underbrace{[p(1-v(1)) - (1-p)v(0)]}_{><0} + \eta S_0 \underbrace{(\gamma_0 - \sigma_0)(v(1) - v(0))}_{>0} + (1-\eta)\underbrace{p\Delta_1(C_1 - C_\emptyset)}_{\leq 0}\end{aligned}$$

Notice that with $v(0) = 0, v(1) = \overline{v}$ then $\Delta_\tau > 0$.

□

8.6.3 Institutional choice two-sided lobbying

Proposition A.10. *Consider the two-sided lobbying game. There exists a unique* $\eta_N \in (0,1)$ *and* $\eta^Y \in (\eta_N, 1)$ *such that*

- *for any* $\eta \geq \eta^Y$, $Pr(e = I|\tau_I = h, t_2 = r) > Pr(e = I|\tau_I = h, t_2 = o)$
- *for any* $\eta \leq \eta_N$, $Pr(e = I|\tau_I = h, t_2 = r) < Pr(e = I|\tau_I = h, t_2 = o)$
- *for any* $\eta \in (\eta_N, \eta^Y)$ *there exists cutoff* $\eta_N < \eta_1 < \eta_2 < ... < \eta_m < \eta^Y$, *with* $m \geq 1$ *and* m *odd. Then,* $Pr(e = I|\tau_I = h, t_2 = r) < Pr(e = I|\tau_I = h, t_2 = o)$ *if and only if* $\eta \in [\eta_N, \eta_1] \cup [\eta_2, \eta_3] \cup ... \cup [\eta_{m-1}, \eta_m]$

Proof. Ex-post, for a competent I, re-election probabilities are given by

$$Pr(e = I|\tau = H, t_2 = r, L_1) = \rho + (1-\rho)(1-p) \equiv p(h, L_1) \tag{26}$$

$$Pr(e = I|\tau = H, t_2 = r, L_0) = \rho + (1-\rho)p \equiv p(h, L_0) \tag{27}$$

$$Pr(e = I|\tau = H, t_2 = o, \emptyset, \eta < \underline{\eta}) \equiv p(h, \eta < \underline{\eta}) = p(h, L_0) \tag{28}$$

$$Pr(e = I|\tau = H, t_2 = o, \emptyset, \eta \in [\underline{\eta}, \overline{\eta}]) = \rho + (1-\rho)[V^*(0) + \overline{V}^* p] \equiv p(h, \eta \in [\underline{\eta}, \overline{\eta}]) \tag{29}$$

$$Pr(e = I|\tau = H, t_2 = o, \emptyset, \eta > \overline{\eta}) \equiv p(h, \eta > \overline{\eta}) = p(h, L_1) \tag{30}$$

Note that $p(h, L_1) < p(h, L_0)$. Then, the ex-ante re-election probability with LT is given by

$$Pr(e = I|\tau_I = H, t_2 = r) = \eta p(h, L_1) + (1-\eta)p(h, L_0) \tag{31}$$

The first two bullet points follow directly from observation of the above. For the third one, notice that at $\eta = \eta_N$, a competent I strictly prefers no LT by $p(h, L_0) > p(h, L_1)$ and vice versa at $\eta = \eta_Y$. Further, since $\overline{V}^*$ decreases in η, there exists at least one cutoff $\in (\eta_N, \eta^Y)$ such that a competent I incumbent is indifferent at such a cutoff. Crucially, however, this cutoff need not be unique. However, the number of such cutoffs must be odd given a competent I's institutional preferences at $\eta = \eta_N$ and $\eta = \eta^Y$. $\square$

Institut
d'Economia
de Barcelona