Term Limits as a Response to Incumbency Advantage

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In this paper we develop a spatial model to provide an explanation for the seeming paradox that voters in some states reelect incumbents while unilaterally self-imposing legislative term limits. The model shows that voters are more likely to support term limits if the incumbent’s position is farther from the median voter position or if the incumbent’s party is more moderate. Furthermore, it suggests that term limits, or the threat of term limits, increases the responsiveness of politicians’ policy platforms.

The issue of the proper tenure of elected officials has a long history. In ancient Greece, Aristotle argued that rotation in office both limited the extent to which power’s corrupting influence could take hold of politicians and fostered broad-based participation in governance, which in turn created a more civically competent citizenry. The argument for perpetual rotation persisted, finding its advocates in ancient Rome (among them the famous scholar and politician Cicero), in medieval Venice, and in early modern England. It is in seventeenth-century England that the debate began to take on its current form. Advocates (among them Henry Neville, Algernon Sydney, and John Locke) argued, similarly to Aristotle, that rotation militated against the corrupting potential of political power and also fostered civic competence. However, others, including David Hume, spoke out against mandatory rotation, viewing it as a recipe for instability and administrative incompetence.1

This debate surfaced once again during the early days of the American Republic. The Articles of Confederation included term limits for senators, but these limits were challenged and subsequently ignored by incumbents who, with the support of their constituents, refused to relinquish office. With the demise of the Articles of Confederation, the debate moved to the Constitutional Convention in Philadelphia. The Anti-Federalists, proponents of states’ rights and a weak federal

1 Much of this normative history is based on the excellent account in Petracca (1992).
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government, believed that legislators should serve as delegates who mirrored the (changing) attitudes of their local constituencies. They argued that term limits enhanced both participation and representation by keeping the ideological and personal distance between legislators and constituents at an optimal low and by putting constraints on the inherent thirst for power. The Federalists (especially Alexander Hamilton) opposed mandatory rotation, believing that legislators should serve as trustees who pursued their national constituencies’ long-term well-being rather than their principals’ immediate desires (Benjamin and Malbin 1992). They argued that term limits removed the power to elect representatives from the voters, led to ineffectual governance and political instability, and ultimately created more distance between constituencies and and legislators, thus allowing legislators to pursue self-interested objectives (Hamilton, quoted in Benjamin and Malbin 1992).

This debate resurfaced in the early 1990s, as congressional term limits moved to the forefront of popular, normative, and scientific debates about democratic representation and effective government. This sudden rhetorical and intellectual focus was accompanied by real-time institutional reform. In 1990 the people of California, Oklahoma, and Colorado resorted to the referendum, the popular procedure for limiting the terms of their state representatives. In Colorado the restrictions applied as well to the state’s delegation of congressmen in Washington, D.C. In 1992 another 10 states adopted laws limiting the terms of office of state legislators and/or federal representatives. But in 1995 the Supreme Court ruled that laws limiting the terms of federal representatives were unconstitutional. Today, 20 states still have some form of term-limit legislation for state legislators on the books. The term-limit movement has thus engineered what is arguably a major set of institutional reforms.

One set of beliefs apparently shared by contemporary advocates of term limits is that incumbents are too secure, elections are not competitive, and more generally that political careerism has stained American politics and policy. For instance, more than 80% of representatives running for reelection have been successful in almost every year between 1940 and 1990. In Senate elections the reelection rate is usually between 70% and 90% (see Benjamin and Malbin 1992; Davidson and Oleszek 1994; and Miller 1999). A number of statistical investigations also confirm the existence of incumbency advantage (Ansolabehere, Brady, and Fiorina 1988; Collie 1981; Cox and Katz 1996; Garand and Gross 1984; and Gelman and King 1990). It is argued that incumbent advantage generally lowers electoral responsiveness (Coyne and Fund 1992; Rivers and Brady 1991), induces pork-barrel legislation (Fiorina 1989), and deters high-quality challengers (Levitt and Wolfram 1997). Proponents of term limits generally believe that by increasing the amount of open-seat races, term limits would

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2 Term limits were deemed unconstitutional and consequently overturned by state courts in Massachusetts (1997), Nebraska (1996), and Washington (1998), reducing the total number of states with term-limit legislation from 23 to 20.
increase turnover, enhance competition (Coyne and Fund 1992; Daniel and Lott 1997; Petracca 1991), and produce policy outcomes more in tune with constituents' preferences. As becomes clear when reading this literature, the protagonists have often confused normative and empirical debate. Both advocates and opponents of term limits, for example, seem to share the basic principles that democratic politics should be competitive and should engender a representative link between politician and citizen. The disagreements, then, are rooted in different conceptions of competition or just representation, or alternatively in positive disagreements about the effects that term limits will eventually have on these essential democratic ingredients. Though normatively agnostic, the model analyzed below provides theoretical grounding to a portion of the above arguments regarding the effects of term limits on representation and competitiveness, a theoretical framework which should be useful for both normative and positive debates.3

In addition to these theoretical issues, the success of term-limit initiatives in the 1990s raises an interesting empirical question: though voters seemed satisfied with incumbents, they voted to pass the term-limit initiatives. For example, in 1990, voters in California reelected more than 90% of their state legislators but also voted to pass a term-limit initiative. And if they were not satisfied with the incumbents, why could they not simply vote them out of office, instead of resorting to an indirect instrument such as term limits? In this paper we construct a model that specifies voter utility in terms of the responsiveness of public policy and that offers an explanation for the seeming paradox that voters choose to support incumbents while voting in favor of a term-limits initiative. As noted above, results from our model also provide a theoretical foundation for the above arguments concerning the effects of term limits on legislative responsiveness, turnover, and electoral competitiveness. In the next section we review the literature that attempts to explain the phenomenon of voters voting for both incumbents and term-limits referendums.

Literature Review

How does one account for the apparent paradox that voters choose to reelect incumbents but also to limit their tenures? Dick and Lott (1993) offered the first attempt to answer this question; it was subsequently addressed by Buchanan and Congleton (1994). The basic reasoning is as follows: a congressman’s ability to secure wealth transfers for his district increases with his legislative experience and decreases with the experience of his fellow congressmen. This incumbent can use his experience to ensure electoral victory, even if the

3 For general arguments about the pros and cons of term-limit legislation, see also Adams and Kenny (1986); Cohen and Spitzer (1992); Corwin (1991); Lopez (2002, 2003); Mansfield (1993); and the articles collected in Benjamin and Malbin (1992).
challenger in question is situated closer to the district’s median voter. As the amount of transferable resources a new congressman will be able to secure ($M_1$) is, ceteris paribus, less than the amount of resources the incumbent can secure ($M_2$), the incumbent can stay in office by promising to distribute $M_1$ resources as would the challenger, thus keeping for himself the chance to distribute the leftover wealth, $M_2 - M_1$, according his own preferences. The only way a challenger could secure an equal proportion of transferable resources is for the overall level of seniority in Congress to decrease. Without term limits, therefore, no voters in any given district have an incentive to replace their incumbents. The model thus presents a problem of collective action in the form of a prisoner’s dilemma, whereby if all districts elected challengers who better approximate their own median, there would be (1) no loss of relative seniority and (2) a Pareto-optimal gain for voters, as the $M_2 - M_1$ amount of resources formerly consumed by incumbents would now be distributed in a way that more closely approximates voter preferences. Term limits allow districts to overcome this problem by making credible the mutual commitment to remove long-standing incumbents, thus securing the Pareto-optimal gains that come from the ability to elect more adequately disposed representatives. This model does not, however, explain the fact that many states unilaterally imposed term limits on their national congressional delegations. Colorado, for instance, was the first state to restrict the terms of office allowed for its representatives.

Tabarrok (1994, 1996) offers an alternative explanation. He shows that risk-averse politicians have incentives to impose term limits unilaterally in order to avoid the risk of being systematically exploited by other parties taking full advantage of the power of incumbency. Tabarrok’s model helps explain why some politicians have incentives to support term limits, but it does not consider the voter’s decision. Glaeser (1997) develops a model to show that risk-averse voters may unilaterally pass term limits to avoid the same risk faced by politicians in Tabarrok’s model. But Glaeser’s model does not consider the strategic role of politicians. A general problem of these models is that they do not take account of the interactions between candidates and voters. By focusing so heavily on one side—either voters or candidates—they fail to notice that the utility accrued from instituting or not instituting term limits is ultimately a function of the strategic electoral interaction between voters and candidates.

Friedman and Wittman (1995) offer a different type of explanation. They argue that term limits result from the desires of some voters to transfer power from districts with long-standing incumbents to those with low-seniority incumbents, from the legislative to the executive branch, and from one party to another. Thus the fact that a majority of voters prefer their own district’s incumbent is not inconsistent with the fact that they also favor term limits, as long as the benefit from the transfer of power is greater than the loss incurred if their incumbent is removed. Friedman and Wittman focus on voters’ desire to redistribute power between various actors and institutions but ignore the fact that both ideological
and institutional conflicts have been becoming less salient in American politics. Issue voting is an important modern phenomenon, as voters increasingly see little difference between the overall positions of Democrats and Republicans. This is not to say that partisan conflict and institutional balances are unimportant to the American electorate, but before we resort to the more fundamental conflicts over ideology and institutions, we suggest trying first to develop a model that considers the strategic interactions between candidates and voters to explain voters’ seemingly self-contradictory behavior of voting for incumbents but also imposing limits on incumbent tenures. In the next section we show that under some conditions it is rational for voters to vote for both incumbents and term-limit initiatives.

**The Model**

When voters are deciding between supporting or not supporting term limits, they are confronted with the following two options: (1) if the term-limit referendum is passed, a new candidate will replace the incumbent to compete with the challenger from the opposing party in the coming election; (2) if the referendum is not passed, the incumbent will face a challenger from the opposing party. The outcomes of these two pairs of contests will determine the voters’ decision on the term-limit referendum. To resolve the paradox that voters choose to reelect incumbents but also to limit their tenures, we need first to establish the conditions under which a majority of voters prefer the incumbent to the challenger, then to solve for the equilibrium outcome when two new candidates compete with each other in the event that the term-limit referendum is passed, and finally to show that it is possible that a majority of voters prefer one of these new candidates to the incumbent.

Assume that in each district two candidates, C₁ and C₂, representing parties 1 and 2, respectively, are competing for office on a unidimensional policy space [0, 1]. Furthermore, assume that voters’ preferences over policies are single peaked and the utility function for a voter is \( u_v(y) = -(x - y)^2 \), where \( x \) is the voter’s most-preferred policy and \( y \) the policy. We identify a voter with his most-preferred policy; that is, one is called voter \( x \) if his most-preferred policy is \( x \). For simplicity, we assume that \( x \) is uniformly distributed on [0,1].

There are both advantages and disadvantages to being an incumbent. One of the incumbent’s advantages is that voters view him as a less risky choice than his opponent because they are less certain of the exact policy that the challenger would implement if elected. Formally, we assume that when a challenger pro-

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4This assumption, however, does not affect the main theoretical results, especially Theorem 1, we establish later in the paper. In our model individual voters care only about the distance between their ideal points and the candidate’s position. So given any density function, a cut-off point exists such that voters to the left (right) of this point will vote for the candidate from the left (right) party. Thus the positions of the cut-off points might be different when voters’ ideal points are not uniformly distributed, but it does not change the existence result established by Theorem 1.
poses a platform $x_c$, voters form an expectation of the exact policy that will be implemented if the challenger wins the election, which is represented by the random variable $\tilde{x}_c$, with $g(\tilde{x}_c)$ as its density function. Thus, voter $x$’s expected utility for a challenger with platform $x_c$ is

$$u_x(x_c) = -\int_0^1 (\tilde{x}_c - x)^2 g(\tilde{x}_c) d\tilde{x}_c = -\int_0^1 (\tilde{x}_c^2 - 2\tilde{x}_c x + x^2) g(\tilde{x}_c) d\tilde{x}_c$$

$$= -\int_0^1 \tilde{x}_c^2 g(\tilde{x}_c) d\tilde{x}_c + 2xm(\tilde{x}_c) - x^2$$

$$= -v(\tilde{x}_c) - m(\tilde{x}_c)^2 + 2xm(\tilde{x}_c) - x^2$$

$$= -v(\tilde{x}_c) - [m(\tilde{x}_c) - x]^2;$$

where $m(\tilde{x}_c)$ is the mean of the random variable $\tilde{x}_c$ and $v(\tilde{x}_c)$ its variance.\(^5\) We write the mean and variance of $\tilde{x}_c$ as $m(\tilde{x}_c)$ and $v(\tilde{x}_c)$ to emphasize their dependence on $\tilde{x}_c$, and thus on $x_c$. Assume that $m(\tilde{x}_c) = x_c$. That is, the mean of $\tilde{x}_c$ is exactly the proposed platform (see also Bernhardt and Ingberman 1985). This means that when a new candidate proposes a platform $x_c$, voters’ expectation of the candidate’s policy choice is centered on $x_c$. The variance of the random variable, $v(\tilde{x}_c)$, can be interpreted as the degree of uncertainty voters perceive about the candidate’s platform (Banks 1990). Thus a voter’s expected utility of a challenger with platform $x_c$ decreases with an increase in the degree of uncertainty regarding the challenger’s platform, $v(\tilde{x}_c)$, and the distance between the voter’s and the candidate’s expected positions ($|x_c - x|$).

Furthermore, we assume that the degree of uncertainty, $v(\tilde{x}_c)$, is a function of the distance between the challenger’s platform and his party’s position as perceived by voters. The positions of the two parties are denoted by $x_{p1}$ and $x_{p2}$, respectively. The party position is not the strategic instrument of either the party or the candidate. It can be viewed as the (perhaps weighted) mean of the policies of the party’s past incumbents, or simply the position of the party’s past incumbent. Party 1 (2) is the left (right)-wing party so that

$$A1. \quad 0 < x_{p1} < \frac{1}{2} < x_{p2} < 1.$$ 

We also assume that the incumbent belongs to party 1 and the challenger belongs to party 2 such that

$$A2. \quad x_1 < \frac{1}{2} < x_c < 1.$$ 

The greater the distance between a candidate’s platform and his party’s position, the less certain voters feel about the challenger. An underlying rationale for this assumption is that if a candidate’s platform is more divergent from his party’s position, then it is less likely that it will be enacted in the legislature. So even though a challenger is free to choose a platform, he is constrained by his party’s

\(^5\)We have used the fact that $v(\tilde{x}_c) = E(\tilde{x}_c^2) - (m(\tilde{x}_c))^2$. \(\)
platform; the farther his platform is from his party’s, the greater the uncertainty with which he will be perceived by voters.\textsuperscript{6} Formally, we assume that the variance term, $v(x_c)$, can be decomposed into $v(x_c) = v_0 + k(x_c - x_p)^2$, where $x_p$ is the position of the party that the challenger belongs to; $v_0$ can be seen as the voters’ disutility for intrinsic uncertainty, in the sense that as long as there is uncertainty regarding a candidate’s position, there is a fixed level of disutility for voters. Thus $v_0$ is the risk premium for a voter to be indifferent between accepting a position $x_c$ for sure and accepting a random position $\hat{x}_c$ whose mean value is exactly $x_c$. The term $k(x_c - x_p)^2$ can be seen as the disutility from extrinsic uncertainty, which is caused by the candidate’s strategic positioning. The value of $k$ measures the degree of the voter’s suspicion.

The utility of voter $x$ toward a challenger can thus be rewritten as $u(x) = -v_0 - k(x_c - x_p)^2 - (x_c - x)^2$. This specification implicitly assumes that a candidate does not have a policy preference and that he proposes a platform purely to maximize his votes. Voters believe that the platform is partially binding and will therefore serve as the mean around which final policy outcomes will be distributed. Hence the term $-(x_c - x)^2$. Moreover, the farther $x_c$ is from $x_p$, the greater the uncertainty (and thus disutility) voters perceived. Hence the term $-k(x_c - x_p)^2$.

The following argument assumes that candidates are pure-vote maximizers, i.e., have no policy preferences. The incumbent’s advantage over his opponent as a better-known product, however, also serves as a disadvantage because it prevents him from manipulating his platform freely to attract votes. Since the policy of an incumbent is known from his previous term, he will arouse great suspicion if his platform does not accord with his past policy. In terms of the utility function, this means that the value of $k$ is much greater for the incumbent than for the challenger. For simplicity, we assume that the incumbent does not have the chance to propose a new platform and that voters know with certainty that the incumbent’s policy will be the same as the current policy, denoted as $x_I$.\textsuperscript{7} This assumption is actually not as strong as it seems. Suppose, on the contrary, that the incumbent can choose a new platform, say $x_0$, to maximize votes strategically. By definition, the incumbent does not have the intrinsic uncertainty, $v_0 = 0$, so the utility of voter $x$ for the incumbent is $-k_I (x_0 - x_I)^2 - (x_0 - x)^2$.

Note that the incumbent always has the option of choosing his past policy, $x_I$, as a platform. If, despite $k$ being larger, he chooses a new platform $x_0 \neq x_I$, then it must be the case that he can garner even more votes with $x_0$ than $x_I$. In other words, the incumbent might enjoy an even greater advantage if he is allowed to choose a new platform because he can win reelection more easily. Thus, by assuming that the incumbent’s platform is fixed does not affect the generality of

\textsuperscript{6}We thank an anonymous referee for this suggestion.

\textsuperscript{7}This implicitly assumes that $k$ is infinity for the incumbent.
our argument because our theoretical results can only be strengthened if we relax this assumption.

**Competition between the Incumbent and the Challenger**

Without term limits, a candidate from party 2 will challenge the incumbent. Since there is no uncertainty as to the incumbent’s true position, \( x_I \), voter \( x \)'s utility for the incumbent is \( -(x - x_I)^2 \). Voter \( x \)'s utility for a challenger with platform \( x_C \) is \( -v_0 - k(x_c - x_{p2})^2 - (x_c - x)^2 \). Define \( \bar{x} \) such that \( -(x_I - \bar{x})^2 = -v_0 - k(x_c - x_{p2})^2 - (\bar{x} - x_I)^2 \). \( \bar{x} \) is the position of a voter who is indifferent between the incumbent and the challenger. Since the incumbent is of the left-wing party, voters on the left (right) of \( \bar{x} \) will vote for the incumbent (challenger). Solving for \( \bar{x} \) we have

\[
\bar{x} = \frac{(x_I + x_c)}{2} + \frac{[v_0 + k(x_c - x_{p2})^2]}{2(x_c - x_I)}.
\]

The share of votes obtained by the challenger is thus

\[
\int_{-\infty}^{\bar{x}} f(x)dx = 1 - F(\bar{x}).
\]

The challenger chooses \( x_C \) to maximize vote share \( 1 - F(\bar{x}) \). The first-order condition yields \( x_C^* = x_I + \sqrt{k(k + 1)(x_I - x_{p2})^2 + (k + 1)v_0}/(k + 1) \). The second-order condition holds trivially. Plugging this into the solution for \( \bar{x} \) we have

\[
\bar{x} = (1 + k)x_I + \sqrt{k(k + 1)(x_I - x_{p2})^2 + (k + 1)v_0} - kx_{p2}.
\]

Thus, the incumbent wins the election if

\[
(1 + k)x_I + \sqrt{k(k + 1)(x_I - x_{p2})^2 + (k + 1)v_0} - kx_{p2} > \frac{1}{2}.
\]

**Competition between Two New Candidates**

If term limits are passed, the incumbent’s candidacy is eliminated. In that case two new candidates, \( C_1 \) and \( C_2 \), representing party 1 and party 2, respectively, will compete against each other. Let the candidates’ platforms be \( x_{C_1} \) and \( x_{C_2} \), respectively. Define \( \bar{x}_{im} \) to be the value of \( x \) that satisfies \( -v_0 - k(x_{p1} - x_{C_1})^2 - (x - x_{C_1})^2 = -v_0 - k(x_{p2} - x_{C_2})^2 - (x - x_{C_2})^2 \). As can be seen from the above equation, since both candidates are newcomers, each is constrained by his party’s position, \( (x_{p1} \) and \( x_{p2} \), respectively. Solving for the equation yields

\[
\bar{x}_{im} = \frac{1}{2} \left\{ k \frac{(x_{p2} - x_{C_2})^2 - (x_{p1} - x_{C_1})^2}{(x_{C_2} - x_{C_1})} + x_{C_1} + x_{C_2} \right\}.
\]

\( \bar{x}_{im} \) is the position of a voter who is indifferent between \( x_{C_1} \) and \( x_{C_2} \). Voters to the left (right) of \( \bar{x}_{im} \) prefer \( x_{C_1} \)

\( \text{In fact there are two solutions to the first-order condition. Since the challenger is of the right-wing party, we consider only the one that is greater than } x_I. \)
C_1 (C_2) wins if \( \bar{x}_{im} > (\prec) \frac{1}{2} \). C_1 chooses \( x_{C_1} \) to maximize \( \int_{x_{im}}^{1} f(x) dx = F(\bar{x}_{im}) \).

C_2 chooses \( x_{C_2} \) to maximize \( \int_{0}^{x_{im}} f(x) dx = 1 - F(\bar{x}_{im}) \). From the first-order conditions we have

\[
x_{C_1}^* = \frac{2k + 1}{2(k + 1)} x_{p_1} + \frac{1}{2(k + 1)} x_{p_2};
\]

\[
x_{C_2}^* = \frac{1}{2(k + 1)} x_{p_1} + \frac{2k + 1}{2(k + 1)} x_{p_2}.
\]

The second-order conditions hold trivially. It is important to note that \( x_c^* \) and \( x_{c_2}^* \) are different policies. Moreover, if \( v_0 \) is large enough, \( x_c^* \) is greater than \( x_{c_2}^* \) when \( x_{p_1} = x_j \). That is, when facing a newcomer with the same platform as the incumbent’s, party 2’s candidate must position himself closer to the median voter (in which case he proposes \( x_{c_2}^* \)) than if the opponent is the incumbent (in which case he proposes \( x_c^* \)). Substituting the values of \( x_{c_1}^* \) and \( x_{c_2}^* \) into \( \bar{x}_{im} \), we see that \( \bar{x}_{im} = \frac{x_{p_1} + x_{p_2}}{2} \).

C_1 (C_2) wins if and only if \( \frac{x_{p_1} + x_{p_2}}{2} > (\prec) \frac{1}{2} \).

**Paradox Resolved**

In this section we provide an explanation for why voters who were satisfied with the incumbent chose to prevent incumbents from seeking reelections. The most obvious reason that voters will limit the term of a reelectable incumbent is that they believe the outcome of competition between two new candidates is even better. In the following lemma, surprisingly, we show that if an incumbent who otherwise would have won is not allowed to run because of term limits, the ensuing election will be won by a newcomer from the incumbent’s party, not by the candidate from the challenging party.

**Lemma 1:** If the term-limit referendum is passed, the challenger from the opposing party who would have lost to the incumbent if the referendum had not been passed will still be defeated by the new candidate from the incumbent’s party in the ensuing election.

**Proof:** Since by assumption a majority of voters prefer the incumbent to the challenger if there is no term limit, a majority of voters must prefer \( x_j \) to \( x_c^* \). But since \( x_c^* \) is already the challenger’s best response to the incumbent, a majority of voters must also prefer \( x_j \) to \( x_{c_2}^* \). Given that the term-limit referendum is passed, it must be the case that a majority of voters prefer the winner between \( x_{c_1}^* \) and \( x_{c_2}^* \) to \( x_j \). But we already know that a majority of voters prefer \( x_{c_1} \) to \( x_{c_2}^* \). The winner of \( x_{c_1}^* \) vs. \( x_{c_2}^* \) must thus be \( x_{c_1}^* \), otherwise the term-limit referendum could not have been passed. QED

The logic behind Lemma 1 is straightforward. If voters are dissatisfied with the incumbent, they can choose to vote for the challenger without resorting to term limits. But if voters reelect the incumbent and yet pass term limits, it implies
that they yearn for someone better than the incumbent. In that case only the new
candidate from the incumbent’s party can realize those hopes. This result is con-
sistent with Cain’s (1996) finding that an increasing number of open seats will
not necessarily lead to an increasing number of victorious challengers. Even
though the challenger cannot defeat the new candidate from the incumbent’s
party, supporters of the opposition party candidate are still better off because the
new candidate’s platform is more moderate than the incumbent’s.

In the following theorem, we show that the conditions always exist under which
voters support both the incumbent and term limits.

Theorem 1: There exist values of \((x_I, x_{p_1}, x_{p_2})\), the positions of the incumbent
and the two competing political parties on the policy space, under which a major-
ity of voters will support both the incumbent and term limits.

The formal proof of Theorem 1 can be found in the appendix. We see from the
proof that the conditions needed for Theorem 1 to hold are fairly general, which
implies that it is not a rare phenomenon to find a majority of voters electing the
incumbent and passing term limits.

Theorem 1 provides an existence proof of the conditions under which voters
will reelect the incumbent and pass the term-limit referendum. In the next section
we elaborate on some of the conditions under which the paradox can be resolved
and discuss some of the model’s additional empirical implications.

Empirical Implications

THE IMPACT OF THE INCUMBENT’S POSITION. When the incumbent is closer to
the median voter position, it is not only more difficult for challengers from the
opposing party to defeat him but also more difficult to find a candidate from the
incumbent’s party who can do better than the incumbent in elections, in which
case fewer voters are likely to support term limits. The term-limit movement thus
reflects that voters are not satisfied with the incumbents because they are too far
from the median voter position.

THE IMPACT OF THE INCUMBENT PARTY’S POSITION. The greater the value of
\(x_{p_1}\), ceteris paribus, the more likely Theorem 1 is to hold. In other words, if the
incumbent’s party is more moderate, it is more likely that voters will support
both the incumbent and term limits. The reasoning is straightforward. If the posi-
tion of the incumbent’s party is moderate, the new candidate from the incum-
bent’s party can more credibly position himself closer to the median voter
position. Since \(C_1\) positions himself independent of \(C_2\), voters are more likely to
support both the incumbent and term limits when the incumbent’s party is more
moderate.

THE IMPACT OF THE DEGREE OF RISK AVERSION. Inequalities (7) and (8) in the
proof of Theorem 1 show that the greater the degree of risk aversion, \(k\), the more
difficult it is for Theorem 1 to hold. This implies that if voters are overly risk averse toward new candidates, incumbents will enjoy a tremendous advantage. Consequently, it will be difficult for a term-limit referendum to pass because voters are uncertain of any new candidate, regardless of the party to which he belongs; if $k$ is very small, however, the incumbent will enjoy little incumbency advantage. Voters need not resort to term limits as an instrument for removing the incumbent because they can simply vote him out of office directly if his policy is distant from the median position. In short, only when the voters’ degree of risk aversion is moderate will they reelect the incumbent and pass term limits.\footnote{Voters’ aversion toward risk is not the only source of incumbency advantage, as is assumed in our model. A number of studies have shown that incumbents can adopt various measures to deter high-quality challengers. See Box-Steffensmeier (1996); Goidel and Gross (1994); Goldenberg, Traugott, and Baumgartner (1986); Hersch and McDougall (1994); Hogan (2001); Jacobson (1997); and Sorauf (1988). There are two possible effects that result from the decline of challenger quality. First, it will be more difficult to unseat the incumbent. Second, voters’ incentives to pass term limits will be lower. If the first effect is stronger than the second, then our result is strengthened in the sense that it is more likely that voters will vote for the incumbent (because the challenger is less competitive) and support term limits. If the second effect dominates the first, then fewer voters will support term limits. But regardless of which effect is stronger, the reasoning and intuition for Theorem 1 still hold.}

WHO WILL VOTE FOR TERM LIMITS? According to Lemma 1, a majority of the voters prefer the new candidate from the incumbent’s party to the incumbent if term limits is passed. Since the new candidate is more moderate than the incumbent, voters whose ideas points are closer to that of the incumbent’s platform will not vote for the term-limits referendum. Thus, for the referendum to pass, it must receive support from supporters of the opposing party.

Conclusion

In this paper we construct a spatial model that specifies voter utility in terms of the responsiveness of public policy and provide an explanation for the seeming paradox that voters who vote for the incumbent also unilaterally self-impose term limits. Since our model builds only on the voters’ attitude toward risk and does not depend on specific characteristics of legislature, the theoretical results of our model can be applied equally to explain both legislative and executive term limits.

One of the most interesting findings from our model is that term limits will produce politicians whose policies are closer to the median voter position. Setting term limits, however, is not the only way to rein in politicians. A result implied by Theorem 1 is that the incumbent might still enjoy enough incumbency advantages to win the election against the challenger even when the incumbent’s policy position is not close to the median voter position, but the benefits that voters will receive from replacing him through term limits also increase. Thus, out of fear that term limits might become popular and get passed, the incumbent might impose self-restraints not to deviate too far from the median voter position on
policy. The threat of term limits is therefore an effective method to constrain incumbents from abusing their incumbency advantages.

The conclusion that term limits or its threat will increase the responsiveness of politicians’ policy platforms lends credence to the Anti-Federalist notion of responsive policymaking. This is not to say that the Federalists are “wrong” and the Anti-Federalists are “right.” One could indeed argue that the preferred Federalist policy, which deviates from district ideal points and puts national interests first, is somehow better than responsive policy. However, given the assumption of voter utility as specified in our model, the Anti-Federalist’s claim finds support.

Appendix: Proof of Theorem 1

Given Lemma 1, we know that the only possible outcome after term-limit legislation is passed is that \( x_{c_1}^* \) beats \( x_{c_2}^* \); that is, \( \overline{x}_{mn} = \frac{(x_{p_1} + x_{p_2})}{2} > \frac{1}{2} \) or, equivalently,

\[
x_{p_1} + x_{p_2} > 1.
\]

As a result, the conditions needed for the incumbent to win and term-limit legislation to pass are as follows: First, \( x_I \) beats \( x_c^* \), or, equivalently, (1) holds. Second, if a majority of voters know that \( x_I \) will be the winner when term-limit legislation fails but they still vote for the legislation, it must be because the winner in a contest between \( C_1 \) and \( C_2 \), \( x_{c_1}^* \), is preferred by the majority to \( x_I \). Define \( \overline{x}_0 \) to be the value of \( x \) that satisfies \(- (x_I - x)^2 = -v_0 - k(x_{c_1} - x_{p_1})^2 - (x_{c_2} - x)^2\), which can be solved to be \( \overline{x}_0 = \frac{1}{2}\left[ x_I + x_{c_1}^* + k(x_{c_1}^* - x_{p_1})^2/(x_{c_1}^* - x_I) + v_0/(x_{c_1}^* - x_{c_2}) \right] \). If \( x_I < x_{c_1}^* \), then those voters on the left (right) of \( \overline{x}_0 \) will vote for \( x_I(x_{c_1}^*) \). If \( x_I > x_{c_1}^* \), then those voters on the right (left) of \( \overline{x}_0 \) will vote for \( x_I(x_{c_1}^*) \). The condition that \( x_{c_1}^* \) beats \( x_I \) is thus

\[
\overline{x}_0 < \frac{1}{2} \quad \text{if} \quad x_I < x_{c_1}^*;
\]

\[
\overline{x}_0 > \frac{1}{2} \quad \text{if} \quad x_I > x_{c_1}^*.
\]

However, the second case is impossible. This is because \( \overline{x}_0 \) must lie between \( x_I \) and \( x_{c_1}^* \), and that \( x_I < \frac{1}{2} \) by assumption. If it were the case that \( x_I > x_{c_1}^* \), then it must be that \( \overline{x}_0 < \frac{1}{2} \). The condition that a majority of voters prefer \( x_{c_1}^* \) to \( x_I \) thus becomes
If restrictions (1), (2), (3), (4), together with assumptions A1 and A2, can be established simultaneously, then the paradox is resolved. Combining (1) and (4) we have

\[
0 < \left( x_f - \frac{1}{2} \right)^2 - \frac{k}{k+1} \left( x_{p_1} - \frac{1}{2} \right)^2 < \nu_0
\]

Since there is no other restriction on \( \nu_0 \), the second and third inequalities hold if and only if the right-hand side in (5) is greater than the terms after the first inequality; that is,

\[
\left( x_f - \frac{1}{2} \right)^2 - \frac{2k+1}{2(k+1)} x_{p_1} + \frac{1}{2(k+1)} x_{p_2} - \frac{1}{2} \right)^2 - \frac{k}{4(k+1)^2} (x_{p_1} - x_{p_2})^2. \tag{5}
\]

This means that regardless of the values of \( x_f, x_{p_1} \) and \( x_{p_2} \), as long as (6) holds, we can always adjust the value of \( \nu_0 \) so that (5) holds. Since there is no other restriction on \( \nu_0 \), we can replace the second and third restrictions of (5) with (6).

Combining (6) with assumption A1 and (2) we have

\[
1 - x_{p_2} < x_{p_1} < \min \left\{ \frac{1}{1+4k} - \frac{1-4k}{1+4k} x_{p_2}, \frac{1}{2} \right\}.
\]

Since \[
\frac{1}{2} - \frac{1}{1+4k} \frac{(1-4k)}{(1+4k)} x_{p_2} = \frac{x_{p_2} - \frac{1}{2}}{(1+4k)} (1-4k) > 0 \quad \text{if} \; k < \frac{1}{4}, \quad \text{by assuming} \; k < \frac{1}{4} \] we can have
The first inequality in (5) is implied by

\[ 1 - x_{p_2} < x_{p_1} < \frac{1 - 4k}{1 + 4k} - \frac{1 - 4k}{1 + 4k} x_{p_2}. \]  

(7)

The first inequality in (5) is implied by

\[ x_1 < \frac{1}{2} - \sqrt{\frac{k}{k + 1}} \left( x_{p_2} - \frac{1}{2} \right)^2 = \frac{1}{2} - \sqrt{\frac{k}{k + 1}} \left( x_{p_2} - \frac{1}{2} \right). \]  

(8)

Since (3) is also a restriction on \( x_i \), we have to combine (3) with (8). But actually (3) is implied by (8) if (6) holds (so that (3) can be replaced by (8)). That is, we can show that under (6), \( \frac{1}{2} - \sqrt{\frac{k}{k + 1}} \left( x_{p} - \frac{1}{2} \right) < \frac{(2k + 1)x_{p_1}}{2(k + 1)} + \frac{x_{p_2}}{2(k + 1)} \) + \( \frac{x_{p_2} - 1}{2} \) . Simple calculation shows that this is indeed true if (6) holds.

In summary, we have reduced all the required restrictions to assumptions A1 and A2, (7), (8) and \( k < \frac{1}{4} \). We need only to find the set of values \( (x_i, x_{p_1}, x_{p_2}, k) \) that satisfies assumptions A1 and A2, (7), (8), and that \( k < \frac{1}{4} \).

The restrictions are plotted in Figures 1A and 1B, where \( l_1 \) is the line \( x_{p_1} + x_{p_2} = 1 \), \( l_2 \) is the line \( x_{p_1} = \frac{1}{(1 + 4k)} - \frac{(1 - 4k)x_{p_2}}{(1 + 4k)} \), and \( l_3 \) is the line \( x_i = \frac{1}{2} - \sqrt{\frac{k}{k + 1}} \left( x_{p_2} - \frac{1}{2} \right) \). \( l_2 \) can cut through \( l_3 \) from either below (Figure 1A) or above (Figure 1B). In either case, first note that the three lines intersect at the point \( (\frac{1}{2}, \frac{1}{2}) \).

Second, as \( k \) increases, \( l_2 (l_3) \) rotates around the point \( (\frac{1}{2}, \frac{1}{2}) \) in a clockwise (counterclockwise) direction. Third, \( l_2 \) and \( l_3 \) always lie above \( l_1 \) in the interval \( \frac{1}{2} < x_{p_2} < 1 \). Finally, \( l_2 \) lies above (below) \( l_3 \) when \( k > (\leq) \frac{1}{8} \), and coincides with \( l_3 \) when \( k = \frac{1}{8} \). In either case, the set \( (x_i, x_{p_1}, x_{p_2}) \) that satisfies assumptions A1 and A2, (7) and (8) always exists, and lies in the shaded region. Thus, under our restrictions of the values of \( v_0 \) and \( k \), there always exists a range of \( (x_i, x_{p_1}, x_{p_2}) \) such that a majority of voters vote for the term-limit legislation and the incumbent receives a majority of the votes in the election if term limits are not passed.
FIGURE 1A

$l_2$ lying below $l_3$ when $k < \frac{1}{8}$

FIGURE 1B

$l_2$ lying above $l_3$ when $k > \frac{1}{8}$
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