Voter conformism and inefficient policies[*]

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Abstract

We study the efficiency of policies when some voters are conformists who like being on the winner's side and when policies signal information. A reelection-seeking incumbent has private and fully informative information on both her ability and the quality of her policy. Repealing a policy signals a mistake, which downgrades her perceived ability and may thus cause inefficient policy persistence. Conformism is independent from policies and from voters' perceptions, yet we identify a 'conformism advantage' for the incumbent that exists only when there is also an incumbency advantage. We contrast an efficient equilibrium with an inefficient, pooling, one . Strong conformism makes pandering less likely, and may even eliminate it. Nonzero weak conformism can however deteriorate welfare and increase pandering, but paradoxically only when the incumbent is 'altruistic' and values social welfare even when not in power.

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1 Introduction

Conformism – a desire to behave as others, in a reference group, do – is a source of concern in democracies as it can give rise to different kinds of herd behaviors in voting. Some individuals will tend to vote for the same party, or favor the same policies, as their parents or neighbors; this is a reason for strong partisanship and it makes voters less responsive to the efficiency of policies (Bartels 2002; Gerber and Huber 2009).[1] Some voters may also want to be on the winning side, and this is a reason for the 'bandwagon effect': voters are more likely to vote for a candidate if they expect the candidate to win (Lee 2011; Panova 2015).[2] Both partisanship and the desire to be on the winning side affect the reelection chances of an elected politician. For this reason, conformism in its different guises can affect the decisions a politician takes during her mandate.

Allowing elected politicians to run for a second mandate is an incentive mechanism, that forces them to serve voters' needs in order to be reelected. One drawback is that these politicians may pander to cater to some voters' needs or tastes. A broader definition of 'pandering' (which we will use here) is any inefficient behavior taken by incumbents in order to get reelected, including inefficient policy persistence (Majumdar and Mukand 2004; Panova 2015). Pandering can be associated with conformism via the defense of a particular policy (inaccurately be believed to be superior), where conformism directly determines which policy is preferred by voters (Ashworth and Shotts 2010a). Conformism in the shape of a desire to be on the wining side, to the contrary, is not associated directly to any policy preference. We are interested in the impact of such conformism, together with partisanship by some voters, on whether an incumbent will take inefficient decisions to improve reelection odds.

We study an indirect link between conformism and policy efficiency. It can exist even if voters' beliefs are accurate and unaffected by conformism: The mechanism relies on the signaling properties of policy choices. Pandering in our model consists in maintaining a

[1] People who identify with the governing party perceive the results of economic policy more positively than subjects who identify with the opposition.

[2] Many authors have confirmed the bandwagon effect, both empirically (Hodgson and Maloney 2013; Kiss and Simonovits 2014) and experimentally (Bischoff and Egbert 2013; Morton, Muller, Page and Torgler 2015; Agranov, Goeree, Romero and Yariv 2017).

bad policy to avoid signaling a past mistake. Pandering is specifically caused by a correlation between efficient past policy design and the incumbent's capabilities, which creates a signaling game between the incumbent and voters. Interestingly, conformism is totally independent from the policies' perceived quality; Yet conformism as a desire on the part of some voters to vote for the winning side, associated with the unbalanced partisanship of other voters, modifies the signaling benefits of inefficient policies for the incumbent.

In an election, conformity, which can give rise to the 'bandwagon effect', [3] is generally seen as a source of concern, because the herd behavior can give rise to crowd manipulation. We show however that conformism (here a desire to vote for the winner) can have a beneficial impact on policy choices, provided there exists an incumbency advantage . Such an advantage exists when the incumbent benefits from more votes, ceteris paribus, than her opponent would have had with the same platform. Incumbency advantage is well documented[4] and appears to be a critical determinant of success in reelections.[5] Conformism amplifies the incumbency advantage, thereby lessening the impact of signaling. Depending on the exact objective of the incumbent, this can lead, or not, to a more efficient equilibrium.

Our framework The incumbent[6] cares not only about choosing the right policies but also about the 'rents' derived from being in power (Canes-Wrone, Herron and Shotts 2001; Dur 2001; Maskin and Tirole 2004; Casamatta and De Donder 2005; Duggan and Fey 2005; Peress 2010). Her preferences (or the political context) may be such that she cares for policies only when in power, or to the contrary even when policies are chosen by her

[3]Callander (2007) develops a model of sequential voting to argue that voters' desire to win (by voting like most others do, and thus belonging to the majority) is critical to the existence of the bandwagon. Callander (2008) analyzes simultaneous elections under the simple majority rule when voters, in addition to wanting the better candidate to be elected, care about winning.

[4]See Erikson (1971),Gelman and King (1990),Ansolabehere and Snyder Jr (2002), Ashworth and De Mesquita (2008), Lee (2008), Hodler et al. (2010), Erikson and Titiunik (2015), Fiva and Røhr (2018). The many causes of incumbency advantage include bureaucratic relations, pork barrel spending, campaign finances and practices (Ansolabehere et al. 2006), and the structure of intra-party competition(Ansolabehere et al. 2007). Holding office helps incumbents obtain more media coverage(Prior 2006) and additional financial support for their campaigns(Gerber 1998).

[5]See Levitt and Wolfram (1997), Trounstine (2011), Snyder et al. (2015). Levitt and Wolfram (1997) report that incumbents can achieve reelection rates of around 90%. Lee (2008) shows that in Congressional elections, a party which wins with a small number of additional votes in a very close election (suggesting that the electorate is very balanced between the party and its opponent) has a 35% higher probability of winning the next election.

[6]For convenience, we refer to a politician as 'she' and to a voter as 'he'.

successor. She has private and fully informative information on her ability and on the currently right policy. The right policy choice is correlated with her ability. For this reason, she may want to distort her policy choice before running for a second mandate.

Our framework applies to all policy choices that are correlated with the incumbent's ability (e.g., moves on the international scene that are more likely to succeed if the incumbent is a very strong negotiator, as opposed to more prudent diplomatic choices that would be preferred by a weaker negotiator). We develop a case in which this correlation arises because a policy chosen at the beginning of the mandate is more likely to succeed if the incumbent is competent. The incumbent privately observes the quality of her initial policy choices (their effects are found out by voters with a time lag) and can repeal them before the election takes place. Repealing a failing policy allows to avoid costs but also signals an initial mistake, and therefore lower expected competence. This can lead to (inefficient) pandering through policy persistence (Ashworth and Shotts 2010b).

When the incumbent benefits from an incumbency advantage, voting for the opponent comes with a higher risk of not being on the winning side. This is costly to conformist voters. This effect plays in favor of the incumbent as if the opponent's capabilities were lower than they really are. This 'conformism advantage' is at the core of the results we obtain on equilibrium existence and policy persistence.

We show that a (non-monotonic) impact of conformism may exist, even though for voters the conformism is fully independent from policies, to the extent that we would expect no impact. This is because the conformism advantage reduces reelection pressure, and repealing a decision has less of a consequence on the reelection odds. We study the conditions under which two polar pure strategy Perfect Bayesian Equilibria (PBE) exist: In the socially efficient equilibrium (shortened to **S**), the incumbent uses her information efficiently to promote the social interest; In the pooling, pandering equilibrium (shortened to **P**), the incumbent continues her policy irrespective of her private information on its success.

Paradoxically, the desire to be on the winning side turns out to make pandering less likely. But also paradoxically, if the incumbent is altruistic and cares about the social surplus generated by her opponent when in power, a countervailing effect arises: A nonzero weak desire to win causes the altruistic incumbent to pander more. This result contrasts strongly with the usual role attributed to reelection pressure in disciplining politicians and other elected officials. Conversely, when voters have a strong desire to win, the social equilibrium **S** exists, but not the pooling equilibrium **P**, regardless of the private rents derived from being in power. A strong desire to win thus fully eliminates the incumbent's pandering. In short, reelection pressure damages social interest - due to pandering behavior - when independent voters have a nonzero weak desire to win and the incumbent is altruistic, but not otherwise, and never in the event of strong 'conformism'.

Related literature

Conformism Conformism is when an individual in a group displays a certain behavior because it is what the individual has witnessed most frequently in others (Claidière and Whiten 2012), as shown in the pioneering experiments in Asch (1951). The desire to conform makes people want to belong to the majority. Conformity motivations can be informational, i.e., arise from desire to form an accurate interpretation of reality and behave correctly. Or they can be normative, i.e., based on the goal of obtaining social approval from others (Deutsch and Gerard 1955; Cialdini and Goldstein 2004) .[7]

Inefficient signaling via policies Panova (2015) studies how policy persistence and the bandwagon effect can arise from signaling effects. In her model some voters are informed and others are not. Due to their awareness of their limited memory, voters interpret signals about policies as complementing their limited recall, which lends these policies more weight. While in Panova (2015), the conformism arises from limited information and causes policy persistence, in our (very different) setup the reverse effect can arise: When voters' desire to win is strong, voting for the incumbent becomes more attractive, and this can eliminate inefficient persistence of failing policies.

Our modeling of policies is close to that proposed by Dur (2001), in which repealing an implemented policy is a bad signal to uninformed voters about an incumbent's policy

[7] In economics, Zafar (2011) experimentally highlights that informative conformity matters for decision-making, in the shape of learning about the descriptive norm (i.e., what others are doing). Grodner and Kniesner (2006) study the effect of normative conformity on wages and labor supply. Ding (2017) models normative conformity as the desire to vote like the majority when voting on collective decision-making under the unanimity rule. Pivato (2017) develops a theory of epistemic democracy with correlated voters where the voters influence one another via a social network, because of normative conformity.

competence. This author characterizes the conditions under which the incumbent's optimal choice is always to continue her policy, even if it is a failure. Majumdar and Mukand (2004) study the related issue of policy experimentation by an incumbent. The latter may inefficiently select which policies to experiment, and may inefficiently persist. Unlike Dur (2001), we assume that the incumbent has fully informative and private information on her own policy competence. More importantly, we incorporate partisan voters.

Voters in Dur (2001) and Majumdar and Mukand (2004) have common interests and are treated as a single representative independent voter, which is a standard assumption in the literature (Canes-Wrone et al. 2001). However, partisans form a large share of voters (Swank 1995; Feddersen and Pesendorfer 1996, 1997; Bartels 2000, 2002; Brader and Tucker 2009; Klar 2014; Helland and Sørensen 2015). We thus assume that the incumbent faces three types of voters: the incumbent's partisans, the opponent's partisans, and the independent voters, who are conformists (Bartels 2000). While partisans are passive players by definition, our assumption allows us to model the incumbency advantage that arises from the existence of a larger proportion of partisans for the incumbent. Incumbency advantage is an empirically important feature to model, that turns out to be essential in explaining inefficient policy persistence in our setup.

The remainder of the paper is organized as follows. Section 2 describes the model. Section 3 defines the equilibria we consider as well as the impact of conformism on a voter's choice. Section 4 analyzes how conformism affects these equilibria, and inefficient policy persistence. Section 5 provides results for the special case of an altruistic, socially motivated incumbent. We conclude in section 6.

2 The model

2.1 Electoral timeline

Period 1

- Nature draws the (privately known) type θ of the incumbent, who designs a policy.
- The incumbent privately and fully informatively learns whether the designed policy is a

failure or a success, and publicly decides whether to continue or to repeal it.

• Voters observe the incumbent's decision (but not its appropriateness), and then revise their beliefs about the incumbent.

• The election takes place between the incumbent and an opponent.[8]

Period 2

• The winner of the election implements her policy.

2.2 The voters

A number of voters are *partisans* who always vote for their preferred candidate, independently of the incumbent's policy performance and other voters' actions. The other voters are independent, and *conformists*, who have a desire to 'win' and belong to the majority, in addition to wishing to select the most able candidate. We assume that they are represented by a single representative *independent* voter. This avoids issues related to coordination and to the probability of each single independent voter being pivotal.[9]. We will see that the independent voter's strategy is characterised by a cut-off level on his revised beliefs about the incumbent.

The utility of the independent voter is the expected welfare generated by the second-period policy, plus a 'conformity bonus' W obtained if and only if he has voted for the winner.

2.3 Incumbency advantage and reelection odds

Assumption 1 (Incumbency advantage) *If the independent voter selects the incumbent, she wins with certainty (the opponent cannot win).*[10] *Otherwise, she wins with*

[8]There is no abstention (Callander 2008). If there is a tie, the winner is the opponent. We assume that there is no discount factor for simplicity.

[9]The desire to pick the winner should not systematically override the desire to achieve good policies. To avoid dealing with multiple conditions to ensure that this is true for all configurations, we adopt a representative voter. The literature on voter turnout has often used the concept of the quasi-symmetric mixed-strategy Nash equilibrium in which voters in favor of the same alternative use the same strategy. In our specific context, this boils down to a representative voter. Media coverage, opinion polls and political advertising can serve as coordination devices.

[10]To simplify mathematical expressions, we assume that the opponent can never win without the independent vote, but the analysis could be extended to the more general case in which her probability of wining without support from the independent voters is lower

probability p*,* $p \in (0,1)$.

The independent voter is pivotal with probability $1-p$ (when the incumbent has not enough partisans to guarantee reelection). Probability p (that the incumbent's partisans make up more than $\frac{1}{2}$ of voters) inversely measures the importance of independent voters, and the extent to which policy choices can change the outcome of the election. A lower value of p means greater reelection pressure.

When the independent voter votes for the incumbent with a probability equal to a given threshold $\hat{\mu}^d$, the reelection probability is $e(d) = p + (1-p)\hat{\mu}^d$.

2.4 Policies

There is no conflict of interest in policy choices between voters, or between voters and politicians. However the incumbent is better informed on whether the existing policy should be continued, and continuation is correlated with the incumbent's ability.

- *Ability and policy quality* Each candidate is privately and fully informed about her ability, which can be either $\theta = \theta_H$ (high ability, 'H-type candidate') or $\theta = \theta_L$ (low ability, 'L-type candidate'), where $1 > \theta_H > \theta_L > 0$. Ability measures the chances of the candidate designing a successful policy: θ is the probability that a policy designed by a politician of ability θ is a success. We denote as $\Delta\theta \equiv \theta_H - \theta_L$ the difference in efficiency between the two types of candidate.

The *prior* beliefs about a candidate having a high ability θ_H are μ for the incumbent and μ_o for the opponent. Voters' belief μ_o is randomly drawn from $[0,1]$ according to a c.d.f. $\mathbf{G}(\cdot)$: $[0,1] \to [0,1]$, which we will take to be the uniform distribution over [0,1]. $\mathbf{G}(x_0)$ denotes the probability that x is smaller than x_0.

- *Costs and benefits of policies* At the end of the first period, the incumbent privately learns whether the policy she implemented is a 'success' or a 'failure' (voters will only learn this after the election). The incumbent then decides whether to continue (C) or to repeal (R) her policy, a decision $d \in \{C, R\}$. This decision d leads voters to revise their prior belief from μ to $\mu(d)$ according to Bayes' rule.

than the corresponding probability for the incumbent.

A repealed policy generates zero costs and benefits. A successful period-t policy, if not repealed, generates an expected social benefit b_t: $b_1 \equiv b > 0$, and $b_2 \equiv 1$ by normalization. A failing policy, if not repealed, generates an expected welfare loss $l > 0$. It is socially efficient to repeal a failed policy and to continue a successful one, whatever the capabilities of the incumbent.[11]

• *Policies in period 2* In period 2, because of the absence of reelection concerns, a politician always continues a successful policy (to obtain $b_2 = 1$) and repeals a failing one (to obtain 0). A high-ability, θ_H-type [resp. a low-ability, θ_L-type] politician generates an expected welfare of $\theta_H b_2 + (1-\theta_H)0 = \theta_H$ [resp. θ_L]. The value of electing a high-ability rather than a low-ability candidate thus equals exactly $\Delta\theta$.

2.5 The incumbent's objective

The expected utility of a type θ incumbent ($\theta \in \{\theta_H, \theta_L\}$) is

$$X_1 + \mathbf{E}_\theta B_1(d) + e(d)[X_2 + \mathbf{E}_\theta B_2] + (1-e(d))\, v B^o(d)$$

where

X_t are the rents she derives in period t when in power,

d is her decision to continue ($d = C$) or repeal ($d = R$) the initial policy,

$B_1(d)$ and B_2 are the social benefits she generates when in power,

$vB^o(d)$ is the expected utility she derives when the opponent governs in the second period,

and $e(d) = p + (1-p)\hat{\mu}^d$, $e(d) \in [0,1]$ is her probability of being reelected.

While it is considered that the Constitution provides incentives for political rulers to care about social welfare when in power, it is not clear whether they will also value social welfare when they are replaced by an opponent. We therefore allow for several configurations. This will turn out to be of great significance.

[11] To avoid unlikely configurations we assume that the benefits from continuing a successful policy are large enough so that the incumbent will never want to repeal it to signal her low type. Although the incumbent's type determines her probability of designing successful policies, it does not directly impact which decision d is socially optimal.

The incumbent's expected benefit can be either constant, increasing or decreasing in terms of the expected social benefit $B^o(d)$ generated by the opponent when elected. To simplify the exposition without affecting qualitative results,[12] we model this benefit as equal to $\upsilon B^o(d)$.

Definition 1 (Incumbent motivations) *We use the following terminology:*

- *If $\upsilon = 0$, the incumbent is 'office-motivated' and cares about social benefit only when in power.*
- *If $\upsilon > 0$, the incumbent is 'altruistic' and always values social benefit (and also about the rents derived from being in power)*[13]

3 Voting strategy and equilibrium characteristics

3.1 The independent voter's choice

Recall that the benefit from electing an able politician rather than a low-ability one is

$$\Delta\theta \equiv \theta_H - \theta_L.$$

Conformism provides an additional reward[14] $W (W \geqslant 0)$ if the independent voter votes for the winner. This reward is obtained with certainty when he votes for the incumbent ($\hat{\mu} = 1$) as he is pivotal, but only with probability $1-p$ if he votes for the opponent. This is a crucial way in which conformism and incumbency advantage interact.

An independent voter's utility is

- $\mu(d)\theta_H + (1-\mu(d))\theta_L + W$ when he votes for the incumbent;
- $p[\mu(d)\theta_H + (1-\mu(d))\theta_L] + (1-p)[\mu_o\theta_H + (1-\mu_o)\theta_L + W]$ when he votes for the opponent, who gets elected with probability $(1-p)$.

[12] Our qualitative results depend only on whether the expected benefit enjoyed by the incumbent when not in power, say υ_2^o, is constant, increasing or decreasing in B^o. The assumption of proportionality makes it easier to simplify notations. Regarding the general case, computations are available from the authors upon request.

[13] If $\upsilon < 0$, the incumbent is *confrontational* and wants her opponent to fail when in power, possibly because this will affect other election outcomes or due to strongly divergent values. We do not analyze the case with $\upsilon < 0$, as it does not provide interesting additional insights. Computations for this case are available from authors upon request.

[14] $W = 0$ implies that independent voters are non-conformists.

An independent voter thus reelects the incumbent if and only if [15]

$$\mu(d)\theta_H + (1-\mu(d))\theta_L + W \geqslant p[\mu(d)\theta_H + (1-\mu(d))\theta_L] + (1-p)[\mu_o\theta_H + (1-\mu_o)\theta_L + W],$$

that is:

$$\hat{\mu}^d \equiv \mu(d) + \frac{p}{(1-p)\Delta\theta} W \geq \mu_o.$$

Therefore, in the absence of conformism ($W = 0$), the voter's beliefs about the incumbent are exactly equal to the thresholds on μ_o which ensure that the voter prefers to vote for the incumbent rather than the opponent. This is not the case when voters are conformists ($W > 0$). In such cases ($W > 0$), the condition is weaker when W increases, because less favorable beliefs about the incumbent become sufficient for the independent voter to choose her; ($\mu(d)$ only needs to be larger than $\mu_o - pW/[(1-p)\Delta\theta]$).

Similarly, we can define

$$\hat{\mu} \equiv \mu + \frac{p}{(1-p)\Delta\theta} W.$$

3.2 Conformism advantage and reelection probability

Definition 2 *Because conformism acts as if the voter's beliefs about the ability of the incumbent were improved by* $\frac{p}{(1-p)\Delta\theta}W$*, we call* $\frac{p}{(1-p)\Delta\theta}W$ *'Conformism Advantage'* .

This conformism advantage is independent from policies. It is amplified by both incumbency advantage p and the strength of the desire to win, W, and is reduced when electing a high-ability candidate matters much (when $\Delta\theta$ is large).

The size of this advantage does not depend on the policy adopted by the incumbent, so that conformism and assessment of capabilities are *fully independent* from the point of view of voters.

As a consequence, the probability of the incumbent being reelected by a pivotal independent voter is $Pr(\mu_o \leq \mu(d) + pW/[(1-p)\Delta\theta]) = \mathbf{G}(\mu(d) + pW/[(1-p)\Delta\theta])$.

The overall probability of the incumbent being reelected is

$$e(d) = p + (1-p)\hat{\mu}^d = p + (1-p)\mathbf{G}(\mu(d) + pW/[(1-p)\Delta\theta]).$$

[15] For simplicity, we assume that an independent voter prefers to vote for the incumbent when he sees no difference between the incumbent and her opponent.

Under a uniform distribution of μ_o on [0,1], $\hat{\mu}^d = \mu(d) + pW/[(1-p)\Delta\theta]$ and the overall reelection probability is

$$e(d) = p + (1-p)\cdot\min\{1, \mu(d) + pW/[(1-p)\Delta\theta]\}.$$

Conformism advantage increases the probability of reelection by exactly $pW/\Delta\theta$, when $\hat{\mu}^d$ is strictly lower than 1, with each parameter showing great intuitiveness. When conformism is so strong that $\mu(d) + p/[(1-p)\Delta\theta]W > 1$ for a decision d, the incumbent is certain to be reelected when she takes that decision. Thus, whether $\hat{\mu}^d$ is strictly lower than one (or not) will play a role in the conditions under which pandering emerges.

3.3 Second-period welfare

In case the incumbent is reelected, she generates a social benefit equal to her type in expectation.

If the opponent gets elected, the expected social benefit can be computed, conditional on the opponent being elected against an incumbent of perceived average ability $\hat{\mu}^d$:

If $1 > \hat{\mu}^d > 0$, we have $B^o(d) \equiv E[\mu_o|\mu_o > \hat{\mu}^d]\cdot\theta_H + \{1 - E[\mu_o|\mu_o > \hat{\mu}^d]\}\cdot\theta_L$. Given that μ_o follows a uniform distribution, the independent voter's belief that the opponent is of type θ_H is given by $E[\mu_o|\mu_o > \hat{\mu}^d] = \frac{\int_{\hat{\mu}^d}^1 xg(x)\mathbf{d}x}{1-\hat{\mu}^d} = \frac{1+\hat{\mu}^d}{2}$. Thus,

$$B^o(d) = \frac{\theta_H + \theta_L - (\hat{\mu}^d \cdot \Delta\theta)}{2}. \tag{1}$$

But if $\hat{\mu}^d \geq 1$, because $\mu_o \leq 1$, $E[\mu_o|\mu_o > \hat{\mu}^d] = 0$, then

$$B^o(d) = \theta_L.$$

3.4 Socially efficient and pandering equilibria

The formal definition of a Perfect Bayesian Equilibrium in our game is given in the appendix. [16] We contrast two equilibria. Equilibrium **S** is socially efficient, and semi-separating (fully separating with respect to past policy's success, but not separating with respect to the

[16] Given our assumption that private and social benefits are large enough, both a H- and a L-type incumbent have the same strategy in the equilibria we consider. We therefore omit the incumbent's type in the notations below.

incumbent's type). Equilibrium **P** is an inefficient, pooling equilibrium that corresponds to pandering.

Equilibrium **S** is characterized by

$$\{[(d = C/\text{success}), (d = R/\text{failure})], [Vote(C), Vote(R)], [\mu(C), \mu(R)]\},$$

where $[\mu(C), \mu(R)]$ are the revised beliefs of an independent voter upon observing C and R respectively, and $[Vote(C), Vote(R)]$ are the voting decisions that maximize the voter's utility given that his beliefs are $[\mu(C), \mu(R)]$.

Conversely, in equilibrium **P**, the incumbent hides her information by always continuing the policy even though this is inefficient when the policy is a failure. **P** is characterized by

$$\{[(d = C/\text{success}), (d = C/\text{failure})], [Vote(C), Vote(R)], [\mu(C), \mu(R)]\}$$

and is a pooling equilibrium. In this equilibrium inefficient policy persistence arises, as the incumbent never repeals a failing policy before the election date.

Since $\mu(C) > \mu > \mu(R)$, the 'augmented beliefs' (the thresholds on μ_o such that the voter picks the incumbent) are ranked as follows: $\hat{\mu}^C \geq \hat{\mu} \geq \hat{\mu}^R$.

4 The case of an office-motivated incumbent where $v = 0$

4.1 The socially efficient equilibrium S with $v = 0$

In order for an **S**-equilibrium to exist, the following incentive conditions must be met, so that there is separation with respect to the success of the implemented policy:

- A successful policy should be continued.

  This is because when the $\theta, \theta \in \{\theta_H, \theta_L\}$ type incumbent has observed that her policy is a success, the incumbent's preference is to continue the policy rather than repeal it if and only if:

$$X_1 + b_1 + p(X_2 + \theta) + (1 - p)[G(\hat{\mu}^C)(X_2 + \theta)]$$
$$\geq X_1 + 0 + p(X_2 + \theta) + (1 - p)[G(\hat{\mu}^R)(X_2 + \theta)],$$

which can simplify into the following, always satisfied, inequality:

$$b_1 + (1-p)\cdot[G(\hat{\mu}^C) - G(\hat{\mu}^R)]\cdot(X_2+\theta) \geq 0.$$

- A failing policy should be repealed, whatever the type $\theta, \theta \in \{\theta_H, \theta_L\}$ of the incumbent.

Repealing a failing policy is preferred by a type θ incumbent, if

$$X_1 + 0 + p(X_2+\theta) + (1-p)[G(\hat{\mu}^R)(X_2+\theta)]$$
$$\geq X_1 - l + p(X_2+\theta) + (1-p)[G(\hat{\mu}^C)(X_2+\theta)],$$

which simplifies into

$$\frac{l}{1-p} \geq [G(\hat{\mu}^C) - G(\hat{\mu}^R)]\cdot(X_2+\theta) \qquad (IC)^S_{v=0}$$

For this condition to be met, the loss l caused by continuing a failing policy should more than offset the gain in reelection probability derived from this decision, given the rents obtained from being in power (which are X_2,), and the expected welfare generated when in power (which is θ.).

In the absence of conformism ($W = 0$), the incumbent is never sure of being reelected, since $p < 1/2$. With conformism however, as shown in Table 1, there are sets of parameters whereby the incumbent is sure to be reelected if she continues her policy, or even sure to be reelected whatever her decision.

We distinguish three cases, where $W^C \equiv (1-\mu(C))\Delta\theta\frac{1-p}{p}$ and $W^R \equiv (1-\mu(R))\Delta\theta\frac{1-p}{p}$:

a) Strong conformism: If $W^R \leq W$, the incumbent is sure to be reelected even if she repeals her policy.

b) Intermediate conformism: If $W^C < W < W^R$, an incumbent is sure to be reelected only if she continues her policy.

c) Weak conformism: If $0 \leq W \leq W^C$, the incumbent's probability of being reelected is lower than 1 even if she continues the policy.

Table 1: Re-election probabilities in the **S** equilibrium

Case #	Conformism	Proba. if $d = C$	Proba. if $d = R$	Impact on $(IC)^S_{v=0}$
	W	$G(\hat{\mu}^C)$	$G(\hat{\mu}^R)$	$G(\hat{\mu}^C) - G(\hat{\mu}^R)$
Case *a*)	$W \geq W^R$	1	1	0
Case *b*)	$W^R > W > W^C$	1	$\mu(R) + \frac{pW}{(1-p)\Delta\theta}$	$1 - \mu(R) - \frac{pW}{(1-p)\Delta\theta}$
Case *c*)	$W^C \geq W \geq 0$	$\mu(C) + \frac{pW}{(1-p)\Delta\theta}$	$\mu(R) + \frac{pW}{(1-p)\Delta\theta}$	$\mu(C) - \mu(R)$

Lemma 1 *The gain in reelection probability associated with continuing rather than repealing a policy does not depend on conformism except in Case b).*

In Case *a*), because the incumbent's decision does not affect her reelection probability, she is better off making the efficient choice: She strictly prefers to discontinue a failing policy and continue a successful one. The conditions for **S** to exist are thus always met ($(IC)^S : \frac{l}{1-p} \geq 0$).

In Case *b*), reelection is ensured if the incumbent chooses $d = C$, but depends on the strength of conformism if she chooses $d = R$. Constraint $(IC)^S_{v=0}$ becomes

$$\frac{l}{1-p} \geq [1 - \frac{pW}{(1-p)\Delta\theta} - \mu(R)](X_2 + \theta).$$

This condition directly depends on W.

Furthermore, because of $W > W^C$, we have $\mu(C) > 1 - \frac{pW}{(1-p)\Delta\theta}$, then

$$\mu(C) - \mu(R) > 1 - \frac{pW}{(1-p)\Delta\theta} - \mu(R). \tag{2}$$

In Case *c*), conformism is weak enough for reelection never to be certain. Constraint $(IC)^S_{v=0}$ for each type θ is then

$$\frac{l}{1-p} \geq [\mu(C) - \mu(R)](X_2 + \theta).$$

This constraint is more stringent for a high-ability, H-type ($\theta = \theta_H$). This is because the H-type generates higher value when in power (θ_H instead of θ_L in expectation) and because she cares about the value she herself generates; she has a greater incentive to try to remain in power than a L-type.

Lemma 2 *Given that the incumbent is office-motivated* ($v = 0$)*, weak conformism* ($0 \leq W \leq W^C$) *plays no direct role in the incentive of the incumbent to play efficiently according to* ***S****.*

The above results yield Proposition 1.

Proposition 1 *When the incumbent is office-motivated* ($v = 0$)*, the conditions under which a socially efficient equilibrium* ***S*** *will arise depend on the strength of conformism of the independent voter.*

Case a). Very strong conformism ($W \geq (1-\mu(R))\Delta\theta\frac{1-p}{p}$) *removes the incentive to persist with a failing policy; The* ***S*** *equilibrium always exists.*

Case b). Increases in W for intermediate values ($(1-\mu(C))\Delta\theta\frac{1-p}{p} < W < (1-\mu(R))\Delta\theta\frac{1-p}{p}$) *continuously make the efficient equilibrium more likely to arise.*

Case c). Weak conformism ($0 \leq W \leq (1-\mu(C))\Delta\theta\frac{1-p}{p}$) *corresponds to a the most stringent constraint for* ***S*** *to arise. The constraint does not depend on the value of* W*.*

Proposition 1 demonstrates that when the incumbent is office-motivated, a stronger desire for conformity makes the efficient **S** equilibrium *more likely* to arise, since it makes incentive constraints less stringent when threshold values of W are reached. In addition, greater conformism has a continuous impact within the range corresponding to Case *b*).

When $W > W^C$, because of (2),

$$[\mu(C)-\mu(R)](X_2+\theta) > [1-\frac{pW}{(1-p)\Delta\theta}-\mu(R)](X_2+\theta). \tag{3}$$

Recalling the fact that $[\mu(C)-\mu(R)](X_2+\theta) > 0$, we then have Proposition 2.

Proposition 2 *Given that the incumbent is office-motivated* ($v = 0$)*, compared with* $w = 0$*, when* $W > (1-\mu(C))\Delta\theta\frac{1-p}{p}$*, the condition for a socially-efficient equilibrium* ***S*** *becomes less stringent. However, when* $(1-\mu(C))\Delta\theta\frac{1-p}{p} \geq W > 0$*, the two conditions are the same. In sum, conformism monotonically increases the probability of equilibrium* ***S*** *existing.*

Proposition 2 demonstrates that when the incumbent is office-motivated, if and only if the condition $W > (1-\mu(C))\Delta\theta\frac{1-p}{p}$ is met, the desire for conformity makes the efficient **S** equilibrium *more likely* to arise.

4.2 The pandering equilibrium P with $\nu = 0$

In the pandering equilibrium, the independent voter believes that the incumbent is maintaining her policy independently of her information on its success. Continuing a policy is thus uninformative. We assume that the posterior belief about the incumbent equals the prior μ.

If the incumbent repeals her policy, this is an out-of-equilibrium move. Like Dur (2001), we assume that in that case, the voter concludes that the policy has been a failure and updates the probability of the incumbent being H-type to $\mu(R)$. [17]

In order for a **P**-equilibrium to exist, the following incentive conditions must be met:

- A successful policy should be continued.

  This is because when the $\theta, \theta \in \{\theta_H, \theta_L\}$ type incumbent has observed that her policy is a success, she prefers to continue the policy rather than repeal it if and only if:

$$
\begin{aligned}
&X_1 + b_1 + p(X_2 + \theta) + (1-p)[G(\hat{\mu})(X_2 + \theta)] \\
&\geq X_1 + 0 + p(X_2 + \theta) + (1-p)[G(\hat{\mu}^R)(X_2 + \theta)],
\end{aligned}
$$

  which can simplify into the following, always satisfied, inequality:

$$
b_1 + (1-p) \cdot [G(\hat{\mu}) - G(\hat{\mu}^R)] \cdot (X_2 + \theta) \geq 0.
$$

- A failing policy should also be continued, whatever the type θ of the incumbent.

Continuing a failing policy is preferred by a type θ incumbent, given the equilibrium beliefs μ and out-of-equilibrium beliefs $\mu(R)$, if and only if

$$
\begin{aligned}
&X_1 - l + p(X_2 + \theta) + (1-p)[G(\hat{\mu})(X_2 + \theta)] \\
&\geq X_1 + 0 + p(X_2 + \theta) + (1-p)[G(\hat{\mu}^R)(X_2 + \theta)],
\end{aligned}
$$

which simplifies into

$$
\frac{l}{1-p} \leq [G(\hat{\mu}) - G(\hat{\mu}^R)][X_2 + \theta] \qquad (IC)^P_{\nu=0}.
$$

Table 2: Reelection probabilities in the **P** equilibrium

Case #	Conformism W	Proba. if $d=C$ $G(\hat{\mu})$	Proba. if $d=R$ $G(\hat{\mu}^R)$	Impact on $(IC)^P$ $G(\hat{\mu})-G(\hat{\mu}^R)$
Case $a)$	$W \geq W^R$	1	1	0
Case $b')$	$W^R > W > W^P$	1	$\mu(R)+\frac{pW}{(1-p)\Delta\theta}$	$1-\mu(R)-\frac{pW}{(1-p)\Delta\theta}$
Case $c')$	$W^P \geq W \geq 0$	$\mu+\frac{pW}{(1-p)\Delta\theta}$	$\mu(R)+\frac{pW}{(1-p)\Delta\theta}$	$\mu-\mu(R)$

As in the **S** equilibrium, we can distinguish three cases where $W^P \equiv (1-\mu)\Delta\theta\frac{1-p}{p}$, summarized in table 2. Thus,

In case a') [Strong conformism], the incumbent is sure to get elected even if she repeals her policy. There is then no incentive to distort policy choices away from efficiency and **P** does not exist (this case is the one where playing according to the **S** equilibrium is a strictly dominant strategy, i.e. case a)). Consequently, we have Lemma 3.

Lemma 3 *When $W \geq [1-\mu(R)]\Delta\theta\frac{1-p}{p}$, the pooling equilibrium **P** cannot arise. Strong conformism eliminates pandering.*

This result does not depend on the extent of the benefits b and losses l associated with the chosen policies.

In case b') [Intermediate conformism], the incumbent is sure to get reelected when she continues the policy but not if she plays the out-of-equilibrium strategy $d=R$. Thus, in Case b'), condition $(IC)^P_{v=0}$ concretely is

$$\frac{l}{1-p} < [1-\frac{pW}{(1-p)\Delta\theta}-\mu(R)](X_2+\theta).$$

This condition is more stringent for the L-type: indeed, she generates less surplus when in power in period 2, and thus does not benefit as much from the decision to continue an inefficient policy in order to remain in power. Furthermore, when W increases, the incentive condition is *more difficult* to satisfy.

Moreover, because of $W > W^P$, we have $\mu > 1-\frac{pW}{(1-p)\Delta\theta}$, therefore,

[17] While other assumptions could be made, including passive beliefs, this has a minimal impact on results.

$$\mu - \mu(R) > 1 - \frac{pW}{(1-p)\Delta\theta} - \mu(R). \tag{4}$$

In case c') [Weak conformism]', **P** exists if and only if

$$\frac{l}{1-p} \le [\mu - \mu(R)](X_2 + \theta).$$

We can summarize our results as follows:

Proposition 3 *When the incumbent is office-motivated ($v = 0$), the conditions under which a pandering equilibrium **P** will arise depend on the strength of conformism of the independent voter.*

*Case a$'$). Very strong conformism ($W \ge (1-\mu(R))\Delta\theta\frac{1-p}{p}$) removes the incentive to persist with a failing policy; The **P** equilibrium can never exist.*

Case b$'$). Increases in W for intermediate values ($(1-\mu)\Delta\theta\frac{1-p}{p} < W < (1-\mu(R))\Delta\theta\frac{1-p}{p}$) continuously make the pandering equilibrium less likely to arise.

*Case c$'$). Weak conformism ($0 \le W \le (1-\mu)\Delta\theta\frac{1-p}{p}$) corresponds to the least stringent constraint for **P** to arise. The constraint does not depend on W.*

When $W \ge W^P$, because of (4),

$$[\mu - \mu(R)](X_2 + \theta) > [1 - \frac{pW}{(1-p)\Delta\theta} - \mu(R)](X_2 + \theta). \tag{5}$$

With the fact that $[\mu - \mu(R)](X_2 + \theta) > 0$, we have Proposition 4.

Proposition 4 *Given that when the incumbent is office-motivated ($v = 0$), compared with $w = 0$, when $W > (1-\mu)\Delta\theta\frac{1-p}{p}$, the conditions for a pandering equilibrium **P** become more stringent. However, when $(1-\mu)\Delta\theta\frac{1-p}{p} \ge W > 0$, the two conditions are the same. In sum, conformism monotonically decreases the probability of equilibrium **P** existing.*

Proposition 4 demonstrates that when the incumbent is office-motivated, if and only if the condition $W > (1-\mu)\Delta\theta\frac{1-p}{p}$ is met, the desire for conformity makes the efficient **P** equilibrium *less likely* to arise.

In addition, from Case a) and Case a') we get the effect of conformism on equilibrium existence as Corollary 1.

Corollary 1 *When $W \geq [1-\mu(R)]\Delta\theta(1-p)/p$ and $v = 0$, the **S** equilibrium always exists under the conditions in which **P** does not exist.*

Corollary 1 demonstrates that if the incumbent is office-motivated ($v = 0$), strong conformism provides certainty that the efficient **S** equilibrium exists, and makes it impossible for the inefficient pandering **P** equilibrium to exist. Thus, it implies that a sufficient level of strong conformism improves social welfare with certainty, as it eliminates the incentive to persist with failing policies.

5 The case of an altruistic incumbent where $v = 1$

This section presents the results when the incumbent is 'altruistic' ($v = 1$), in the sense that although she cares about private benefits, she also cares about social welfare, even when not in power. This case is detailed in the appendix as it is more complex than that of an office-motivated incumbent ($v = 0$).

5.1 The social equilibrium S with $v = 1$

The conditions for the socially efficient equilibrium to emerge relate to the size of ego rents compared with thresholds on the benefit b of continuing a good policy and the losses l of not repealing a bad one in the first period. Three different cases need be distinguished according to the strength of the desire to win W. When W is very large, $\hat{\mu}^C = \hat{\mu}^R = 1$: The incumbent gets elected even if she repeals her policy. For intermediate values of W, $\hat{\mu}^C = 1 > \hat{\mu}^R$ so that continuing the policy ensures reelection while repealing it involves the risk of losing the election. Last, for low values of W, $1 > \hat{\mu}^C > \hat{\mu}^R$.

Proposition 5 *When the incumbent is 'altruistic' with $v = 1$, the conditions for **S** to exist are as follows:*
*a) [Strong conformism] When $W \geq [1-\mu(R)]\Delta\theta\frac{1-p}{p}$, **S** exists for $\forall X_2 \geq 0$.*
*b) [Intermediate conformism] When $[1-\mu(R)]\Delta\theta\frac{1-p}{p} > W > [1-\mu(C)]\Delta\theta\frac{1-p}{p}$, **S** exists if and only if*

$$\Phi_b^S < X_2 < \Phi_1^S, \tag{6}$$

where

$$\Phi_b^S \equiv \frac{-b}{(1-p)[1-\hat{\mu}^R]} + \frac{1+\hat{\mu}^R}{2}\Delta\theta,$$

$$\Phi_1^S \equiv \frac{l}{(1-p)[1-\hat{\mu}^R]} - \frac{1-\hat{\mu}^R}{2}\Delta\theta.$$

c) [Weak conformism] When $[1-\mu(C)]\Delta\theta\frac{1-p}{p} \geq W > 0$*, **S** exists if and only if*

$$X_2 < \Phi_2^S \equiv \frac{l}{(1-p)[\hat{\mu}^C-\hat{\mu}^R]} - \frac{\hat{\mu}^C+\hat{\mu}^R}{2}(\theta_H+\theta_L) - \Delta\theta. \tag{7}$$

In order to compare these conditions with the absence of conformism ($W = 0$), we define the upper threshold for X_2 which ensures that a failing policy is repealed (and **S** exists) when $W = 0$:

$$X_2 < \overline{X_2}^0 \equiv \frac{l}{(1-p)[\mu(C)-\mu(R)]} - \frac{\mu(C)+\mu(R)}{2}(\theta_H+\theta_L) - \Delta\theta = \Phi_2^S(W=0) \tag{8}$$

The following figure 1 presents the equilibrium regions in which the horizontal and vertical axes correspond to the levels of independent voters' desire to win and the incumbent's ego rents, for $\Phi_2^S > \Phi_1^S$. [18]

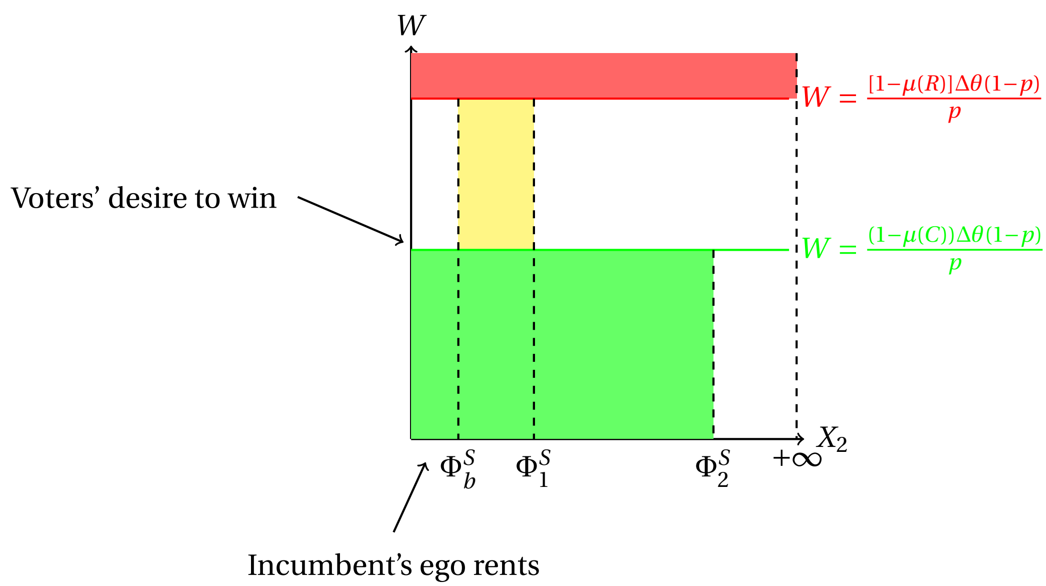

Figure 1: **S**-equilibrium regions with altruism where $\Phi_2^S > \Phi_1^S > \Phi_b^S > 0$.

[18] If $\Phi_2^S \leq \Phi_1^S$ or $\Phi_b^S \leq 0$, the corresponding figures are easy to draw. We omit them here.

The weak desire to win (or 'Weak conformism') affects the existence condition (7) *via* the 'conformism advantage' $\frac{p}{(1-p)\Delta\theta}W$: The characteristics of the equilibria are similar once the independent voter's posterior beliefs are replaced by their version augmented with the conformism advantage.

5.2 The pandering equilibrium P with $v = 1$

We have examined the constraints for the social equilibrium **S** to exist when the incumbent is altruistic. We now explore the constraints for the pandering equilibrium P to exist with an altruistic incumbent.

Proposition 6 *When the incumbent is 'altruistic' ($v = 1$), the constraints for **P** to exist are as follows:*

*a') [Strong conformism]' When $W \geq [1-\mu(R)]\Delta\theta\frac{1-p}{p}$, **P** does not exist.*

*b') [Intermediate conformism]' When $[1-\mu(R)]\Delta\theta\frac{1-p}{p} > W > (1-\mu)\Delta\theta\frac{1-p}{p}$, **P** exists if*

$$X_2 > \Psi_1^P \equiv \frac{l}{(1-p)[1-\hat{\mu}^R]} + \frac{1+\hat{\mu}^R}{2}\Delta\theta. \tag{9}$$

*c') [Weak conformism]' When $(1-\mu)\Delta\theta\frac{1-p}{p} \geq W \geq 0$, **P** exists if*

$$X_2 \geq \Psi_2^P \equiv \frac{l}{(1-p)[\hat{\mu}-\hat{\mu}^R]} - \frac{\hat{\mu}+\hat{\mu}^R}{2}(\theta_H + \theta_L). \tag{10}$$

Note that the last two cases are not defined by the same boundaries as in the **S** equilibrium. We always have $\Psi_2^P < \Psi_1^P$. Figure 2 presents the equilibrium regions where the horizontal and vertical axes correspond to the levels of independent voters' desire to win and the incumbent's ego rents.

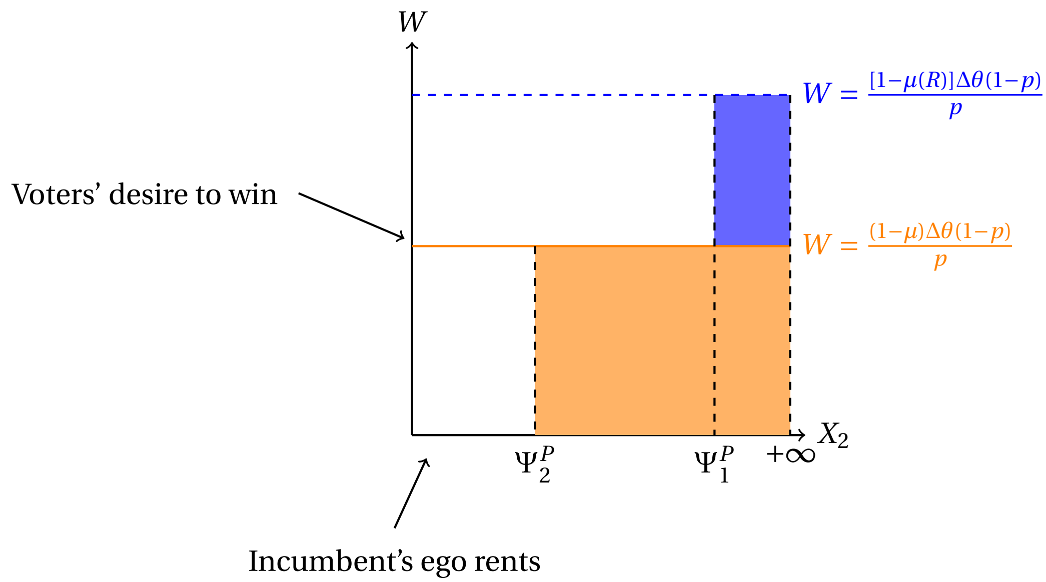

Figure 2: **P**-equilibrium regions with altruism where $\Psi_2^P < \Psi_1^P$.

Note that in the absence of conformism ($W = 0$), the condition for **P** to exist is

$$X_2 > \hat{X}_2{}^0 \equiv \frac{l}{(1-p)[\mu - \mu(R)]} - \frac{\mu + \mu(R)}{2}(\theta_H + \theta_L) = \Psi_1^P(W = 0). \tag{11}$$

5.3 The effect of conformism on policy persistence with $v = 1$

Using Section 5.1, we analyze whether conformism makes equilibrium S more likely to exist.

a) = *a*′) **Strong conformism** When $W \geq [1-\mu(R)]\Delta\theta(1-p)/p$, conformism enlarges the set of parameters whereby the incumbent behaves efficiently.

b) **Intermediate conformism for S** When $[1-\mu(R)]\Delta\theta(1-p)/p > W > [1-\mu(C)]\Delta\theta(1-p)/p$, the conditions for **S** are $X_2 \in [0, \overline{X_2}^0)$ (from condition (8)) and $X_2 \in (\Phi_b^S, \Phi_1^S)$ (from (6)). Conformism induces **S** if $[0, \overline{X_2}^0) \subseteq (\Phi_b^S, \Phi_1^S)$. This requires $\Phi_b^S \leq 0$, i.e., for condition (12) to be satisfied:

$$\frac{2b}{(1-p)\Delta\theta} \geq 1 - (\hat{\mu}^R)^2. \tag{12}$$

When condition (12) is satisfied, continuing the successful policy is preferred to repealing it for a L-type incumbent (independently from X_2).[19]

Consider now the condition for $\Phi_1^S > \overline{X_2}^0$. It is written:

$$\frac{1+\hat{\mu}^R}{2}\Delta\theta + \frac{\mu(C)+\mu(R)}{2}(\theta_H+\theta_L) > \frac{l}{1-p}\{\frac{1}{\mu(C)-\mu(R)} - \frac{1}{1-\hat{\mu}^R}\}, \tag{13}$$

When condition (13) is satisfied, the voter believes that the incumbent is using the **S** strategy. If repealing the failing policy is preferred by the incumbent when voters are nonconformists, then repealing must also be preferred when independent voters are conformists (who more readily vote for the incumbent due to the 'conformism advantage').

Conditions (12) and (13) ensure that $[0, \overline{X_2}^0) \subseteq (\Phi_b^S, \Phi_1^S)$, in which case **S** exists for a larger set of parameters under conformity than without conformity. We have the following result:

When $[1-\mu(R)]\Delta\theta(1-p)/p > W > [1-\mu(C)]\Delta\theta(1-p)/p$, if the conditions (12) and (13) are satisfied, $[0, \overline{X_2}^0) \subseteq (\Phi_b^S, \Phi_1^S)$: Conformism then enlarges the set of parameters whereby the efficient equilibrium **S** exists.

c) **Nonzero weak conformism for S** Assume $[1-\mu(C)]\Delta\theta(1-p)/p \geq W > 0$. Then $X_2 \in [0, \Phi_2^S)$ implies $X_2 \in [0, \overline{X_2}^0)$: A nonzero weak desire for conformity reduces the set of parameters whereby the efficient equilibrium **S** exists, compared with nonconformity.[20]

Similarly, using Section 5.2, we analyze whether conformism makes equilibrium P more likely to exist.

$a) = a'$) **Strong conformism** When $W \geq [1-\mu(R)]\Delta\theta(1-p)/p$, pandering equilibrium P does not exist, which means that conformism eliminates pandering.

b') **Intermediate conformism for P** When $[1-\mu(R)]\Delta\theta(1-p)/p > W > (1-\mu)\Delta\theta(1-p)/p$, $\hat{\mu} = 1 > \hat{\mu}^R$: Continuing the policy ensures that voters prefer the incumbent, while repealing it allows the opponent to win with a non-zero probability. Inefficient policy persistence thus ensures that the incumbent wins in the reelection.

The conditions for the pandering equilibrium to arise are (11): $X_2 \in (\hat{X}_2^{\,0}, +\infty)$ in the absence of conformism, and (9): $X_2 \in (\Psi_1^P, +\infty)$ for conformity. The threshold for pandering is higher under conformism ($\Psi_1^P > \hat{X}_2^{\,0}$ is always met)[21].

[19] A L-type incumbent would only want to repeal a successful policy in order to help the opponent win the election (in order to obtain B^o chosen by a more able politician).

[20] More details can be found in the Lemma 4 from Appendix.

[21] More details are in the Lemma 5 in the Appendix.

When $[1-\mu(R)]\Delta\theta(1-p)/p > W > (1-\mu)\Delta\theta(1-p)/p$, we have $(\Psi_1^P, +\infty) \subseteq (\hat{X}_2{}^0, +\infty)$: Conformism reduces the set of parameters whereby the pandering equilibrium **P** exists.

c') **Nonzero weak conformism for P** When $(1-\mu)\Delta\theta\frac{1-p}{p} \geq W > 0$,$(\hat{X}_2{}^0, +\infty) \subseteq (\Psi_2^P, +\infty)$. Pandering emerges for a larger set of parameters under nonzero weak conformism than in the absence of conformism.[22]

Contrary to the case of an office-motivated incumbent, and very paradoxically, with an altruistic incumbent, nonzero weak conformism (a nonzero weak desire to win) tends to lead to more pandering and is damaging to social interest.

A summary of the various cases yields the following proposition.

Proposition 7 *Conformism has a non-monotonic impact on inefficient policy persistence for an altruistic incumbent.*

- *When W is positive but small, conformism reduces the set of parameters whereby **S** exists (where $0 < W \leq (1-\mu(C))\Delta\theta\frac{1-p}{p}$) and enlarges that whereby **P** exists (where $0 < W \leq (1-\mu)\Delta\theta\frac{1-p}{p}$)) : Nonzero weak conformism degrades social welfare.*
- *When W gets larger, conformity enlarges the set of parameters whereby **S** exists under some conditions[23] and certainly reduces that whereby **P** exists. When the desire to win is such that the 'conformism advantage' is above $1-\mu(R)$, policies are always efficient. In short, intermediate and strong conformism improves social welfare.*

When the incumbent is altruistic, she positively values the social welfare created by her opponent if elected. And this social welfare is lower on average when she does not pander than when she does: Because pandering makes it more difficult for the opponent to win, her expected ability which is conditional on winning against a pandering incumbent, is higher than her expected ability which is conditional on winning against a non-pandering incumbent. And this guarantees that the opponent generates a higher social benefit when elected against a pandering incumbent than when she is more easily elected against a non-pandering incumbent. The incumbent has therefore *more* incentive to pander when she is altruistic, as this increases her welfare when not elected. This effect first increases

[22]More details are in the Lemma 6 in the Appendix.

[23] These are the conditions (12) and (13).

with conformism (since conformism improves the incumbent's advantage and therefore the expected ability of an opponent who manages to get elected). When conformism gets stronger, this altruism-specific effect becomes dominated by the effect (also observable for an office-motivated incumbent) of conformism reducing reelection pressure.

6 Conclusion

Our analysis has shown how the signaling motives of an incumbent depend on the degree to which voters wish to be on the winning side. This result holds even though we have considered a set-up in which conformism does not interact with voters' assessment of the incumbent's qualities. The incumbent's signaling motives may drive her to inefficiently continue failing policies. Because the incumbent benefits from an incumbency advantage, we considered a set-up in which a greater desire to be on the winning side makes the incumbent more likely to get reelected. We have identified a 'conformism advantage' that benefits the incumbent, and which arises from the interaction between incumbency advantage and conformism. This advantage is reduced when the cost of not selecting a high-ability politician increases.

We have shown that the desire for 'conformity' is generally beneficial to social welfare and efficiency when the incumbent is office-motivated. Paradoxically, conformism plays a non-monotonic role in the existence of an equilibrium when the incumbent is 'altruistic' in the sense that she cares about social surplus even when not in power: A nonzero weak desire for conformity then tends to induce more pooling and inefficient persistence, while a strong desire for conformity reduces the reelection pressure felt by the incumbent, and leads to more efficiency and less persistence. A more altruistic incumbent is thus more likely to act in a socially detrimental way than an office-motivated one, when conformism is not very strong.

These effects depend crucially on the existence of an incumbency advantage. In this respect, media coverage, opinion polls and political advertising may all modify the extent of incumbency advantage, with non-trivial consequences on policy persistence and efficiency. A rise in the proportion of voters who are partisans and are not politically volatile can also reinforce the impact of conformism in terms of being on the side of the majority.

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7 Appendix

Definition of an equilibrium

Let $\sigma_S^\theta \in [0,1]$ [resp. σ_F^θ] be the probability that in period 1 the θ-incumbent who observes that her policy is a success [resp. a failure] chooses to continue the policy ($\theta \in \{H, L\}$).

Let $\eta_C \in [0,1]$ [resp. η_R] be the probability that the independent voter votes for the incumbent when he observes that her decision is to continue [resp. repeal] her policy in period 1.

A pure strategy profile $[(\sigma_S^\theta, \sigma_F^\theta)_\theta, (\eta_C, \eta_R)]$ and a belief $(\mu(C), \mu(R))$ constitute a Perfect Bayesian Equilibrium, if the strategy $[(\sigma_S^\theta, \sigma_F^\theta)_\theta, (\eta_C, \eta_R)]$ maximizes each corresponding player's utility given beliefs $(\mu(C), \mu(R))$ and the other players' strategies; and in terms of this Bayesian updating the belief $(\mu(C), \mu(R))$ is consistent with $[(\sigma_S^\theta, \sigma_F^\theta)_\theta, (\eta_C, \eta_R)]$.

Recall that we assume that the gain from continuing a successful policy is large enough for a L-type incumbent not to want to repeal the policy in order to signal her low type – which might be attractive only to an altruistic incumbent. The incumbent's socially efficient policy-making strategy, for all $\theta \in \{H, L\}$, is $(\sigma_S^\theta = 1, \sigma_F^\theta = 0)$: she continues her policy if it is a success, and repeals it if it is a failure. Equilibrium **S** is characterized by $[(\sigma_S^\theta = 1, \sigma_F^\theta = 0)_\theta, (\eta_C, \eta_R), (\mu(C), \mu(R))]$, and the incumbent uses her private information optimally to promote social interest in period 1.

Conversely, in equilibrium **P**, the incumbent hides her information by always continuing the policy even though it is inefficient to do so when the policy is a failure. **P** is characterized by $[(\sigma_S^\theta = 1, \sigma_F^\theta = 1)_\theta, (\eta_C, \eta_R), (\mu(C), \mu(R))]$ and is a pooling equilibrium.

In the main text, because we focus on pure strategy equilibria, we do not need the above notations on probabilities, and directly use the choice made by the incumbent ($d \in \{C, R\}$) and the corresponding decision of the single representative independent voter.

Case $v = 1$. Proof of proposition 5

Proof.

When the incumbent's decision is d and $1 > \hat{\mu}^d > 0$, she updates the expected value of the *prior* probability that a challenger is H-type as $\overline{\hat{\mu}^d}$ and

$$\overline{\hat{\mu}^d} \equiv E[\mu_o | \mu_o > \hat{\mu}^d] = \frac{\int_{\hat{\mu}^d}^1 x g(x) \mathbf{d}x}{1 - \hat{\mu}^d} = \frac{1 + \hat{\mu}^d}{2}.$$

If $\hat{\mu}^d \geq 1$, because of $\mu_o \leq 1$, then $\overline{\hat{\mu}^d} \equiv 0$.

(a)When $W \geq [1 - \mu(R)]\Delta\theta(1-p)/p$, we have $\hat{\mu}^C > \hat{\mu}^R \geq 1$ and $\mathbf{G}(\hat{\mu}^C) = \mathbf{G}(\hat{\mu}^R) = 1$. The incumbent is sure to win even if she repeals her policy. We continue to analyze **S** as in proposition 1.

1. Continuing a successful policy is preferred to repealing it for the H-type incumbent if and only if:

$$X_1 + b + p(X_2 + \theta_H) + (1-p)\mathbf{G}(\hat{\mu}^C)(X_2 + \theta_H)$$

$$> X_1 + 0 + p(X_2 + \theta_H) + (1-p)\mathbf{G}(\hat{\mu}^R)(X_2 + \theta_H)$$

$$\Leftrightarrow \quad b > 0,$$

which is satisfied.

2. Continuing the successful policy is preferred to repealing it for the L-type incumbent if and only if:

$$X_1 + b + p(X_2 + \theta_L) + (1-p)\mathbf{G}(\hat{\mu}^C)(X_2 + \theta_L)$$

$$>$$

$$X_1 + 0 + p(X_2 + \theta_L) + (1-p)\mathbf{G}(\hat{\mu}^R)(X_2 + \theta_L)$$

$$\Leftrightarrow \quad b > 0,$$

which is satisfied.

3. Repealing a failing policy is optimal for the H-type if and only if:

$$X_1 + 0 + p(X_2 + \theta_H) + (1-p)\mathbf{G}(\hat{\mu}^R)(X_2 + \theta_H)$$

$$> X_1 + (-l) + p(X_2 + \theta_H) + (1-p)\mathbf{G}(\hat{\mu}^C)(X_2 + \theta_H)$$

$$\Leftrightarrow \quad l > 0,$$

which is satisfied.

4. Similarly, repealing the failing policy is preferred to continuing it for the L-type incumbent if and only if:

$$X_1 + 0 + p(X_2 + \theta_L) + (1-p)\mathbf{G}(\hat{\mu}^R)(X_2 + \theta_L)$$

$$> X_1 + (-l) + p(X_2 + \theta_L) + (1-p)\mathbf{G}(\hat{\mu}^C)(X_2 + \theta_L)$$

$$\Leftrightarrow \quad l > 0,$$

which is satisfied.

When $W \geq [1-\mu(R)]\Delta\theta(1-p)/p$, **S** always exists.

(b)When $[1-\mu(R)]\Delta\theta(1-p)/p > W > [1-\mu(C)]\Delta\theta(1-p)/p$, $\hat{\mu}^C > 1 > \hat{\mu}^R$, $\mathbf{G}(\hat{\mu}^C) = 1 > \mathbf{G}(\hat{\mu}^R)$. The incumbent is certain to win in the reelection only if she continues the policy. Recalling that $v = 1$ and the definition of equation (1), we continue to consider the conditions of **S**.

1. Continuing a successful policy is preferred to repealing it for a H-type incumbent if and only if:

$$X_1 + b + p(X_2+\theta_H) + (1-p)\mathbf{G}(\hat{\mu}^C)(X_2+\theta_H)$$

$$> X_1 + 0 + p(X_2+\theta_H) + (1-p)\{\mathbf{G}(\hat{\mu}^R)(X_2+\theta_H) + [1-\mathbf{G}(\hat{\mu}^R)]\underbrace{[\overline{\hat{\mu}^R}\theta_H + (1-\overline{\hat{\mu}^R})\theta_L]}_{1\cdot B^o(R)}\}$$

$$\Leftrightarrow b + (1-p)(1-\hat{\mu}^R)[X_2 + \frac{1-\hat{\mu}^R}{2}\Delta\theta] > 0. \tag{14}$$

The first term in (14) (the effect of continuing the successful welfare policy in period 1) is positive. The second term in (14) is the effect of the H-type incumbent's decision on her probability of reelection, and thus on her expected utility after reelection. Since $1 > \hat{\mu}^R$, the second term is positive. Hence the condition (14) is met. Note that because of $v = 1$, we mark with $1 \cdot B^o(R)$ the expected utility that the incumbent derives when her opponent governs in the second period. For simplicity, we will omit this kind of remark in the rest of the appendix.

2. Similarly, continuing the successful policy is preferred to repealing it for the L-type incumbent if and only if:

$$X_1 + b + p(X_2+\theta_L) + (1-p)\mathbf{G}(\hat{\mu}^C)(X_2+\theta_L)$$

$$> X_1 + 0 + p(X_2+\theta_L) + (1-p)\{\mathbf{G}(\hat{\mu}^R)(X_2+\theta_L) + [1-\mathbf{G}(\hat{\mu}^R)][\overline{\hat{\mu}^R}\theta_H + (1-\overline{\hat{\mu}^R})\theta_L]\}$$

$$\Leftrightarrow b + (1-p)(1-\hat{\mu}^R)\{X_2 - \frac{1+\hat{\mu}^R}{2}\Delta\theta\} > 0. \tag{15}$$

Condition (15) holds if and only if:

$$X_2 > \frac{-b}{(1-p)(1-\hat{\mu}^R)} + \frac{1+\hat{\mu}^R}{2}\Delta\theta.$$

3. When the incumbent has observed that her policy is a failure, repealing the policy is optimal for the H-type if and only if:

$$X_1 + 0 + p(X_2+\theta_H) + (1-p)\{\mathbf{G}(\hat{\mu}^R)(X_2+\theta_H) + [1-\mathbf{G}(\hat{\mu}^R)][\overline{\hat{\mu}^R}\theta_H + (1-\overline{\hat{\mu}^R})\theta_L]\}$$

$$> X_1 + (-l) + p(X_2+\theta_H) + (1-p)\mathbf{G}(\hat{\mu}^C)(X_2+\theta_H)$$

$$\Leftrightarrow l + (1-p)(\hat{\mu}^R - 1)[X_2 + \frac{1-\hat{\mu}^R}{2}\Delta\theta] > 0. \tag{16}$$

The H-type incumbent prefers to repeal the failing policy if and only if (16) is met, i.e.,

$$X_2 < \frac{l}{(1-p)[1-\hat{\mu}^R]} - \frac{1-\hat{\mu}^R}{2}\Delta\theta.$$

4. Repealing the failing policy is preferred by the L-type incumbent if and only if:

$$X_1 + 0 + p(X_2+\theta_L) + (1-p)\{\mathbf{G}(\hat{\mu}^R)(X_2+\theta_L) + [1-\mathbf{G}(\hat{\mu}^R)][\overline{\hat{\mu}^R}\theta_H + (1-\overline{\hat{\mu}^R})\theta_L]\}$$
$$> X_1 + (-l) + p(X_2+\theta_L) + (1-p)\mathbf{G}(\hat{\mu}^C)(X_2+\theta_L)$$

$$\Leftrightarrow l + (1-p)[\hat{\mu}^R - 1][X_2 - \frac{1+\hat{\mu}^R}{2}\Delta\theta] > 0. \tag{17}$$

Therefore, the incumbent prefers to repeal her failing policy if and only if the condition (17) holds, i.e.,

$$X_2 < \frac{l}{(1-p)[1-\hat{\mu}^R]} + \frac{1+\hat{\mu}^R}{2}\Delta\theta.$$

S exists if and only if the conditions (15), (16) and (17) hold, i.e.,

$$\frac{-b}{(1-p)[1-\hat{\mu}^R]} + \frac{\Delta\theta}{2}[1+\hat{\mu}^R] < X_2 < \Phi_1^S, \tag{18}$$

$$\Phi_1^S \equiv \frac{l}{(1-p)[1-\hat{\mu}^R]} - \frac{\Delta\theta}{2}[1-\hat{\mu}^R],$$

(c)When $[1-\mu(C)]\Delta\theta(1-p)/p \geq W \geq 0$, $1 > \hat{\mu}^C > \hat{\mu}^R$, $1 > \mathbf{G}(\hat{\mu}^C) > \mathbf{G}(\hat{\mu}^R)$. This means that the incumbent cannot win the reelection with certainty through her decision.

1. Continuing a successful policy is preferred to repealing it for the H-type incumbent if and only if:

$$X_1 + b + p(X_2+\theta_H) + (1-p)\{\mathbf{G}(\hat{\mu}^C)(X_2+\theta_H) + [1-\mathbf{G}(\hat{\mu}^C)][\overline{\hat{\mu}^C}\theta_H + (1-\overline{\hat{\mu}^C})\theta_L]\}$$
$$> X_1 + 0 + p(X_2+\theta_H) + (1-p)\{\mathbf{G}(\hat{\mu}^R)(X_2+\theta_H) + [1-\mathbf{G}(\hat{\mu}^R)][\overline{\hat{\mu}^R}\theta_H + (1-\overline{\hat{\mu}^R})\theta_L]\}$$

$$\Leftrightarrow b + (1-p)[\hat{\mu}^C - \hat{\mu}^R][X_2 + \frac{\hat{\mu}^C + \hat{\mu}^R}{2}(\theta_H+\theta_L) + \Delta\theta] > 0.$$

Since $\hat{\mu}^C > \hat{\mu}^R$, the condition is always met.

2. Continuing a successful policy is preferred to repealing it for the L-type incumbent if and only if:

$$X_1 + b + p(X_2 + \theta_L) + (1-p)\{\mathbf{G}(\hat{\mu}^C)(X_2 + \theta_L) + [1 - \mathbf{G}(\hat{\mu}^C)][\overline{\hat{\mu}^C}\theta_H + (1 - \overline{\hat{\mu}^C})\theta_L]\}$$

$$> X_1 + 0 + p(X_2 + \theta_L) + (1-p)\{\mathbf{G}(\hat{\mu}^R)(X_2 + \theta_L) + [1 - \mathbf{G}(\hat{\mu}^R)][\overline{\hat{\mu}^R}\theta_H + (1 - \overline{\hat{\mu}^R})\theta_L]\}$$

$$\Leftrightarrow b + (1-p)[\hat{\mu}^C - \hat{\mu}^R][X_2 + \frac{\hat{\mu}^C + \hat{\mu}^R}{2}(\theta_H + \theta_L)] > 0.$$

This condition is always satisfied.

3. Repealing a failing policy is optimal for the H-type if and only if:

$$X_1 + 0 + p(X_2 + \theta_H) + (1-p)\{\mathbf{G}(\hat{\mu}^R)(X_2 + \theta_H) + [1 - \mathbf{G}(\hat{\mu}^S(R))][\overline{\hat{\mu}^R}\theta_H + (1 - \overline{\hat{\mu}^R})\theta_L]\}$$

$$> X_1 + (-l) + p(X_2 + \theta_H) + (1-p)\{\mathbf{G}(\hat{\mu}^C)(X_2 + \theta_H) + [1 - \mathbf{G}(\hat{\mu}^S(C))][\overline{\hat{\mu}^C}\theta_H + (1 - \overline{\hat{\mu}^C})\theta_L]\}$$

$$\Leftrightarrow l + (1-p)[\hat{\mu}^R - \hat{\mu}^C][X_2 + \frac{\hat{\mu}^R + \hat{\mu}^C}{2}(\theta_H + \theta_L) + \Delta\theta] > 0. \tag{19}$$

Condition (19) is not always satisfied. It holds if and only if

$$X_2 < \frac{l}{(1-p)[\hat{\mu}^C - \hat{\mu}^R]} - \frac{\hat{\mu}^C + \hat{\mu}^R}{2}(\theta_H + \theta_L) - \Delta\theta.$$

4. Repealing a failing policy is preferred to continuing it for the L-type incumbent if and only if:

$$X_1 + 0 + p(X_2 + \theta_L) + (1-p)\{\mathbf{G}(\hat{\mu}^R)(X_2 + \theta_L) + [1 - \mathbf{G}(\hat{\mu}^R)][\overline{\hat{\mu}^R}\theta_H + (1 - \overline{\hat{\mu}^R})\theta_L]\}$$

$$> X_1 + (-l) + p(X_2 + \theta_L) + (1-p)\{\mathbf{G}(\hat{\mu}^C)(X_2 + \theta_L) + [1 - \mathbf{G}(\hat{\mu}^C)][\overline{\hat{\mu}^C}\theta_H + (1 - \overline{\hat{\mu}^C})\theta_L]\}$$

$$\Leftrightarrow l + (1-p)[\hat{\mu}^R - \hat{\mu}^C][X_2 + \frac{\hat{\mu}^C + \hat{\mu}^R}{2}(\theta_H + \theta_L)] > 0. \tag{20}$$

Therefore, condition (20) is satisfied if and only if

$$X_2 < \frac{l}{(1-p)[\hat{\mu}^C - \hat{\mu}^R]} - \frac{\hat{\mu}^C + \hat{\mu}^R}{2}(\theta_H + \theta_L).$$

The optimal decision by both types of incumbent is to continue the successful policy and repeal the failing policy if and only if the two conditions (19) and (20) hold:

$$X_2 < \Phi_2^S \equiv \frac{l}{(1-p)[\hat{\mu}^C - \hat{\mu}^R]} - \frac{\hat{\mu}^C + \hat{\mu}^R}{2}(\theta_H + \theta_L) - \Delta\theta. \tag{21}$$

This proves proposition 5. ■

Case $v = 1$. Proof of proposition 6

Proof.

Consider $\overline{\hat{\mu}}$, i.e., given $1 > \hat{\mu} > 0$,

$$\overline{\hat{\mu}} \equiv E[\mu_o|\mu_o > \hat{\mu}] = \frac{\int_{\hat{\mu}}^{1} xg(x)\mathbf{d}x}{1-\hat{\mu}} = \frac{1+\hat{\mu}}{2};$$

Given $\hat{\mu} \geq 1$, $\overline{\hat{\mu}} \equiv 0$.

(a)When $W \geq [1-\mu(R)]\Delta\theta(1-p)/p$, $\hat{\mu} > \hat{\mu}^R \geq 1$, and $\mathbf{G}(\hat{\mu}) = \mathbf{G}(\hat{\mu}^R) = 1$. This means that the incumbent definitely wins the reelection even if she repeals her policy.

Continuing a failing policy is optimal for the H-type incumbent if and only if:

$$X_1 + (-l) + p(X_2 + \theta_H) + (1-p)\mathbf{G}(\hat{\mu})(X_2 + \theta_H)$$
$$> X_1 + 0 + p(X_2 + \theta_H) + (1-p)\{\mathbf{G}(\hat{\mu}^R)(X_2 + \theta_H) + [1 - G(\hat{\mu}^R)][\overline{\hat{\mu}^R} h + (1 - \overline{\hat{\mu}^R})\theta_L]\}$$

$$\Leftrightarrow \quad -l > 0.$$

This condition cannot hold. The H-type incumbent would never repeal her failing policy. Therefore, **P** does not exist.

(b)When $[1-\mu(R)]\Delta\theta(1-p)/p > W > (1-\mu)\Delta\theta(1-p)/p$, $\hat{\mu} \geq 1 > \hat{\mu}^R$, $\mathbf{G}(\hat{\mu}) = 1 > \mathbf{G}(\hat{\mu}^R)$. This means that the incumbent definitely wins the reelection only if she continues her policy. We continue to consider the conditions of **P**.

1. Continuing a successful policy is optimal for the H-type incumbent if and only if:

$$X_1 + b + p(X_2 + \theta_H) + (1-p)\mathbf{G}(\hat{\mu})(X_2 + \theta_H)$$
$$> X_1 + 0 + p(X_2 + \theta_H) + (1-p)\{\mathbf{G}(\hat{\mu}^R)(X_2 + \theta_H) + [1 - \mathbf{G}(\hat{\mu}^R)][\overline{\hat{\mu}^R}\theta_H + (1 - \overline{\hat{\mu}^R})\theta_L]\}$$

$$\Leftrightarrow b + (1-p)[1 - \hat{\mu}^R][X_2 + \frac{1-\hat{\mu}^R}{2}\Delta\theta] > 0,$$

which holds.

2. Similarly, continuing a successful policy is preferred to repealing it for the L-type incumbent if and only if:

$$X_1 + b + p(X_2 + \theta_L) + (1-p)\mathbf{G}(\hat{\mu})(X_2 + L\theta_)$$
$$> X_1 + 0 + p(X_2 + \theta_L) + (1-p)\{\mathbf{G}(\hat{\mu}^R)(X_2 + \theta_L) + [1 - \mathbf{G}(\hat{\mu}^R)][\overline{\hat{\mu}^R}\theta_H + (1 - \overline{\hat{\mu}^R})\theta_L]\}$$

$$\Leftrightarrow b + (1-p)[1-\hat{\mu}^R][X_2 - \frac{1+\hat{\mu}^R}{2}\Delta\theta] > 0. \tag{22}$$

It holds if and only if

$$X_2 > \frac{-b}{(1-p)[1-\hat{\mu}^R]} + \frac{1+\hat{\mu}^R}{2}\Delta\theta.$$

3. Continuing a failing policy is optimal for the H-type incumbent if and only if:

$$X_1 + (-l) + p(X_2 + \theta_H) + (1-p)\mathbf{G}(\hat{\mu})(X_2 + \theta_H)$$

$$> X_1 + 0 + p(X_2 + \theta_H) + (1-p)\{\mathbf{G}(\hat{\mu}^R)(X_2 + \theta_H) + [1 - \mathbf{G}(\hat{\mu}^R)][\overline{\hat{\mu}^R}\theta_H + (1 - \overline{\hat{\mu}^R})\theta_L]\}$$

$$\Leftrightarrow -l + (1-p)[1-\hat{\mu}^R][X_2 + \frac{1-\hat{\mu}^R}{2}\Delta\theta] > 0, \tag{23}$$

i.e.,

$$X_2 > \frac{l}{(1-p)[1-\hat{\mu}^R]} - \frac{1-\hat{\mu}^R}{2}\Delta\theta.$$

4. Similarly, continuing a failing policy is preferred for the L-type incumbent if and only if:

$$X_1 + (-l) + p(X_2 + \theta_L) + (1-p)\mathbf{G}(\hat{\mu})(X_2 + \theta_L)$$

$$> X_1 + 0 + p(X_2 + \theta_L) + (1-p)\{\mathbf{G}(\hat{\mu}^R)(X_2 + \theta_L) + [1 - \mathbf{G}(\hat{\mu}^R)][\overline{\hat{\mu}^R}\theta_H + (1 - \overline{\hat{\mu}^R})\theta_L]\}$$

$$\Leftrightarrow -l + (1-p)[1-\hat{\mu}^R][X_2 - \frac{1+\hat{\mu}^R}{2}\Delta\theta] > 0, \tag{24}$$

which holds if and only if

$$X_2 > \frac{l}{(1-p)[1-\hat{\mu}^S(R)]} + \frac{1+\hat{\mu}^R}{2}\Delta\theta.$$

In conclusion, **P** exists, if and only if conditions (22), (23) and (24) are simultaneously satisfied. Because $b > 0 > -l$, if condition (24) is satisfied, so is condition (22). The conditions become

$$X_2 > \Psi_1^P \equiv \frac{l}{(1-p)[1-\hat{\mu}^R]} + \frac{1+\hat{\mu}^R}{2}\Delta\theta. \tag{25}$$

(c)When $(1-\mu)\Delta\theta(1-p)/p \geq W \geq 0$, $1 > \hat{\mu} > \hat{\mu}^R$, $1 > \mathbf{G}(\hat{\mu}) > \mathbf{G}(\hat{\mu}^R)$.

1. Continuing a successful policy is optimal for the H-type incumbent if and only if:

$$b+(1-p)\{[\hat{\mu}-\hat{\mu}^R][X_2+\frac{\hat{\mu}+\hat{\mu}^R}{2}(\theta_H+\theta_L)+\Delta\theta]\}>0,$$

   which obviously holds.

2. Similarly, continuing a successful policy is preferred by the L-type incumbent if and only if:

$$b+(1-p)[\hat{\mu}-\hat{\mu}^R][X_2+\frac{\hat{\mu}+\hat{\mu}^R}{2}(\theta_H+\theta_L)]>0,$$

   which holds

3. Continuing a failing policy is optimal for the H-type incumbent if and only if:

$$-l+(1-p)[\hat{\mu}-\hat{\mu}^R][X_2+\frac{\hat{\mu}+\hat{\mu}^R}{2}(\theta_H+\theta_L)+\Delta\theta]>0. \quad (26)$$

   Hence condition (26) holds if the H-type incumbent has a sufficiently high ego rent X_2 and the policy outcome benefit from repealing the faithful policy c is sufficiently small, i.e.,

$$X_2>\frac{l}{(1-p)[\hat{\mu}-\hat{\mu}^R]}-\frac{\hat{\mu}+\hat{\mu}^R}{2}(\theta_H+\theta_L)-\Delta\theta.$$

4. Similarly, continuing a failing policy is preferred to repealing it for the L-type incumbent if and only if:

$$-l+(1-p)[\hat{\mu}-\hat{\mu}^R][X_2+\frac{\hat{\mu}+\hat{\mu}^R}{2}(\theta_H+\theta_L)]>0. \quad (27)$$

   Condition (27) holds if and only if

$$X_2>\frac{l}{(1-p)[\hat{\mu}-\hat{\mu}^R]}-\frac{\hat{\mu}+\hat{\mu}^R}{2}(\theta_H+\theta_L).$$

To sum up, **P** exists if and only if functions (26) and (27) are simultaneously satisfied, i.e.,

$$X_2>\Psi_2^P\equiv\frac{l}{(1-p)[\hat{\mu}-\hat{\mu}^R]}-\frac{\hat{\mu}+\hat{\mu}^R}{2}(\theta_H+\theta_L). \quad (28)$$

■

Lemma 4 *Assume* $[1-\mu(C)]\Delta\theta(1-p)/p\geq W>0$ *and* $\nu=1$. *Then* $X_2\in(0,\Phi_2^S)$ *implies* $X_2\in(0,\overline{X_2}^0)$*: A nonzero weak desire for conformity reduces the set of parameters whereby the efficient equilibrium* ***S*** *exists, compared with the absence of conformity.*

Proof of Lemma 4 where $v = 1$.

Proof. Because of $\frac{[1-\mu(C)]\Delta\theta(1-p)}{p} \geq W > 0$,

$$1 \geq \hat{\mu}^C > \hat{\mu}^R.$$

Because $h > l$,

$$1 \geq \hat{\mu}^C - \hat{\mu}^R = \mu(C) - \mu(R) > 0. \tag{29}$$

Because of (8), (7) and $\hat{\mu}^d \equiv \mu(d) + \frac{p}{(1-p)\Delta\theta} W$, we have

$$\Phi_2^S < \overline{X_2}^0$$

Therefore,

$$(0, \Phi_2^S) \subset (0, \overline{X_2}^0).$$

This proves Lemma 4.

■

Lemma 5 *When* $[1-\mu(R)]\Delta\theta(1-p)/p > W > (1-\mu)\Delta\theta(1-p)/p$ *and* $v = 1$ *, we have* $(\Psi_1^P, +\infty) \subseteq (\hat{X}_2{}^0, +\infty)$*: Conformism reduces the set of parameters whereby the pandering equilibrium* ***P*** *exists.*

Proof of Lemma 5 when $v = 1$.

Proof.

The threshold for pandering is higher under conformity if $\Psi_1^P > \hat{X}_2{}^0$. This holds if and only if

$$\frac{1}{2}[1+\hat{\mu}^R]\Delta\theta + \frac{\mu+\mu(R)}{2}(\theta_H + \theta_L) > \frac{l}{1-p}\Big[\frac{1}{\mu-\mu(R)} - \frac{1}{1-\hat{\mu}^R}\Big]. \tag{30}$$

Replacing $\hat{\mu}^R$ by its expression $\mu(R) + \frac{p}{\Delta\theta(1-p)} W$, we can rewrite condition (31) as

$$\frac{1}{2}[1+\mu(R) + \frac{p}{1-p}W]\Delta\theta + \frac{\mu+\mu(R)}{2}(\theta_H+\theta_L) > \frac{l}{1-p} \cdot \frac{1-\mu(R) - \frac{p}{(1-p)\Delta\theta}W - [\mu-\mu(R)]}{[\mu-\mu(R)][1-(\mu(R)+\frac{p}{(1-p)\Delta\theta}W)]}, \tag{31}$$

All terms on the left of (31) are positive. The right of (31) simplifies into $\frac{l}{1-p} \cdot \frac{1-\mu-\frac{p}{(1-p)\Delta\theta}W}{[\mu-\mu(R)][1-\mu(R)-\frac{p}{(1-p)\Delta\theta}W]}$ which is negative on the interval we are considering: $[1-\mu(R)]\Delta\theta(1-p)/p > W > (1-\mu)\Delta\theta(1-p)/p$.

The inequality if thus always satisfied, which proves Lemma 5.

■

Lemma 6 *When* $(1-\mu)\Delta\theta\frac{1-p}{p} \geq W > 0$ *and* $v = 1$, $(\hat{X}_2{}^0, +\infty) \subseteq (\Psi_2^P, +\infty)$. *Pandering emerges for a larger set of parameters under nonzero weak conformism than in the absence of conformism.*

Proof of Lemma 6 when $v = 1$.

Proof. Because of $(1-\mu)\Delta\theta(1-p)/p \geq W > 0$,

$$1 \geq \hat{\mu} > \hat{\mu}^R.$$

Because $h > l$,

$$1 > \hat{\mu} - \hat{\mu}^R = \mu - \mu(R) > 0. \tag{32}$$

Inspired by (11), (10), $\hat{\mu} \equiv \mu + \frac{p}{(1-p)\Delta\theta} W$ and $\hat{\mu}^R \equiv \mu(R) + \frac{p}{(1-p)\Delta\theta} W$,

thus, $\Psi_2^P < \hat{X}_2{}^0$.

This means $(\hat{X}_2{}^0, +\infty) \subseteq (\Psi_2^P, +\infty)$. This proves Lemma 6. ■