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ABSTRACT

The role of citizens' initiatives figures prominently in contemporary debates on constitutional change. A basic question is why are initiatives necessary in a representative democracy where candidates must already compete for the right to control policy? This paper offers one answer to this question. In a representative democracy, the bundling of issues together with the fact that citizens have only one vote, means that policy outcomes on specific issues may diverge far from what the majority of citizens want. In such circumstances, allowing citizens to put legislation directly on the ballot, permits the "unbundling" of these issues, which forces a closer relationship between policy outcomes and popular preferences. To the extent that it is considered socially undesirable for outcomes on specific issues to stray too far from what the majority wants, this creates a role for citizens' initiatives.

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1 Introduction

An intriguing constitutional device observed in some representative democracies is the *citizens' initiative* – a form of direct democracy that permits citizens to place legislative proposals on the ballot.[1] If passed, an initiative binds the elected representatives and hence reduces policy maker discretion relative to a pure representative democracy. To place an initiative on the ballot, a citizen (or group of citizens) must present a petition signed by some required fraction of the electorate.[2] Some form of initiative is currently permitted in twenty-four of the United States.[3]

In spite of the extensive practical experience of initiatives in the United States and elsewhere, there is still much debate about their role. Advocates of initiatives see them as a valuable supplement to representative government, permitting citizens to have a more direct say in policy determination. Critics argue that initiatives are primarily exploited by special interests, and that voters are insufficiently informed to decide on complex policy issues. This results in money having undue influence in the initiative process (see, for example, Broder (2000)). Moreover, initiatives cause ballot clutter and may lead to the exploitation of minorities.

To assess these debates requires an understanding of why initiatives are necessary in a representative democracy where candidates must already compete for the right to control policy. In other words, it is necessary to identify the source of the failure in electoral competition that initiatives will remedy. This paper develops a perspective on this issue. In a representative democracy, the bundling of issues together with the fact that citizens have only one vote, means that policy outcomes on specific issues may diverge far from what the majority of citizens want. In such circumstances, allowing citizens to put legislation directly on the ballot, permits the "unbundling" of these issues, which forces a closer relationship between policy outcomes and popular preferences. To the extent that it is considered socially undesirable for

[1] Such proposals are variously referred to as citizens' initiatives, ballot initiatives, or voter initiatives.

[2] See, for example, Bowler, Donavan and Tolbert (1999) Table 2.1. Statutory initiatives in the United States require between 2% and 15% of the voting population to sign a petition before an initiative can be placed.

[3] Twenty three of these states adopted the initiative between 1898 and 1959 with Missippi being the most recent state to adopt the initiative in 1992. Apart from the United States, Switzerland is perhaps the most important example of an advanced democracy that makes significant use of initiatives.

outcomes on specific issues to stray too far from what the majority wants, this creates a role for citizens' initiatives.

Our argument is developed using a simple model of electoral competition in which two parties, comprised of policy-motivated citizens, compete by selecting candidates. Candidates are characterized by their policy preferences which determine their policy choices if elected (as in Osborne and Slivinski (1996) and Besley and Coate (1997)). The winning candidate determines two policy issues: public spending and a regulation (for example, gun control). We identify three reasons why, in the absence of initiatives, the winning candidate's stance on regulation need not be congruent with the preferences of a majority of voters. Each source of non-congruence relies on the fact that the elected representative is responsible for choosing both public spending and the regulation. The model is then extended to allow citizens to place legislation concerning the regulation directly on the ballot. We show that this yields a regulatory policy outcome that is closer to majority preferences in cases where non-congruence would otherwise obtain. There are two possible avenues of influence. Initiatives may work *directly* by removing discretion over regulation from the elected representative. They may also work *indirectly* whereby the threat of an initiative changes the regulatory stance of the candidates that parties select.

A number of other papers have explored the role of initiatives in combatting non-majoritarian policy outcomes when representatives have preferences that are not congruent with those of the majority. For example, Gerber (1996) shows how a legislature that does not represent the median view on an issue can be called to account by a citizens' initiative. She makes the observation that a legislature may act pre-emptively, passing a majority preferred policy to avoid an initiative. Similarly, Denzau, Mackay and Weaver (1981) show how initiatives constrain agenda setting politicians with non-majoritarian preferences.[4] However, these papers start with the assumption that elected representatives do not hold the majority view, thereby skirting the question of why initiatives fill a role that electoral competition cannot.

[4] Matsusaka and McCarty (1999) point out that initiatives may induce legislators with majoritarian preferences to compromise in a non-majoritarian direction if they are uncertain of voters preferences. Imagine, for example, that the gambling industry favors looser regulations and can place an initiative eliminating all regulations. Then if legislators do not know how voters would vote on such an initiative, they may favor loosening regulations to forestall the industry placing the initiative. This point applies with even greater force if money can induce voters to vote against their true interests.

The analysis developed here is complementary with other perspectives on the role of initiatives that have been developed in prior work. Looking back at the introduction of initiatives in the United States at the turn of the twentieth century, their perceived role was to limit the power of special interests (see, for example, Magleby (1984)). If special interests bribe policy-makers to support legislation *after* they have been elected, then elections have limited ability to combat interest group influence (Besley and Coate (2001)). By allowing citizens to bypass the legislature, initiatives can facilitate anti-special interest legislation. A further argument for initiatives is that they counteract the effects of log-rolling in legislatures (Matsusaka (1995)). A policy that benefits citizens in a minority of districts, may be passed if representatives in the minority districts purchase the votes of representatives in the majority districts by promising to vote for bills they favor. An initiative allows citizens to strike down such legislation.[5]

The organization of the remainder of the paper is as follows. The next section lays out our model and section 3 explains why the multi-dimensional nature of electoral competition can lead to non-majoritarian outcomes on specific policy issues. Section 4 introduces initiatives and shows how they can restore majoritarian outcomes in these circumstances. Section 5 identifies some caveats to the argument and section 6 concludes.

2 The Model

2.1 Government policies

Consider a community that must decide on two issues: public spending and a regulation. The level of public spending is denoted by g and the regulation by $r \in \{0, 1\}$. The regulation can be interpreted broadly, for example as an economic issue like affirmative action or a non-economic issue like gun control. Let $r = 1$ if the restriction or rule is in place and $r = 0$ otherwise.

Citizens' preferences differ over the two issues. On public spending, there are two preference types indexed by $k \in \{L, R\}$ where L denotes "left wing"

[5] Matsusaka (1992) addresses the positive question of what kinds of issues will be decided by initiative (as opposed to elected representatives). He argues that issues that are controversial and not too technical, such as banning bilingual education, will tend to be tackled via initiative. This is because legislators prefer to avoid making decisions on controversial issues, but very technical issues are too complicated to be settled via initiative.

and R "right wing". A citizen of spending preference type k obtains a net benefit $b(g;k)$ from public spending level g. The function $b(\cdot;k)$ is single-peaked with a unique maximum $g^*(k) > 0$. Left-wingers have a higher demand for public spending; i.e., $g^*(L) > g^*(R)$. There are also two preference types with respect to the regulation. These are indexed by $t \in \{0,1\}$ where t denotes a citizen's preferred regulatory outcome. A citizen of type t obtains a net benefit θ_t when the regulation is enacted, where $\theta_1 > 0 > \theta_0$.

The fraction of citizens of type (k,t) is denoted by γ_t^k. We let $\gamma^k = \gamma_0^k + \gamma_1^k$ denote the fraction of the population with public spending preference k and $\gamma_t = \gamma_t^L + \gamma_t^R$ the fraction with regulatory attitude t. We assume throughout that those who oppose regulation are a minority group in the sense that $\gamma_0 < \min\{\gamma^L, \gamma^R\}$. Hence, the majoritarian regulatory outcome is that the regulation is implemented.

2.2 Policy determination

Policy-making is delegated to an elected representative. Representatives are citizens and are characterized by their types (k,t). No ex-ante policy commitments are possible, so that a type (k,t) representative chooses a public good level $g^*(k)$ and makes regulatory decision t.

Candidates in the election are put forward by two political parties, denoted A and B. Each party is comprised of member citizens bound together by their views on public spending. Thus, all members of Party A are left-wingers and all members of Party B are right-wingers. Party members play the role of elites in the model as they control access to political office. Both parties contain a mixture of pro and anti-regulation citizens, with λ_J denoting the fraction of members of Party J who are pro-regulation. Let t_J^* denote the regulatory attitude of the majority of Party J's members; i.e., $t_J^* = 1$ if $\lambda_J > \frac{1}{2}$ and $t_J^* = 0$ if $\lambda_J < \frac{1}{2}$. Each party selects the candidate a majority of its members prefers.

There are two types of voters. A fraction μ are *rational voters* who anticipate the policy outcomes each candidate would deliver and vote for the candidate whose election would produce their highest policy payoff. Thus, a rational voter of type (k,t) faced with candidates of types (k_A, t_A) and (k_B, t_B) will vote for Party A's candidate if $b(g^*(k_A), k) + \theta_t t_A$ exceeds $b(g^*(k_B), k) + \theta_t t_B$. Rational voters indifferent between two candidates abstain.

Following Baron (1994) and Grossman and Helpman (1996), the remaining fraction are *noise voters*. A fraction η of these vote for Party A's candidate, where η is the realization of a random variable with support $[0, 1]$ and cumulative distribution function $H(\eta)$. The idea is that noise voters respond to non-policy relevant features of candidates such as their looks, sense of humor, etc. We assume that H is symmetric so that for all η, $H(\eta) = 1 - H(1 - \eta)$. This implies that noise voters are *unbiased* in the sense that the probability that a fraction less than η vote for Party A's candidate equals the probability that a fraction less than η vote for Party B's candidate.

Noise voters make election outcomes probabilistic. To illustrate, consider an election in which the difference between the fraction of citizens obtaining a higher utility from the policy choices generated by Party A's candidate and the fraction obtaining a higher utility from Party B's candidate is ω. Since μ is the fraction of rational voters and η the fraction of noise voters who vote for Party A's candidate, Party A's candidate will win if $\mu\omega + (1 - \mu)\eta > (1 - \mu)(1 - \eta)$ or, equivalently, if $\eta > \frac{-\mu\omega}{2(1-\mu)} + \frac{1}{2}$. The probability that Party A's candidate will win is thus $\psi(\omega)$ where $\psi(\omega) = 0$ if $\omega \leq \frac{-(1-\mu)}{\mu}$, $\psi(\omega) = 1$ if $\omega \geq \frac{1-\mu}{\mu}$, and $\psi(\omega) = 1 - H(\frac{-\mu\omega}{2(1-\mu)} + \frac{1}{2})$ otherwise. We assume throughout that $\left|\gamma^L - \gamma^R\right| < \frac{1-\mu}{\mu}$, which puts an upper bound on the number of rational voters.

Party members know the election probabilities associated with different candidate pairs and take them into account when voting for candidates. An *equilibrium* is a pair of candidates (k_A, t_A) and (k_B, t_B) such that a majority of Party A's members prefer a type (k_A, t_A) candidate to any other type of candidate given that Party B is running a type (k_B, t_B) candidate and, conversely, a majority of Party B's members prefer a type (k_B, t_B) candidate given that Party A's candidate is type (k_A, t_A). Any equilibrium gives rise to a probability distribution over outcomes: the policy outcome will be that associated with Party J's candidate with a probability equal to the chance that Party J's candidate wins.

The members of each party share the same public spending preferences, so that there are effectively only two types of citizens in each Party: those who favor the regulation and those who are against it. The preferences of the largest of these two groups therefore determine the majority preferred candidate for the party. We do not restrict these preferences to be in line with a majority of the population, for there are many instance of divergence between the opinions of political elites and the masses. A pair of candidates (k_A, t_A) and (k_B, t_B) is then an equilibrium if type (L, t_A^*) citizens prefer a type (k_A, t_A) candidate to any other type of candidate given that Party B is running a type (k_B, t_B) candidate and, conversely, type (R, t_B^*) citizens prefer a type (k_B, t_B) candidate to any other type of candidate given that Party A is running a type (k_A, t_A) candidate.

3 Sources of non-majoritarian outcomes

This section explains why the fact that representatives must decide on both public spending and regulation means that electoral competition may fail to produce a majoritarian regulatory policy outcome. Three explanations are identified. The first applies when regulation is not a politically salient issue and the majority of party members are anti-regulation. The second applies when regulation is salient only for those citizens with the minority view. The third applies when regulation is not salient but there is an anti-regulation interest group.

3.1 Issue non-salience and party preferences

Our first explanation requires that public spending be more important to citizens than regulation in the following precise sense – for each type of citizen (k, t), the gain from achieving their preferred level of public spending, given by $\Delta b(k) = b(g^*(k), k) - b(g^*(-k), k)$, exceeds the gain from achieving their preferred regulatory policy, given by $|\theta_t|$.[6] Thus, disagreement over public spending is sharper than that over regulatory policy. Under this assumption, if the two parties select candidates with different public spending preferences, all rational voters prefer the candidate who shares their public good preferences *irrespective of his stance on regulation.* Regulation is not, therefore, a politically salient issue.

Under this assumption, if Party A selects a left-winger and Party B a right-winger, there is no electoral gain to party members from selecting a candidate whose position on regulation differs from their ideal. Each party's candidate will therefore have the same attitude toward regulation as the majority of party members. Since rational voters vote according to the candidates' spending preferences, Party A's candidate will win with probability $\psi(\gamma^L - \gamma^R)$.

[6] The notation $-k$ refers to the opposite type to k. For example, $-k = R$ when $k = L$.

For this to be an equilibrium, party members must prefer to select candidates who reflect their views on public spending. Neither group must want to compromise in the public spending dimension. It is clear that a party with a majority of anti-regulation members has no incentive to do so, since this compromise would reduce the probability that it achieves both of its policy objectives. However, since γ_1 exceeds γ^k for $k \in \{L, R\}$, a party with a majority of pro-regulation members may wish to compromise in the spending dimension if the opposing party is selecting an anti-regulation candidate. For example, if $t_A^* = 0$, $t_B^* = 1$ and $\psi(\gamma^L - \gamma^R)$ is close to zero, then Party A will choose a type $(R, 0)$ candidate despite the fact that public spending is more important to its members than regulation. This possibility is ruled out by the following assumption:

Assumption 1: For $k \in \{L, R\}$, $\psi(\gamma^k - \gamma^{-k})\Delta b(k) > [\psi(\gamma_1 - \gamma_0) - \psi(\gamma^k - \gamma^{-k})]\theta_1$.

The left-hand side is the expected loss in public spending benefits from a compromise on public spending, while the term on the right hand side is the expected gain in terms of regulatory outcome. The assumption implies that a compromise on public spending is not desirable for either party. It requires that the fractions γ^L and γ^R not be too far apart.[7]

Under Assumption 1, Party A selecting a type (L, t_A^*) candidate and Party B a type (R, t_B^*) candidate is the unique equilibrium. Thus, we have:[8]

Proposition 1 *Suppose that for each type of citizen, regulation is non-salient. Then, under Assumption* 1*, the regulatory outcome will be* t_A^* *with probability* $\psi(\gamma^L - \gamma^R)$ *and* t_B^* *with probability* $1 - \psi(\gamma^L - \gamma^R)$*.*

If the majority in one party are anti-regulation, then the non-majoritarian regulatory outcome will be selected with positive probability. Since citizens have only one vote and there are multiple issues, there is some "slack" in the process that allows parties to indulge their policy preferences. Anti-regulation parties can run candidates with anti-regulation attitudes without paying an electoral penalty because regulatory policy is not salient for voters. The probability that these candidates win, reflects their popularity on the

[7]This assumption will definitely be satisfied if $\gamma^L \simeq \gamma^R$. For then $\psi(\gamma^k - \gamma^{-k})$ exceeds $\psi(\gamma_1 - \gamma_0) - \psi(\gamma^k - \gamma^{-k})$ and, by assumption, $\Delta b(k) > \theta_1$.

[8]The proof of this and subsequent results are in the Appendix.

politically salient issues. Thus, regulatory policy outcomes do not reflect voters' preferences over those issues.[9]

This argument demonstrates how, with multiple issues, non-majoritarian attitudes of party elites can translate into non-majoritarian policies. Moreover, there is no good reason to expect the preferences of party members to conform with mass opinion. There are many real world examples. In the U.K., both major parties are against the death penalty, while an overwhelming majority of voters favor it. In the U.S., both major parties favor free trade and the Republican party is against the minimum wage.

3.2 Single-issue voters

Our second argument applies when regulation is salient for the minority of voters who oppose the regulation, but not for voters who favor it. Hence, for each $k \in \{L, R\}$, $\theta_1 < \Delta b(k) < |\theta_0|$. This is a case where there is a difference in preference *intensity* between the two types of citizens. Gun control is a good example of this in the United States. While a majority of citizens appear to favor stricter controls, the minority against act as single issue voters (Schuman and Presser (1977-8)).

In these circumstances, even if a majority of party members are pro-regulation, they may be willing to compromise in the regulatory dimension to keep the single issue anti-regulation voters. Consider the situation of Party A, knowing that Party B is planning to select a right-wing candidate who is anti-regulation. If Party A selects a pro-regulation left-winger, it loses the votes of all the left-wingers who oppose the regulation. This could significantly reduce the probability of it winning and being able to implement its preferred public spending level.

The following assumption embodies the conditions under which equilibrium can involve both parties selecting candidates who share the public spending preferences of their members, but who are anti-regulation.

Assumption 2: For $k \in \{L, R\}$
(i) $\psi(\gamma^k - \gamma^{-k})\Delta b(k) > \psi(\gamma_1 - \gamma_0)\theta_1$, and
(ii) $[\psi(\gamma^k - \gamma^{-k}) - \psi(\gamma_1^k - (\gamma_0^k + \gamma^{-k}))]\Delta b(k) > \psi(\gamma_1^k - (\gamma_0^k + \gamma^{-k}))\theta_1$.

Part (i) of the assumption ensures that neither party has an incentive to put forward a candidate with the opposing party's public spending preferences

[9]Besley and Coate (2000) apply this idea to regulatory policy to explain why electing and appointing regulators can make a difference to regulatory policy.

but the majoritarian regulatory attitude. Such a deviation would lead to an expected loss of $\psi(\gamma^k - \gamma^{-k})\Delta b(k)$ and an expected gain of $\psi(\gamma_1 - \gamma_0)\theta_1$. Part (ii) ensures that neither party wishes to switch to a candidate with non-majoritarian regulatory preferences. Such an action would lead to an expected gain of $\psi(\gamma_1^k - (\gamma_0^k + \gamma^{-k}))\theta_1$ and a loss of $[\psi(\gamma^k - \gamma^{-k}) - \psi(\gamma_1^k - (\gamma_0^k + \gamma^{-k}))]\Delta b(k)$. Thus we have:

Proposition 2 *Suppose that the majority of each party's members are pro-regulation and that regulation is salient only for those who oppose it. Then, under Assumption* 2*, an equilibrium exists in which the regulatory outcome will be non-majoritarian with probability one.*

This gives a theoretical underpinning for the idea that intense minorities can have political influence over the issues that they care about. Under Assumption 2, the parties are willing to sacrifice their stance on the regulatory issue to gain the extra voters. This is most likely to happen when each party can make a large electoral gain from getting a few more voters. This would be true, for example, in the limiting case where the fractions supporting the two parties are close together and there are relatively few noise voters. The multi-dimensionality of the policy space is key here – the parties are willing to sacrifice their stance in one dimension for electoral gain another. This kind of result can explain the persistence of weak gun control and affirmative action in the United States in spite of majority opinion.

3.3 Interest group influence

To incorporate interest group influence, we assume that a group of citizens who oppose the regulation are organized as an interest group which makes contributions to the campaigns of anti-regulation candidates. These contributions are used to "buy" the votes of noise voters and enhance the election chances of the favored candidates. Contributions are given after the parties have selected candidates and parties anticipate lobbying activities when selecting candidates.[10] An equilibrium now consists of (i) a function describing each interest group's optimal contribution to the candidates for any pair of

[10] Unlike Grossman and Helpman (1996) who combine electoral politics and lobbying, we assume that the interest groups moves after the parties. This approach is similar to that dicussed in Persson and Tabellini (1999) section 7.5.

candidate types, and (ii) a pair of candidate types that are majority preferred by the members of each party given the interest group's contribution behavior.

We begin by describing the mechanism by which campaign contributions buy votes. Consider an election in which the difference between the campaign expenditures of the two parties' candidates is z. If z is positive, Party A's candidate is outspending B's and *vice versa*. Then the fraction of noise voters voting for Party A's candidate, η, is a random variable with support $[0, 1]$ and cumulative distribution function $H(\eta; z)$. The function H is assumed to be twice continuously differentiable and to satisfy the condition that for all (η, z), $H_z(\eta; z) < 0$.

To ensure that noise voters remain unbiased, we restrict $H(\eta; z)$ to be symmetric, so that for all η and z, $H(\eta, z) = 1 - H(1 - \eta, -z)$. This implies that the probability that Party A's candidate gets a fraction of noise voters less than η when he out-spends Party B's candidate by an amount z equals the probability that Party B's candidate gets a fraction of noise voters less than η when he outspends Party A's candidate by the same amount. We assume that for all η and $z > 0$, $H_{zz}(\eta; z) > 0$, implying diminishing returns to outspending an opponent.

Turning to the interest group, a fraction $\xi < 1$ of those opposing the regulation belong to the interest group. This group seeks to maximize the objective function $\xi\gamma_0\theta_0 r - x$ where r denotes the regulatory outcome and x denotes campaign contributions. To determine the interest group's contribution, consider an election in which the difference between the fraction of citizens obtaining a higher utility from Party A's candidate and the fraction obtaining a higher utility from Party B's candidate is ω. If both candidates have the same regulatory stance, the interest group makes no campaign contribution. However, if Party A's candidate is anti-regulation and Party B's is pro, then the interest group may contribute to Party A's candidate. Generalizing the earlier analysis, let $\widehat{\psi}(\omega, z)$ be the probability that Party A's candidate wins when the difference between the two candidates' campaign expenditures is z.[11] Then the interest group contributes $x^*(\omega)$ to Party A's candidate, where

$$x^*(\omega) = \arg\max\{\widehat{\psi}(\omega, x)\xi\gamma_0 |\theta_0| - x : x \geq 0\}.$$

[11] Following the earlier logic, $\widehat{\psi}(\omega, z) = 0$ if $\omega \leq \frac{-(1-\mu)}{\mu}$, $\widehat{\psi}(\omega, z) = 1$ if $\omega \geq \frac{1-\mu}{\mu}$ and $\widehat{\psi}(\omega, z) = 1 - H(\frac{-\mu\omega}{2(1-\mu)} + \frac{1}{2}, z)$ otherwise.

If Party A's candidate is pro-regulation and Party B's is anti, the interest group contributes $x^*(-\omega)$ to Party B's candidate.

To illustrate how interest group influence leads to non-majoritarian policy outcomes, suppose that regulation is not salient and that a majority of each party's members are pro-regulation. Then, both parties may pander to the interest group by running an anti-regulation candidate to avoid giving the other party the electoral advantage of interest group support. Consider the situation of Party A, knowing that Party B is planning to select a right-wing candidate who is anti-regulation. If Party A selects a pro-regulation left-winger, the interest group will contribute to Party B's candidate. This could significantly reduce the probability A's candidate wins and is able to implement the party's preferred public spending plan. The logic is similar to that underlying the single issue voter case, except that money to buy votes rather than votes themselves are the motivating force.

The following assumption gives the conditions under which equilibrium can involve both parties selecting candidates who share the public spending preferences of their members, but who have non-majoritarian regulatory preferences.

Assumption 3: For $k \in \{L, R\}$ (i) $\psi(\gamma^k - \gamma^{-k})\Delta b(k) > \widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1))\theta_1$, and
(ii) $[\psi(\gamma^k - \gamma^{-k}) - \widehat{\psi}(\gamma^k - \gamma^{-k}, -x^*(\gamma^{-k} - \gamma^k))]\Delta b(k) > \widehat{\psi}(\gamma^k - \gamma^{-k}, -x^*(\gamma^{-k} - \gamma^k))\theta_1$.

Part (i) ensures that neither party has an incentive to put forward a candidate with the opposing party's public spending preferences but the majoritarian regulatory attitude. Such a deviation would lead to an expected loss of $\psi(\gamma^k - \gamma^{-k})\Delta b(k)$ and an expected gain of $\widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1))\theta_1$. Part (ii) ensures that neither party wishes to switch to a candidate with non-majoritarian regulatory preferences. Such an action would lead to an expected gain of $\widehat{\psi}(\gamma^k - \gamma^{-k}, -x^*(\gamma^{-k} - \gamma^k))\theta_1$ and a loss of $[\psi(\gamma^k - \gamma^{-k}) - \widehat{\psi}(\gamma^k - \gamma^{-k}, -x^*(\gamma^{-k} - \gamma^k))]\Delta b(k)$. Thus we have:

Proposition 3 *Suppose that there is an anti-regulation interest group, the majority of each party's members are pro-regulation, and that regulation is non-salient. Then, under Assumption* 3*, an equilibrium exists in which the regulatory outcome will be non-majoritarian with probability one.*

Thus the interest group guarantees that its position on the regulatory issue prevails. Moreover, it does so without actually paying any campaign contributions in equilibrium! The threat of supporting any candidate with a non-majoritarian position on the regulatory issue is sufficient. Again the multi-dimensional nature of political competition is key to understanding this – the party is willing to accommodate the lobby on the regulatory issue because it fears the electoral disadvantage in the *other* policy dimension (public spending). This is more likely to happen when political competition is intense on that issue and campaign expenditures make a big impact (as measured by $[\psi(\gamma^k - \gamma^{-k}) - \widehat{\psi}(\gamma^k - \gamma^{-k}, -x^*(\gamma^{-k} - \gamma^k))])$.

The most natural examples for this explanation are regulations that harm business interests, such environmental or gambling regulations. Favoring such regulations would be unlikely to win a candidate many votes, but would certainly encourage the affected parties to contribute to his opponent.

3.4 Discussion

All our explanations for divergence between majority preference and policy rest on the fact that elected representatives must choose both public spending and regulation. To appreciate this, note that if regulation were the only issue, the policy outcome would be majoritarian if (i) for at least one Party J, $\lambda_J > \frac{1}{2}$ and (ii) $\gamma_1 - \gamma_0 > \frac{1-\mu}{\mu}$. The first condition implies that at least one party would put forward a pro-regulation candidate and the second implies that this candidate would win with probability one. However, the conditions of Propositions 1, 2 or 3 are all consistent with (i) and (ii) holding.

Assuming that parties are policy-motivated rather than vote maximizers is also key to the results. In a Downsian model where parties select candidates to maximize their chance of winning, either both parties pick pro-regulation candidates of the majority preferred spending type or there is no equilibrium.[12] What is not critical to the results is the assumption that parties have a monopoly in selecting candidates. Allowing independent *citizen-candidates* to enter, as in Osborne and Slivinski (1996) and Besley and Coate (1997), would not force the parties to select candidates with majoritarian regulatory attitudes.[13]

[12] In the neo-Downsian models of Lindbeck and Weibull (1987), Dixit and Londregan (1996) and Grossman and Helpman (1996), parties just care about winning but inherit fixed positions on certain issues. If we were to assume that Party A were constrained to choose a left-winger and Party B a rightwinger, then the arguments of section 3.2 and 3.3 would be consistent with a Downsian objective.

[13] Consider, for example, the case where regulation is not salient, and suppose that Party

The explanations developed here are consonant with the large empirical literature in political science that has investigated the "congruence" between public opinion and public policy.[14] While there is substantial congruence between public opinion and policy, specific issues exhibit widespread divergence.[15] Since elections are seen as the major source of congruence between policy and opinion, an important task for theory is to explain why electoral competition produces congruence on some issues but not on others. The literature has long recognized the possibility that an election between two

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A selected a type $(L, 0)$ candidate and Party B a type $(R, 0)$. Then, one might argue that a type $(L, 1)$ independent candidate would enter to compete with Party A's candidate. However, this argument neglects important issues inherent in elections with three or more candidates. If rational voters vote sincerely, entry by a type $(L, 1)$ independent would simply split the left-wing vote and significantly enhance the probability of the right-wing candidate winning. If rational voters are strategic, left wingers will be reluctant to switch to the entrant for fear of wasting their vote. It follows that a type $(L, 1)$ independent is likely either to increase the probability of the right wing candidate winning or to have no effect. Either way, such a candidate has little or no incentive to enter.

[14] Measuring congruence has been tackled in a number of different ways. One approach is to look directly at the relationship between policy outcomes and citizens' preferences, either for specific policy issues (for example, Weissberg (1976)) or for more aggregate measures of policy stance (for example, Wright, Erikson and McIver (1987)). Another approach explores the relationship between citizens' preferences and the voting behavior and/or policy preferences of their representatives (for example, Miller and Stokes (1963) and Herrera, Herrera and Smith (1992)). Here a distinction is made between "collective" and "dyadic" representation (Weissberg (1978)), the former referring to the relationship between the average citizen and the average representative and the latter referring to the relationship between individual representatives and their constituents. A third approach studies the relationship between party platforms and public opinion (for example, Monroe (1983)).

[15] For example, Weissberg's case studies of eleven policy issues revealed three cases - gun control, religion in public schools, and foreign aid - in which policy differed starkly from majoritarian preferences (Weissberg (1976)). Monroe (1979) studied 248 issues and reported that policy outcomes were consistent with majoritarian preferences about two thirds of the time. Miller and Stokes (1963) found little congruence between congressional representatives voting on American involvement in foreign affairs and constituent preferences. Herrera, Herrera and Smith (1992) found that congressional representatives were out of step with popular opinion on five of the seven issues on which they collected survey data - policies on Russia, Minority Aid, Government Services, Standard of Living and Abortion. On party platforms, Monroe (1983) found congruence with voter preferences for only 59% of his 202 specific issue/year observations. Moreover, there are frequent observations of differences in party stances on particular issues. Congruence appears greater for the Democrats on welfare and economic policy, conforming to the stereotypical view that the Republicans are the party of the business and the rich.

candidates who must decide on a bundle of issues can result in the election of a candidate whose stance on specific issues is non-majoritarian (for example, Dahl (1956)). However, it has not explained why candidates should have such non-majoritarian stances.

4 The impact of citizens' initiatives

This section shows how initiatives can restore majority-preferred outcomes when the regulatory policy is distorted away from the majority preferred outcome due to one of the forces described above. To introduce initiatives formally, suppose that any citizen can place a proposal on the ballot regarding the regulation at a cost of δ.[16] There are two possible proposals: that the regulation be implemented and its converse. Citizens vote directly on proposals at the same time that they are voting for the candidates. If there is a single proposal and it receives majority support, it is implemented. Otherwise, the regulatory decision is left to the elected representative. Thus, the citizens' vote is binding only if it is in favor of the proposal. If both proposals are on the ballot, and one or more proposals gets a majority vote, then the proposal receiving the most support is implemented.

Citizens decide whether or not to introduce an initiative after the parties have selected their candidates. Thus, they know the likely regulatory outcome if no initiatives were introduced. Moreover, parties can anticipate how their selection of candidates will impact the likelihood of initiatives being offered.

We assume that the voting decisions over initiatives are governed by the same process as voting over candidates. Thus, a fraction μ are rational and vote for an initiative if they favor the outcome it prescribes and against it otherwise. The remainder are noise voters. If there is a single initiative the fraction voting in favor is a random variable with support $[0, 1]$ and cumulative distribution function $H(\eta; z)$ where z is the difference in spending for and against the initiative. If both proposals are on the ballot, we require noise voters to vote in favor of one and against the other thereby disallowing voting for or against two conflicting proposals. This rules out the possibility

[16] We do not consider the possibility of public spending initiatives here. Our public spending variable is best thought of as a composite for a whole host of economic policy issues, and hence thinking of it being regulated by a single initiative would be inappropriate.

of two conflicting proposals receiving majority support. Thus, the fraction voting in favor of the pro-regulation initiative and against the anti-regulation initiative is a random variable with support $[0, 1]$ and cumulative distribution function $H(\eta; z)$ where z is the difference in spending in support of the two initiatives. These assumptions imply that votes for initiatives can be bought in exactly the same way as votes for candidates.

The timing of the political process is as follows. First, parties select their candidates. Next, citizens decide whether or not to put initiatives on the ballot. Third, if active, the interest group chooses how much to contribute to the candidates and/or the initiative campaigns. Finally, voters vote. To avoid a tedious investment in notation, we will not provide a detailed model of the game in which citizens decide whether to introduce initiatives. We will simply require that initiative proposals be consistent with the pure strategy equilibria of a game in which each citizen, having observed the candidates put forward, chooses whether or not to place an initiative.[17] For most of the analysis, we will assume that δ (the cost of placing an initiative) is very small. The collective action problems arising from the large costs associated with placing an initiative will be discussed in the next section.

An *equilibrium* now consists of three things: (i) a function describing the interest group's optimal contributions to each Party's candidate and/or the initiative campaign for any candidate types and initiative decision, (ii) a function describing, for any given candidate pairs, the probabilities of each of the different ballot initiative possibilities; i.e., both initiatives are proposed, only the pro-regulation initiative is proposed, etc., and (iii) a pair of candidate types that are majority preferred by the members of each party given the anticipated behavior of those proposing initiatives and interest group contributions.

We now have the following result.

Proposition 4 *Suppose that the constitution permits citizens' initiatives on the regulatory issue. Then, for sufficiently small* δ, *any equilibrium produces*

[17] Thus, for both initiatives to appear on the ballot, there must be citizens whose gain from proposing each type of initiative exceeds δ, given that the other initiative will be proposed. For neither initiative to be proposed, the gain for all citizens from proposing either initiative must be less than δ given that the other type of initiative will not be proposed. For only one type of initiative to be proposed, some citizen must gain more than δ from proposing the initiative and no other citizen can reap a benefit exceeding δ from proposing the other type of initiative.

the majority-preferred regulatory outcome with probability $\widehat{\psi}(\gamma_1-\gamma_0, -x^*(\gamma_0-\gamma_1))$ *and the non-majoritarian outcome with probability* $\widehat{\psi}(\gamma_0-\gamma_1, x^*(\gamma_0-\gamma_1))$.

This tells us that, when the costs of placing an initiative are small, *any* equilibrium must produce the same probability distribution over the regulatory policy outcome. If the fraction of rational voters is sufficiently high that $\gamma_1-\gamma_0 \geq \frac{1-\mu}{\mu}$, this probability distribution selects the majority-preferred regulatory outcome with probability one (since $\widehat{\psi}(\gamma_1-\gamma_0, -x^*(\gamma_0-\gamma_1)) = 1$).

The proposition does not appeal to any special assumptions and hence applies to *all* of the situations described in Propositions 1, 2 and 3. However, if $\gamma_1-\gamma_0 < \frac{1-\mu}{\mu}$, there is still a positive probability that the non-majoritarian regulatory outcome will arise. Observe, also that the power of the interest group is not eliminated as its activities reduce the probability that the regulation is introduced (if there were no interest group, $x^* = 0$ and the probability of the non-majoritarian outcome is just $\psi(\gamma_0-\gamma_1)$). Even so, the regulatory outcome reflects only the citizens' preferences over regulation and the probability distribution is that which would arise if the regulatory policy issue were unbundled, i.e. decided on separately via a referendum. Hence, the influence of citizens' preferences over the *other* issues play no role in determining the policy outcome.

To understand the result, note first that the probability distribution described in the proposition would arise if both pro and anti-regulation initiatives were proposed. Under the assumption that noise voters vote in favor of one or the other initiative, then one initiative must receive majority support and this will decide the outcome. The regulatory issue is, in effect, removed from the control of the winning candidate. The interest group will devote $x^*(\gamma_0-\gamma_1)$ to supporting the anti-regulation initiative. Thus, the probability that the pro-regulation initiative will win is $\widehat{\psi}(\gamma_1-\gamma_0, -x^*(\gamma_0-\gamma_1))$. It follows that, if an equilibrium generated a probability distribution over the regulatory policy different from this, one or both of the initiatives would not be proposed. The proof of the proposition shows that, for sufficiently small δ, it is not possible to have one or both initiatives not being proposed and have a probability distribution different from that described in the proposition.

The above result tells us that any equilibrium must produce the same probability distribution over regulatory policy outcomes. However, it leaves open the question of whether an equilibrium exists. Our next result resolves this question.

Proposition 5 *Suppose that the constitution permits citizens' initiatives on the regulatory issue. Then, for sufficiently small* δ*, there exists an equilibrium in which Party A selects a type* $(L, 1)$ *candidate, Party B selects a type* $(R, 1)$ *candidate and the anti-regulation initiative is proposed if and only if* $\gamma_1 - \gamma_0 < \frac{1-\mu}{\mu}$.

In this equilibrium, both parties select majoritarian candidates independent of the preferences of their members. Party members realize that to select a candidate with a non-majoritarian regulatory attitude would be futile. It would simply trigger a pro-regulation initiative that would take the issue out of the hands of the elected representative.

Two points should be noted about this particular equilibrium. First, when $\gamma_1 - \gamma_0 \geq \frac{1-\mu}{\mu}$, the ability to propose initiatives affects the regulatory policy choice even though no initiative is actually proposed. This is consonant with the arguments of Gerber (1996) and (1999), who sees the *threat* of initiatives as important in shaping policy outcomes. Second, when $\gamma_1 - \gamma_0 < \frac{1-\mu}{\mu}$ only the anti-regulation initiative is proposed. Thus, the fact that we observe non-majoritarian proposals in initiatives and/or a majority of initiatives failing, does not imply that initiatives are not serving the role of moving policy outcomes in a majoritarian direction.[18]

5 Caveats

It is important to air some caveats to the perspective developed so far. Above all, it needs to be emphasized that using our argument as a basis for promoting initiatives rests on the assumption that it is socially desirable for policies to be close to what the majority wants. While this view is at the heart of some version of the democratic ideal, it has no obvious welfare economic foundation. Moreover, political theorists since the dawn of modern representative democracy have seen appropriate restraints on popular opinion as a *sine qua non* of a just political system. The most obvious area of concern is in dealing with the rights of minorities (for example an issue such as gay marriages). This suggests the importance of constitutional protection of such rights to prevent minority groups from attack via initiatives.

[18] From 1898-1992 only 38% of initiatives were successful according to Magleby (1994, page 231).

We took as our point of comparison a case where the policy outcome was non-majoritarian. If policy initially favors a majority of citizens and there is enough noise voting so that $\frac{1-\mu}{\mu} > \gamma_1 - \gamma_0$, then permitting citizens' initiatives can actually *increase* the chances of a non-majoritarian policy. Suppose, for example, that the issue is not salient and that the majority of members of both parties are pro-regulation. Then, Proposition 1 implies that the regulation would be introduced with probability one with no initiatives, while Proposition 4 implies that it would be introduced with probability $\psi(\gamma_1 - \gamma_0)$ with initiatives. Thus, our argument does not suggest that allowing initiatives must always bring policy on each issue closer to popular opinion. Rather, it shows that permitting initiatives will produce the same outcome as would arise from a direct vote on the issue. With noise voters and interest groups, this is not the same as yielding the majoritarian outcome.

Proposition 4 is valid only as δ goes to zero. Yet, even where constitutions permit citizens' initiatives, there are restrictive provisions for placing an initiative on the agenda. This makes δ very large in practice, beyond the reach of all but the most affluent of citizens. This means that collective action will typically be required to place an initiative. Outside of a perfect Coasian world, therefore, initiatives may not be proposed even if there is a group of citizens for whom the aggregate expected benefits exceed the cost.[19] This will tend to dampen the disciplining role of initiatives.[20]

This point applies with greater force in cases where it is those who hold the minority view who have greater access to the use of initiatives.[21] For example, if only the interest group is organized enough to raise the cost δ, then under the conditions of section 3.3., and if $\frac{1-\mu}{\mu} > \gamma_1 - \gamma_0$, then permitting initiatives can increase the likelihood that the interest group gets its preferred outcome.[22]

[19]In practice, there is a negative correlation between the fraction of the electorate whose signatures are required and the probability that an initiative will be placed on the ballot (see Matsusaka (1995)).

[20]This raises the question of why states choose to make δ high with their petition requirements. Presumably, there is some disadvantage from easy ballot access (such as ballot clutter) that is not captured by our model.

[21]The fact that the cost of placing an initiative on the ballot is in terms of collecting supporting signatures, presumably reflects a desire to make δ higher for non-majoritarian initiatives. However, Broder (2000) argues that the cost of placing a non-majoritarian initiative is not significantly greater because of the ease of persuading people to sign petitions.

[22]However, permitting initiatives does not necessarily increase the probability that the

6 Conclusion

In the constitutional debate concerning citizens' initiatives, a central question concerns why initiatives are necessary in a representative democracy where candidates must already compete for the right to control policy. Here, we began with the claim that, in a representative democracy, the bundling of issues means that policy outcomes on specific issues may diverge far from what the majority want. Such divergence has been demonstrated in numerous empirical studies.

Our theoretical model identifies three distinct ways in which non-majoritarian outcomes may arise. If an issue is not politically salient, a candidate with a non-majoritarian stance on that issue will not face an electoral cost as long as he differs from his opponent on a salient issue. Thus party members with non-majoritarian views on a non-salient issue will choose candidates who share their views on that issue, provided that the candidates differ on a salient issue. If an issue is salient only for those with a minority view, then parties will gain an electoral advantage by picking a candidate who shares that view, provided that he/she differs from his opponent in a salient dimension, for he will attract his opponent's minority voters. Even if they hold the majority view, party members may be willing to select such a candidate to increase the probability of a preferred outcome on the other issues. If an issue is not salient and an interest group is organized around the minority position, parties will gain an electoral advantage by selecting a candidate with a non-majoritarian stance who differs from his opponent in some salient dimension. The non-majoritarian stance will not cost the candidate any votes, but will attract campaign contributions from the interest group.

All of these sources of non-majoritarian outcomes rely on the fact that voters who share a majority view on the issue in question select who to vote for on the basis of *other* issues. Thus their preferences play no role in

interest group's preferred outcome is implemented. To see why, suppose that without initiatives both parties run anti-regulation candidates to avoid the electoral disadvantage associated with the interest group's backing of the opposing party's candidate. Further suppose that, with initiatives, if either party were to run a pro-regulation candidate, the interest group would place an anti-regulation initiative. This reduces the electoral disadvantage associated with running a pro-regulation candidate, because the interest group will split its campaigning between support of the initiative and support of the anti-regulation candidate. Accordingly, the interest group's power to influence candidate selection is undermined by its ability to place an initiative.

the determination of policy on that issue. When an initiative is proposed, voting for a candidate on a salient issue no longer precludes an expression of preference on the issue in question. Thus the preferences of *all* the citizens on the issue are reflected in policy determination. Furthermore, initiatives do not need to be proposed for their impact to be felt – the *threat* of an initiative can change parties' incentives to select candidates. In this way, allowing initiatives forces a closer relationship between policy outcomes and popular preferences.

The argument developed here has some implications for empirical researchers seeking to identify the impact of initiatives on policy outcomes.[23] It suggests that we should expect the greatest impact of initiatives to be on (i) non-salient issues for which either political elites have different preferences than the masses or rich interest groups back the minority position and (ii) issues that are salient only for those who hold the minority view.

The model developed here could fruitfully be extended to analyze how initiatives deal with situations where public officials are bribed post election and the effects of log-rolling. More generally, it would be interesting to investigate the role of initiatives in combatting agency problems due to imperfect information concerning the real constraints faced by policy-makers. Such ideas appear to be at the heart of the argument for tax limitation initiatives.

[23] There are a number of papers exploring the impact of initiatives empirically. Lascher, Hagen and Rochlin (1996) investigate whether the link between aggregate measures of policy outcomes and public opinion is closer when states allow citizens' initiatives, finding no significant effect. Matsusaka (1995) finds that U.S. states that permit citizens' initiatives also have lower levels of public spending, while Pommerehne (1990) presents a similar finding for Swiss cantons. With respect to specific policy issues, Gerber (1999) finds that policy outcomes on the death penalty and abortion regulation are closer to public opinion in states that permit citizens' initiatives even though these policies are not directly determined via initiatives.

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7 Appendix

Proof of Proposition 1: We will show that the game in which the majority groups in each party simultaneously choose candidates has a unique Nash equilibrium which involves Party A selecting a candidate of type (L, t_A^*) and Party B a candidate of type (R, t_B^*). The first point to note is that for the majority group in each party, any strategy involving the selection of a candidate who does not share its preferred public spending preferences is strictly dominated. We prove this only for Party A, the argument for Party B being identical. It is easy to show that the strategy $(R, -t_A^*)$ is strictly dominated by the strategy (L, t_A^*), so we concentrate on showing that the strategy (R, t_A^*) is dominated by (L, t_A^*). When Party B selects candidates of types (L, t_A^*), $(L, -t_A^*)$ and (R, t_A^*), this is clear. The non-obvious case is that in which Party B selects a candidate of type $(R, -t_A^*)$ and $(t_A^*, t_B^*) = (1, 0)$. A majority member of Party A obtains an expected payoff

$$\psi(\gamma^L - \gamma^R)[b(g^*(L), L) + \theta_1] + [1 - \psi(\gamma^L - \gamma^R)]b(g^*(R), L)$$

from choosing a candidate of type $(L, 1)$. The payoff from choosing a type $(R, 1)$ candidate is

$$b(g^*(R), L) + \psi(\gamma_1 - \gamma_0)\theta_1.$$

Subtracting the latter from the former, the difference can be expressed as:

$$\psi(\gamma^L - \gamma^R)\Delta b(L) - [\psi(\gamma_1 - \gamma_0) - \psi(\gamma^L - \gamma^R)]\theta_1.$$

This is positive by Assumption 1.

Now consider the game in which the majority members of Party A select from the strategies (L, t_A^*) and $(L, -t_A^*)$, while the majority members of Party B select from the strategies (R, t_B^*) and $(R, -t_B^*)$. Then we claim that for the majority group of each party, selecting a candidate who does not share its preferred regulatory preferences is strictly dominated. Consider Party A and the strategy $(L, -t_A^*)$. Selecting a candidate of type (L, t_A^*) has no impact on the probability that Party A wins (which is positive) and leads to a strictly higher payoff if Party A wins. Similarly for Party B.

It follows that the game in which the majority groups in each party simultaneously choose candidates is solvable by iterated (strict) dominance.

The solution involves Party A selecting a candidate of type (L, t_A^*) and Party B a candidate of type (R, t_B^*). This is then the unique Nash equilibrium of the game. QED

Proof of Proposition 2: We need to show that, under Assumption 2, there exists an equilibrium in which the majority members of Party A select a type $(L, 0)$ candidate, while the majority members of Party B select a type $(R, 0)$ candidate. We show only that it is a best response for the majority members of Party A to select a type $(L, 0)$ candidate when Party B selects a type $(R, 0)$ candidate. The argument for Party B is similar.

The expected payoff of a majority member of Party A when the two parties select candidate of type $(L, 0)$ and $(R, 0)$ respectively, is

$$\psi(\gamma^L - \gamma^R)b(g^*(L), L) + [1 - \psi(\gamma^L - \gamma^R)]b(g^*(R), L).$$

Since $\psi(\gamma^L - \gamma^R) > 0$, this payoff exceeds that from Party A selecting a type $(R, 0)$ candidate. If Party A were to select a type $(L, 1)$ candidate, it would lose the votes of the rational type $(L, 0)$ voters. The expected payoff of a majority member of Party A would be:

$$\psi(\gamma_1^L - (\gamma_0^L + \gamma^R))[b(g^*(L), L) + \theta_1] + [1 - \psi(\gamma_1^L - (\gamma_0^L + \gamma^R))]b(g^*(R), L).$$

Subtracting the latter from the former, the difference between the two payoffs is

$$[\psi(\gamma^L - \gamma^R) - \psi(\gamma_1^L - (\gamma_0^L + \gamma^R))]\Delta b(L) - \psi(\gamma_1^L - (\gamma_0^L + \gamma^R))\theta_1,$$

which is positive by Assumption 2(ii). If Party A were to select a type $(R, 1)$ candidate, the election would simply be a referendum on the regulatory issue. The expected payoff of a majority member of Party A would be:

$$b(g^*(R), L) + \psi(\gamma_1 - \gamma_0)\theta_1.$$

Subtracting this from the proposed equilibrium payoff yields

$$\psi(\gamma^L - \gamma^R)\Delta b(L) - \psi(\gamma_1 - \gamma_0)\theta_1,$$

which is positive by Assumption 2(i). Thus, $(L, 0)$ is a best response to $(R, 0)$ for the majority members of Party A. QED

Proof of Proposition 3: We need to show that, under Assumption 3, there exists an equilibrium in which the majority members of Party A select a type $(L, 0)$ candidate, while the majority members of Party B select a type $(R, 0)$ candidate. We show only that it is a best response for the majority members of Party A to select a type $(L, 0)$ candidate when Party B selects a type $(R, 0)$ candidate. The argument for Party B is similar.

The expected payoff of a majority member of Party A when the two parties select candidate of type $(L, 0)$ and $(R, 0)$ respectively, is

$$\psi(\gamma^L - \gamma^R)b(g^*(L), L) + [1 - \psi(\gamma^L - \gamma^R)]b(g^*(R), L).$$

Since $\psi(\gamma^L - \gamma^R) > 0$, this payoff exceeds that from Party A selecting a type $(R, 0)$ candidate. If Party A were to select a type $(L, 1)$ candidate, the interest group would make contributions to Party B's candidate. The expected payoff of a majority member of Party A would be:

$$\widehat{\psi}(\gamma^L - \gamma^R, -x^*(\gamma^R - \gamma^L))[b(g^*(L), L) + \theta_1] + [1 - \widehat{\psi}(\gamma^L - \gamma^R, -x^*(\gamma^R - \gamma^L))]b(g^*(R), L).$$

Subtracting the latter from the former, the difference between the two payoffs is

$$[\psi(\gamma^L - \gamma^R) - \widehat{\psi}(\gamma^L - \gamma^R, -x^*(\gamma^R - \gamma^L))]\Delta b(L) - \widehat{\psi}(\gamma^L - \gamma^R, -x^*(\gamma^R - \gamma^L))\theta_1,$$

which is positive by Assumption 3(ii). If Party A were to select a type $(R, 1)$ candidate, the election would simply be a referendum on the regulatory issue and the interest group would again support Party B's candidate. The expected payoff of a majority member of Party A would be:

$$b(g^*(R), L) + \widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1))\theta_1.$$

Subtracting this from the proposed equilibrium payoff yields

$$\psi(\gamma^L - \gamma^R)\Delta b(L) - \widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1))\theta_1,$$

which is positive by Assumption 3(i). Thus, $(L, 0)$ is a best response to $(R, 0)$ for the majority members of Party A. QED

Proof of Proposition 4: Let I_0 be a variable that takes on the value 1 when the anti-regulation initiative is proposed and 0 when it is not. Similarly, let

I_1 be a variable which takes on the value 1 when the pro-regulation initiative is proposed and 0 when it is not. Any equilibrium is characterized by three things. First, functions $x_0(k_A, t_A, k_B, t_B, I_0, I_1)$, $x_1(k_A, t_A, k_B, t_B, I_0, I_1)$, $x_A(k_A, t_A, k_B, t_B, I_0, I_1)$ and $x_B(k_A, t_A, k_B, t_B, I_0, I_1)$ describing the interest group's contributions to the initiative campaigns and the two parties' candidates, for any given types of candidates selected and initiative proposals. Thus, x_0 denotes the money spent buying votes in favor of the anti-regulation initiative and x_1 denotes the money spent buying votes against the pro-regulation initiative. By definition, $x_0 = 0$ if $I_0 = 0$ and $x_1 = 0$ if $I_1 = 0$. Second, a function $\rho(k_A, t_A, k_B, t_B)$ giving the probability of each possible initiative proposal $(I_0, I_1) \in \{0, 1\}^2$ for any given types of candidates. Thus, for example, $\rho(k_A, t_A, k_B, t_B)(1, 1)$ is the probability that both anti and pro-regulation initiatives are proposed. Third, a pair of candidates $(\widehat{k}_A, \widehat{t}_A)$ and $(\widehat{k}_B, \widehat{t}_B)$. Formally, therefore, any equilibrium may be summarized by $\{(x_0(\cdot), x_1(\cdot), x_A(\cdot), x_B(\cdot)); \rho(\cdot); (\widehat{k}_A, \widehat{t}_A, \widehat{k}_B, \widehat{t}_B)\}$.

Consider then, a particular equilibrium $\{(x_0(\cdot), x_1(\cdot), x_A(\cdot), x_B(\cdot)); \rho(\cdot); (\widehat{k}_A, \widehat{t}_A, \widehat{k}_B, \widehat{t}_B)\}$. Let $\widehat{\pi}_t$ be the equilibrium probability that the regulatory policy outcome is $t \in \{0, 1\}$. We must show that $\widehat{\pi}_1 = \widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1))$ (this implies that $\widehat{\pi}_0 = \widehat{\psi}(\gamma_0 - \gamma_1, x^*(\gamma_0 - \gamma_1))$ since $\widehat{\pi}_0 = 1 - \widehat{\pi}_1$). The proof will proceed by contradiction, so suppose that $\widehat{\pi}_1 \neq \widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1))$. There are four possibilities: (i) both initiatives are proposed in equilibrium; (ii) only the anti-regulation initiative is proposed; (iii) only the pro-regulation initiative is proposed; and (iv) neither initiative is proposed. We will rule each of these out in turn, which will yield our contradiction.

We will make use of the following additional notation: $\pi_J(I_0, I_1)$ will denote the probability that Party J's candidate wins when the candidate pairs are $(\widehat{k}_A, \widehat{t}_A)$ and $(\widehat{k}_B, \widehat{t}_B)$ and the initiative proposals are (I_0, I_1); π_0 will denote the probability that the anti-regulation initiative receives majority support when the candidate pairs are $(\widehat{k}_A, \widehat{t}_A)$ and $(\widehat{k}_B, \widehat{t}_B)$ and $(I_0, I_1) = (1, 0)$; and π_1 the probability that the pro-regulation initiative receives majority support when the candidate pairs are $(\widehat{k}_A, \widehat{t}_A)$ and $(\widehat{k}_B, \widehat{t}_B)$ and $(I_0, I_1) = (0, 1)$. Naturally, all these probabilities take into account the interest group's contribution behavior as specified by $(x_0(\cdot), x_1(\cdot), x_A(\cdot), x_B(\cdot))$.

Possibility (i): $\rho(\widehat{k}_A, \widehat{t}_A, \widehat{k}_B, \widehat{t}_B)(1, 1) = 1$.

When both initiatives have been proposed, the issue will be decided by which ever initiative passes. (Under our assumption that noise voters vote for one and only one initiative, one initiative must receive majority support.)

The interest group will devote $x^*(\gamma_0 - \gamma_1)$ to supporting the anti-regulation initiative (i.e., $x_0(\cdot) + x_1(\cdot) = x^*(\gamma_0 - \gamma_1)$) and hence the probability that the pro-regulation initiative will win is given by $\widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1))$. But this means that $\widehat{\pi}_1 = \widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1))$ - a contradiction.

Possibility (ii): $\rho(\widehat{k}_A, \widehat{t}_A, \widehat{k}_B, \widehat{t}_B)(1,0) = 1$.

In this case, a citizen of type (k,t) (not in the interest group) enjoys an equilibrium expected payoff:

$$\pi_A(1,0)b(g^*(\widehat{k}_A), k) + \pi_B(1,0)b(g^*(\widehat{k}_B), k) + \theta_t(1 - \pi_0)[\pi_A(1,0)\widehat{t}_A + \pi_B(1,0)\widehat{t}_B].$$

This reflects the fact that the initiative will settle the issue only if it passes. If it fails, an event with probability $1 - \pi_0$, the issue will be decided by the winning candidate.

If a pro-regulation initiative were introduced, then both initiatives would be on the table and the issue will be decided by which ever initiative passes. The interest group will devote $x^*(\gamma_0 - \gamma_1)$ to supporting the anti-regulation initiative and hence the probability that the pro-regulation initiative will win is given by $\widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1))$. Thus, the expected payoff of a type (k,t) citizen would be

$$\pi_A(1,1)b(g^*(\widehat{k}_A), k) + \pi_B(1,1)b(g^*(\widehat{k}_B), k) + \theta_t\widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1)).$$

Differencing, the gain in a type (k,t)'s citizen's expected payoff from the pro-regulation initiative being introduced is:

$$\chi(k) + \theta_t\kappa$$

where

$$\chi(k) = [\pi_A(1,1) - \pi_A(1,0)]b(g^*(\widehat{k}_A), k) + [\pi_B(1,1) - \pi_B(1,0)]b(g^*(\widehat{k}_B), k)$$

and

$$\kappa = \widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1)) - (1 - \pi_0)[\pi_A(1,0)\widehat{t}_A + \pi_B(1,0)\widehat{t}_B].$$

Given that $\rho(\widehat{k}_A, \widehat{t}_A, \widehat{k}_B, \widehat{t}_B)(1,0) = 1$, it must be the case that $\chi(k) + \theta_t\kappa \leq 0$ for all (k,t). If not, then for sufficiently small δ, it would be in some citizen's interest to propose the pro-regulation initiative and hence $(I_0, I_1) = (1, 0)$ could not be generated by a pure strategy equilibrium of the game in which each citizen, chooses whether or not to place an initiative. Observe that $\chi(k) < 0$ if and only if $\chi(-k) > 0$. Thus, if $\kappa > 0$ then $\chi(k) + \theta_1\kappa > 0$ for some k, while if $\kappa < 0$ then $\chi(k) + \theta_0\kappa > 0$ for some k. It follows that $\kappa = 0$. But this implies that

$$\widehat{\pi}_1 = \widehat{\psi}(\gamma_1 - \gamma_0, -x_0)[\pi_A(1,0)\widehat{t}_A + \pi_B(1,0)\widehat{t}_B] = \widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1)),$$

which is a contradiction.

Possibility (iii): $\rho(\widehat{k}_A, \widehat{t}_A, \widehat{k}_B, \widehat{t}_B)(0,1) = 1$.

In this case, a citizen of type (k,t) (not in the interest group) has an equilibrium expected payoff:

$$\pi_A(0,1)b(g^*(\widehat{k}_A), k) + \pi_B(0,1)b(g^*(\widehat{k}_B), k) + \theta_t\{\pi_1 + (1 - \pi_1)[\pi_A(0,1)\widehat{t}_A + \pi_B(0,1)\widehat{t}_B]\}.$$

The idea is that the only chance that the regulation will not be implemented is if the initiative fails, an event with probability $1 - \pi_1$. In this event, regulatory policy is determined by the winning candidate.

If the anti-regulation initiative were introduced, the expected payoff of a type (k,t) citizen would be

$$\pi_A(1,1)b(g^*(\widehat{k}_A), k) + \pi_B(1,1)b(g^*(\widehat{k}_B), k) + \theta_t\widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1)).$$

Differencing, the gain in the expected payoff of a type (k,t) citizen from the anti-regulation initiative being introduced is

$$\chi(k) + \theta_t\kappa$$

where

$$\chi(k) = [\pi_A(1,1) - \pi_A(0,1)]b(g^*(\widehat{k}_A), k) + [\pi_B(1,1) - \pi_B(0,1)]b(g^*(\widehat{k}_B), k)$$

and

$$\kappa = \widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1)) - \{\pi_1 + (1 - \pi_1)[\pi_A(0,1)\widehat{t}_A + \pi_B(0,1)\widehat{t}_B]\}$$

Again, it must be the case that $\chi(k) + \theta_t \kappa \leq 0$ for all (k, t) which implies that $\kappa = 0$. If $\kappa = 0$, then

$$\widehat{\pi}_1 = \pi_1 + (1 - \pi_1)[\pi_A(0,1)\widehat{t}_A + \pi_B(0,1)\widehat{t}_B] = \widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1)),$$

which is a contradiction.

Possibility (iv): $\rho(\widehat{k}_A, \widehat{t}_A, \widehat{k}_B, \widehat{t}_B)(0,0) = 1$.

In this case, a citizen of type (k, t) (not in the interest group) has an equilibrium expected payoff:

$$\pi_A(0,0)b(g^*(\widehat{k}_A), k) + \pi_B(0,0)b(g^*(\widehat{k}_B), k) + \theta_t[\pi_A(0,0)\widehat{t}_A + \pi_B(0,0)\widehat{t}_B].$$

If an anti-regulation initiative were introduced, the expected payoff of a type (k, t) citizen would be

$$\pi_A(1,0)b(g^*(\widehat{k}_A), k) + \pi_B(1,0)b(g^*(\widehat{k}_B), k) + \theta_t(1 - \pi_0)[\pi_A(1,0)\widehat{t}_A + \pi_B(1,0)\widehat{t}_B].$$

Thus, the gain in expected payoff for a type (k, t) citizen from the anti-regulation initiative is

$$\chi(k) + \theta_t \kappa$$

where

$$\chi(k) = [\pi_A(1,0) - \pi_A(0,0)]b(g^*(\widehat{k}_A), k) + [\pi_B(1,0) - \pi_B(0,0)]b(g^*(\widehat{k}_B), k)$$

and

$$\kappa = (1 - \pi_0)[\pi_A(1,0)\widehat{t}_A + \pi_B(1,0)\widehat{t}_B] - [\pi_A(0,0)\widehat{t}_A + \pi_B(0,0)\widehat{t}_B].$$

Similarly, if a pro-regulation initiative were introduced, the expected payoff of a type (k, t) citizen would be

$$\pi_A(0,1)b(g^*(\widehat{k}_A), k) + \pi_B(0,1)b(g^*(\widehat{k}_B), k) + \theta_t\{\pi_1 + (1 - \pi_1)[\pi_A(0,1)\widehat{t}_A + \pi_B(0,1)\widehat{t}_B]\}$$

and the gain in expected payoff from the pro-regulation initiative is

$$\widehat{\chi}(k) + \theta_t \widehat{\kappa}$$

where

$$\widehat{\chi}(k) = [\pi_A(0,1) - \pi_A(0,0)]b(g^*(\widehat{k}_A), k) + [\pi_B(0,1) - \pi_B(0,0)]b(g^*(\widehat{k}_B), k)$$

and

$$\widehat{\kappa} = \pi_1 + (1 - \pi_1)[\pi_A(0,1)\widehat{t}_A + \pi_B(0,1)\widehat{t}_B] - [\pi_A(0,0)\widehat{t}_A + \pi_B(0,0)\widehat{t}_B].$$

Since $\rho(\widehat{k}_A, \widehat{t}_A, \widehat{k}_B, \widehat{t}_B)(0,0) = 1$, it must be the case that $\chi(k) + \theta_t\kappa \leq 0$ and $\widehat{\chi}(k) + \theta_t\widehat{\kappa} \leq 0$ for all (k,t). This implies (i) that $\chi(L) = \chi(R) = 0$; (ii) that $\kappa = 0$; (iii) that $\widehat{\chi}(L) = \widehat{\chi}(R) = 0$; and (iv) that $\widehat{\kappa} = 0$.

If $\widehat{k}_A \neq \widehat{k}_B$, (i) implies that $\pi_J(1,0) = \pi_J(0,0)$ and (iii) implies that $\pi_J(0,1) = \pi_J(0,0)$. But then (ii) implies

$$(1 - \pi_0)[\pi_A(0,0)\widehat{t}_A + \pi_B(0,0)\widehat{t}_B] = [\pi_A(0,0)\widehat{t}_A + \pi_B(0,0)\widehat{t}_B],$$

which means either that $\pi_0 = 0$ or that $\pi_A(0,0)\widehat{t}_A + \pi_B(0,0)\widehat{t}_B = 0$. Similarly, (iv) implies that

$$\pi_1 + (1 - \pi_1)[\pi_A(0,0)\widehat{t}_A + \pi_B(0,0)\widehat{t}_B] = [\pi_A(0,0)\widehat{t}_A + \pi_B(0,0)\widehat{t}_B],$$

which means either that $\pi_1 = 0$ or that $\pi_A(0,0)\widehat{t}_A + \pi_B(0,0)\widehat{t}_B = 1$. Since we know that $\pi_1 > 0$, it must be the case that $\pi_A(0,0)\widehat{t}_A + \pi_B(0,0)\widehat{t}_B = 1$ and $\pi_0 = 0$. The former equality implies that:

$$\widehat{\pi}_1 = \pi_A(0,0)\widehat{t}_A + \pi_B(0,0)\widehat{t}_B = 1,$$

while the latter equality implies that $\gamma_1 - \gamma_0 \geq \frac{1-\mu}{\mu}$. But in this case, $\widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1)) = 1$, which means that $\widehat{\pi}_1 = \widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1))$ - a contradiction.

If $\widehat{k}_A = \widehat{k}_B$, then (i) and (iii) are automatically satisfied. If $\widehat{t}_A = \widehat{t}_B$, then $\pi_J(1,0) = \pi_J(0,1) = \pi_J(0,0) = \frac{1}{2}$. A similar logic to that used above, implies that $\widehat{t}_A = \widehat{t}_B = 1$ and $\pi_0 = 0$. These equalities in turn imply that

$$\widehat{\pi}_1 = 1 = \widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1)),$$

which is a contradiction. If $\widehat{t}_A \neq \widehat{t}_B$, then either $(\widehat{t}_A, \widehat{t}_B) = (1,0)$ or $(\widehat{t}_A, \widehat{t}_B) = (0,1)$. In either case, we have that

$$\widehat{\pi}_1 = \widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1)),$$

which is a contradiction. ■

Proof of Proposition 5: For sufficiently small δ, we must demonstrate the existence of an equilibrium $\{(x_0(\cdot), x_1(\cdot), x_A(\cdot), x_B(\cdot)); \rho(\cdot); (k_A, t_A, k_B, t_B)\}$, in which $(k_A, t_A, k_B, t_B) = (L, 1, R, 1)$ and $\rho(L, 1, R, 1)(1, 0) = 1$ if $\frac{1-\mu}{\mu} > \gamma_1 - \gamma_0$ and $\rho(L, 1, R, 1)(0, 0) = 1$ if $\frac{1-\mu}{\mu} \leq \gamma_1 - \gamma_0$.

The first task is to define the interest group's campaign contributions. Here, it is not necessary to be specific. For any $(k_A, t_A, k_B, t_B, I_0, I_1)$, simply let $x_0(k_A, t_A, k_B, t_B, I_0, I_1)$, $x_1(k_A, t_A, k_B, t_B, I_0, I_1)$, $x_A(k_A, t_A, k_B, t_B, I_0, I_1)$ and $x_B(k_A, t_A, k_B, t_B, I_0, I_1)$ be any 4-tuple of campaign contributions that maximize the interest group's expected payoff. Thus, if $(k_A, t_A, k_B, t_B, I_0, I_1) = (L, 1, R, 1, 0, 0)$ then $x_0 = x_1 = x_A = x_B = 0$; if $(k_A, t_A, k_B, t_B, I_0, I_1) = (L, 0, R, 1, 0, 0)$ then $x_0 = x_1 = x_B = 0$ and $x_A = x^*(\omega)$, where ω is the fraction of the population preferring $(g^*(L), 0)$ to $(g^*(R), 1)$; etc.

The next task is to define the initiative proposal function $\rho(k_A, t_A, k_B, t_B)$. This is more involved because we must make sure that initiative proposals are consistent with the pure strategy equilibria of a game in which each citizen, having observed the candidates put forward, chooses whether or not to place an initiative at cost δ. We distinguish four different possibilities: (1) $t_A = t_B = 0$; (2) $t_A = t_B = 1$; (3) $(t_J, t_{-J}) = (1, 0)$ and $k_A = k_B$; and (4) $(t_J, t_{-J}) = (1, 0)$ and $k_A \neq k_B$. As in the previous proposition, we will make use of the following additional notation: $\pi_J(I_0, I_1)$ will denote the probability that Party J's candidate wins when the candidate pairs are (k_A, t_A) and (k_B, t_B) and the initiative proposals are (I_0, I_1); π_0 will denote the probability that the anti-regulation initiative receives majority support when the candidate pairs are (k_A, t_A) and (k_B, t_B) and $(I_0, I_1) = (1, 0)$; and π_1 the probability that the pro-regulation initiative receives majority support when the candidate pairs are (k_A, t_A) and (k_B, t_B) and $(I_0, I_1) = (0, 1)$. These probabilities will, of course, be partially determined by the interest group's campaign contributions. We also let $\pi^* = \widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1))$ which is the probability that the regulation would be implemented if both initiatives are proposed (it is easy to check that $x_0(k_A, t_A, k_B, t_B, 1, 1) + x_1(k_A, t_A, k_B, t_B, 1, 1) = x^*(\gamma_0 - \gamma_1)$).

Possibility 1: $t_A = t_B = 0$. In this case, we let $\rho(k_A, t_A, k_B, t_B)(0, 1) = 1$. To justify this, we need to show (i) that at least one citizen would gain from placing the pro-regulation initiative on the ballot, when $t_A = t_B = 0$ and the anti-regulation initiative is not on the ballot and (ii) that no citizen would gain from placing the anti-regulation initiative on the ballot, when

$t_A = t_B = 0$ and the pro-regulation initiative is on the ballot. For (i), note that $x_1(k_A, 0, k_B, 0, 0, 1) = x^*(\gamma_0 - \gamma_1)$ and hence placing the pro-regulation initiative on the ballot raises the probability of the regulation being enacted to π^*. It has no effect on which candidate wins, since both candidates hold identical positions on the regulation. For (ii), note that if the anti-regulation initiative were proposed, the regulation would be decided by the winning initiative. But the probability of the regulation being enacted with both initiatives on the ballot is π^*, which is exactly the same as without the anti-regulation initiative. Since the anti-regulation initiative has no effect on the election outcome, there is no gain from proposing it.

Possibility 2: $t_A = t_B = 1$. If $\frac{1-\mu}{\mu} \leq \gamma_1 - \gamma_0$, we let $\rho(k_A, t_A, k_B, t_B)(0, 0) = 1$. This is justified by the fact that, for both types of initiative, placing one on the ballot has no effect on the probability that the regulation will be enacted (which is 1) and no effect on which candidate wins. If $\frac{1-\mu}{\mu} > \gamma_1 - \gamma_0$, we let $\rho(k_A, t_A, k_B, t_B)(1, 0) = 1$. To justify this, note first that placing the anti-regulation initiative on the ballot raises the probability of the regulation not being enacted to $1 - \pi^*$ (since $x_0(k_A, 1, k_B, 1, 1, 0) = x^*(\gamma_0 - \gamma_1)$) and has no effect on the election outcome. Second, the probability of the regulation being enacted with both initiatives on the ballot is π^* which is exactly the same as without the pro-regulation initiative. Since the pro-regulation initiative has no effect on the election outcome, there is no gain from proposing it.

Possibility 3: $(t_J, t_{-J}) = (1, 0)$ and $k_A = k_B$. If $\frac{1-\mu}{\mu} \leq \gamma_1 - \gamma_0$, we let $\rho(k_A, t_A, k_B, t_B)(0, 0) = 1$. In this case, the only thing differentiating the candidates in the election is their position on regulation. Accordingly, the pro-regulation candidate will win with probability one. This is unchanged by either type of initiative being on the ballot. If $\frac{1-\mu}{\mu} > \gamma_1 - \gamma_0$, matters are more complicated. If (a) $\pi_1 + (1 - \pi_1)\pi_J(0, 1) \neq \pi^*$ and (b) $(1 - \pi_0)\pi_J(1, 0) \neq \pi^*$, then we let $\rho(k_A, t_A, k_B, t_B)(1, 1) = 1$. Condition (a) ensures that at least one citizen gains from the anti-regulation initiative being proposed when the pro-regulation initiative is on the ballot and condition (b) ensures that at least one citizen gains from the pro-regulation initiative being proposed when the anti-regulation initiative is on the ballot.

If condition (a) does not hold but condition (b) holds, we let $\rho(k_A, t_A, k_B, t_B)(1, 0) = 1$. Since the only thing differentiating the candidates is their position on regulation, $x_{-J}(k_A, t_A, k_B, t_B, 0, 0) = x^*(\gamma_0 - \gamma_1)$ and hence $\pi_J(0, 0) = \pi^* = \pi_1 + (1 - \pi_1)\pi_J(0, 1)$. This implies that no citizen can gain from the pro-regulation initiative being on the ballot whether or not the anti-regulation initiative is on the ballot. To show that some citizen gains from the anti-regulation initiative being on the ballot when the pro-regulation initiative is not on the ballot, it is enough to show that $(1-\pi_0)\pi_J(1,0) \neq \pi_J(0,0)$. But this follows immediately from condition (b) and the fact that $\pi_J(0,0) = \pi^*$.

If condition (b) does not hold but condition (a) holds, we let $\rho(k_A, t_A, k_B, t_B)(0,1) = 1$. Again, since the only thing differentiating the candidates is their position on regulation, $x_{-J}(k', t_A, k', t_B, 0, 0) = x^*(\gamma_0 - \gamma_1)$ and $\pi_J(0,0) = \pi^* = (1-\pi_0)\pi_J(1,0)$. This implies that no citizen can gain from the anti-regulation initiative being on the ballot whether or not the pro-regulation initiative is on the ballot. Thus, we just need to show that some citizen gains from the pro-regulation initiative being on the ballot when the anti-regulation initiative is not on the ballot. This follows from condition (a) and the fact that $\pi_J(0,0) = \pi^*$.

If neither condition (a) nor condition (b) holds, we let $\rho(k_A, t_A, k_B, t_B)(0,0) = 1$. In this case, we have that $\pi_J(0,0) = \pi^* = \pi_1 + (1-\pi_1)\pi_J(0,1) = (1-\pi_0)\pi_J(1,0)$ and these inequalities imply that no citizen can gain from either type of initiative being on the ballot whether or not the other initiative is on the ballot.

Possibility 4: $(t_J, t_{-J}) = (1,0)$ and $k_A \neq k_B$. If $\frac{1-\mu}{\mu} \leq \gamma_1 - \gamma_0$, we let $\rho(k_A, t_A, k_B, t_B)(0,1) = 1$ if $\pi_J(0,0) \neq \pi_J(0,1)$ or if $\pi_J(0,0) < 1$. Since the two candidates have different public spending preferences and the pro-regulation initiative would pass with probability one if proposed, at least one citizen can gain from placing the pro-regulation initiative on the ballot when the anti-regulation initiative is not on the ballot if $\pi_J(0,0) \neq \pi_J(0,1)$ or if $\pi_J(0,0) < 1$. No citizen can gain from proposing the anti-regulation initiative, since it will fail with probability one and have no effect on the candidate election. If $\pi_J(0,0) = \pi_J(0,1) = 1$, we let $\rho(k_A, t_A, k_B, t_B)(0,0) = 1$. This is justified by the fact that neither type of initiative will impact the likelihood of the regulation being implemented nor the public spending policy.

If $\frac{1-\mu}{\mu} > \gamma_1 - \gamma_0$, we let $\rho(k_A, t_A, k_B, t_B)(1,1) = 1$ if (a) $\pi_J(0,1) \neq \pi_J(1,1)$ or $\pi_1 + (1-\pi_1)\pi_J(0,1) \neq \pi^*$ and (b) $\pi_J(1,0) \neq \pi_J(1,1)$ or $(1-\pi_0)\pi_J(1,0) \neq \pi^*$. Since the two candidates have different public spending preferences and π^* is the probability that the regulation is enacted if both initiatives are proposed, condition (a) ensures that at least one citizen gains from the anti-regulation initiative being proposed when the pro-regulation initiative is on the ballot and condition (b) ensures that at least one citizen gains from the pro-regulation initiative being proposed when the anti-regulation initiative is on the ballot.

It is easy to show that either condition (a) or (b) must hold. If condition (a) does not hold, we let $\rho(k_A, t_A, k_B, t_B)(0,1) = 1$. The fact that $\pi_J(0,1) = \pi_J(1,1)$ and $\pi_1 + (1-\pi_1)\pi_J(0,1) = \pi^*$ implies that no citizen can gain from the anti-regulation initiative being on the ballot when the pro-regulation initiative is on the ballot. Thus, we just need to show that some citizen who gains from the pro-regulation initiative being on the ballot when the anti-regulation initiative is not on the ballot. It is enough to show that either $\pi_J(0,1) \neq \pi_J(0,0)$ or $\pi_1 + (1-\pi_1)\pi_J(0,1) \neq \pi_J(0,0)$. One of these inequalities must hold for if $\pi_J(0,1) = \pi_J(0,0)$ and $\pi_1 + (1-\pi_1)\pi_J(0,1) = \pi_J(0,0)$ then, since $\pi_1 > 0$, $\pi_J(0,1) = 1$. But since condition (a) does not hold, this implies that $\pi^* = 1$ which contradicts the fact that $\frac{1-\mu}{\mu} > \gamma_1 - \gamma_0$.

If condition (b) does not hold, we let $\rho(k_A, t_A, k_B, t_B)(1,0) = 1$. The fact that $\pi_J(1,0) = \pi_J(1,1)$ and $(1-\pi_0)\pi_J(1,0) = \pi^*$ implies that no citizen can gain from the pro-regulation initiative being on the ballot when the anti-regulation initiative is on the ballot. Thus, we just need to show that some citizen who gains from the anti-regulation initiative being on the ballot when the pro-regulation initiative is not on the ballot. It is enough to show that either $\pi_J(1,0) \neq \pi_J(0,0)$ or $(1-\pi_0)\pi_J(1,0) \neq \pi_J(0,0)$. One of these inequalities must hold for if $\pi_J(1,0) = \pi_J(0,0)$ and $(1-\pi_0)\pi_J(1,0) = \pi_J(0,0)$ then, since $\pi_0 > 0$, $\pi_J(1,0) = 0$. But since condition (b) does not hold, this implies that $\pi^* = 0$ which is a contradiction.

We now claim that given the contribution and initiative proposal functions just constructed, it is an equilibrium for the majority members of each party to select candidates of type $(L,1)$ and $(R,1)$ respectively. This will imply the proposition, because our specification of the initiative proposal function implies that $\rho(L,1,R,1)(0,0) = 1$ if $\frac{1-\mu}{\mu} \leq \gamma_1 - \gamma_0$ and $\rho(L,1,R,1)(1,0) = 1$ if $\frac{1-\mu}{\mu} > \gamma_1 - \gamma_0$ (see Possibility 2 above). We shall simply show that a candidate of type $(L,1)$ is a best response for the majority members of Party A, the argument for Party B being similar.

Assuming that the majority members of Party A have regulatory attitude t, their payoff at the proposed equilibrium is

$$\psi(\gamma^L - \gamma^R)b(g^*(L), L) + [1 - \psi(\gamma^L - \gamma^R)]b(g^*(R), L) + \widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1))\theta_t.$$

This reflects the fact that $\widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1)) = 1$ if $\frac{1-\mu}{\mu} \leq \gamma_1 - \gamma_0$ and $x_0(L, 1, R, 1, 1, 0) = x^*(\gamma_0 - \gamma_1)$. There are three possible deviations that Party A's members might make and we go through each in turn.

The first deviation is to a candidate of type $(L, 0)$. If $\frac{1-\mu}{\mu} \leq \gamma_1 - \gamma_0$, our specification of the initiative proposal function implies that $\rho(L, 0, R, 1)(0, 1) = 1$ if $\pi_B(0, 0) \neq \pi_B(0, 1)$ or if $\pi_B(0, 0) < 1$ and $\rho(L, 0, R, 1)(0, 0) = 1$ if $\pi_B(0, 0) = \pi_B(0, 1) = 1$ (see Possibility 4). But since the pro-regulation initiative will pass with probability one, only the candidates public spending preferences are relevant for the election outcome if it is proposed. This means that $\pi_B(0, 1) = 1 - \psi(\gamma^L - \gamma^R) < 1$, which implies that $\rho(L, 0, R, 1)(0, 1) = 1$. Thus, the payoff to the majority members of Party A from deviating is

$$\psi(\gamma^L - \gamma^R)b(g^*(L), L) + [1 - \psi(\gamma^L - \gamma^R)]b(g^*(R), L) + \theta_t,$$

which is exactly their equilibrium payoff. If $\frac{1-\mu}{\mu} > \gamma_1 - \gamma_0$, our specification of the initiative proposal function implies that $\rho(L, 0, R, 1)(1, 1) = 1$ if (a) $\pi_B(0, 1) \neq \pi_B(1, 1)$ or $\pi_1 + (1 - \pi_1)\pi_B(0, 1) \neq \pi^*$ and (b) $\pi_B(1, 0) \neq \pi_B(1, 1)$ or $(1 - \pi_0)\pi_B(1, 0) \neq \pi^*$. Thus, if conditions (a) and (b) hold, both initiatives will be proposed and the regulation will be decided by the winning initiative. The payoff to the majority members of Party A from deviating is

$$\pi_A(1, 1)b(g^*(L), L) + \pi_B(1, 1)b(g^*(R), L) + \pi^*\theta_t.$$

But, since $\pi_A(1, 1) = \psi(\gamma^L - \gamma^R)$, this is exactly their equilibrium payoff.

If condition (a) does not hold, then $\rho(L, 0, R, 1)(0, 1) = 1$. Thus, the payoff to the majority members of Party A from deviating is

$$\pi_A(0, 1)b(g^*(L), L) + \pi_B(0, 1)b(g^*(R), L) + [\pi_1 + (1 - \pi_1)\pi_B(0, 1)]\theta_t.$$

But, if condition (a) does not hold, then $\pi_B(0, 1) = \pi_B(1, 1) = 1 - \psi(\gamma^L - \gamma^R)$ and $\pi_1 + (1 - \pi_1)\pi_B(0, 1) = \pi^*$. Thus, this payoff is exactly the equilibrium payoff. If condition (b) does not hold, then $\rho(L, 0, R, 1)(1, 0) = 1$ and the payoff to the majority members of Party A from deviating is

$$\pi_A(1, 0)b(g^*(L), L) + \pi_B(1, 0)b(g^*(R), L) + (1 - \pi_0)\pi_B(0, 1)\theta_t.$$

But, if condition (a) does not hold, then $\pi_B(1, 0) = \pi_B(1, 1) = 1 - \psi(\gamma^L - \gamma^R)$ and $(1 - \pi_0)\pi_B(0, 1) = \pi^*$ and, again, this payoff is exactly the equilibrium payoff.

The second type of deviation is to a candidate of type $(R,0)$. If $\frac{1-\mu}{\mu} \leq \gamma_1 - \gamma_0$, our specification of the initiative proposal function implies that $\rho(R,0,R,1)(0,0) = 1$. Since $\frac{1-\mu}{\mu} \leq \gamma_1 - \gamma_0$, and the only thing differentiating the candidates is their positions on the regulation, Party B's candidate will win with probability one. The payoff to the majority members of Party A from deviating is therefore

$$b(g^*(R), L) + \theta_t,$$

which is less than their equilibrium payoff.

If $\frac{1-\mu}{\mu} > \gamma_1 - \gamma_0$, our specification implies of the initiative proposal function implies that $\rho(R,0,R,1)(1,1) = 1$ if (a) $\pi_1 + (1-\pi_1)\pi_B(0,1) \neq \pi^*$ and (b) $(1-\pi_0)\pi_B(1,0) \neq \pi^*$. If condition (a) does not hold but condition (b) holds, $\rho(R,0,R,1)(1,0) = 1$. If condition (b) does not hold but condition (a) holds, $\rho(R,0,R,1)(0,1) = 1$, while if neither condition holds, $\rho(R,0,R,1)(0,0) = 1$. In all cases, the payoff to the majority members of Party A from deviating is

$$b(g^*(R), L) + \widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1))\theta_t,$$

which is less than their equilibrium payoff.

The final type of deviation is to a candidate of type $(R,1)$. If $\frac{1-\mu}{\mu} \leq \gamma_1 - \gamma_0$, our specification of the initiative proposal function implies that $\rho(R,0,R,1)(0,0) = 1$. Since both parties' candidates are type $(R,1)$, the payoff to the majority members of Party A from deviating is therefore

$$b(g^*(R), L) + \theta_t,$$

which is less than their equilibrium payoff. If $\frac{1-\mu}{\mu} > \gamma_1 - \gamma_0$, $\rho(R,1,R,1)(1,0) = 1$. The interest group will devote $x^*(\gamma_0 - \gamma_1)$ to campaigning for the initiative's passage and the payoff to the majority members of Party A from deviating is therefore

$$b(g^*(R), L) + \widehat{\psi}(\gamma_1 - \gamma_0, -x^*(\gamma_0 - \gamma_1))\theta_t,$$

which is less than their equilibrium payoff. QED