Term Limits As a Response to Incumbency Advantage[1]

Kong-Pin Chen
Research Fellow
Academia Sinica
kongpin@gate.sinica.edu.tw

Emerson M. S. Niou
Professor of Political Science
Department of Political Science
Duke University
niou@duke.edu

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Abstract

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. Our model suggests that term limits or the threat of it will increase the responsiveness of politicians' policy platforms. Furthermore, when the position of the incumbent is closer to the median voter position, it is less likely that voters will support term limits; but if the incumbent's party is more moderate, it is more likely that voters will support term limits.
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Term Limits As a Response to Incumbency advantage

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 led to broad-based participation in governance, which in turn created a more civically competent citizenry. The argument for perpetual rotation persisted finding advocates in ancient Rome (among them the famous Roman scholar and politician Cicero), in medieval Venice, and in early modern England. It is in the 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, David Hume and others 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. Term limits were included for Senators in the Articles of Confederation, 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 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 constraining 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 took the power to elect representatives out of the hands of voters, led to ineffectual governance and political instability, and ultimately created more distance between citizens and legislators in disconnecting representatives from their electoral constituencies, thus allowed legislators to pursue their own 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 popular initiative procedure 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 ten 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, twenty states still have some form of term-limit legislation for state legislators on the books.[2] The term-limit movement has thus engineered what is arguably a major set of institutional reforms.

One belief apparently shared by advocates of term limits is that incumbents are too secure, elections are not competitive, and more generally political careerism has stained American politics and policy. For instance, more than 80 percent 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 percent and 90 percent (See Benjamin and Malbin 1992; Davidson and Oleszek 1994; and Miller 1999). A number of statistical investigations also confirm the existence of incumbency advantage (Garand and Gross 1984; Collie 1981; Ansolabehere, Brady and Fiorina 1988; Gelman and King 1990; and Cox and Katz 1996). 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 1996). Proponents of term limits generally believe that by increasing the amount of open-seat races, term limits would increase turnover, enhance competition (Petracca 1991; Coyne and Fund 1992; Daniel and Lott 1997), and produce policy outcomes more in tune with constituents' preferences.[3]

The success of term-limit initiatives in the 1990s, however, raises an interesting question: if voters were satisfied with the incumbents, why did they vote to pass the term-limit referendums? In California, for example, voters reelected 96 percent of their state legislators but also voted to pass a term-limit initiative (California Journal 1990). And if they are not satisfied, why do they not directly vote the incumbents out of office, but have to resort to a roundabout 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 provides an explanation for the seeming paradox that voters choose to support the incumbents while voting in favor of the term-limits initiative. Results from our model also provide theoretical justification for some of the 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 phenomena that voters vote simultaneously for incumbents and for term limits.

Literature Review

How does one account for the apparent paradox that voters choose to reelect incumbents but also to limit incumbent tenures? Dick and Lott (1993) offered the first attempt to answer this question; and 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 that he will defeat challengers, even if the 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 ($M1$) is ceteris paribus less than the amount of resources the incumbent can secure ($M1$), the incumbent can stay in office by promising to distribute $M1$ resources as would the challenger, thus keeping for himself the chance to distribute the left over wealth, $M2 - M1$, according his own preference rankings. The only way a challenger could secure an equal proportion of transferable resources is if the overall levels of seniority in Congress were reduced. 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 $M1 - M2$ amount of resources formerly consumed by incumbents would now be distributed in a way that more closely approximates what the voters desire. 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 predisposed representatives. A problem with this model is that it does not explain the fact that many states did *unilaterally* impose term limits on their 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. Glaeser's model, in contrast, does not consider the strategic role of politicians. A general problem of these models is that they do not take into account the interactions between candidates and voters. By focusing so heavily on either voters or candidates, they fail to notice that, ultimately, the utility accrued from instituting or not instituting term limits is 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 some voters' desire 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 in American politics have become less salient with time. 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 that we first try 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 imposing limits on incumbent tenures. In the next section we show that under some conditions it is rational for voters to vote both for incumbents and for term-limit initiatives.

The Model

When voters are deciding between to support or not to support 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; (2) if the referendum is not passed, the incumbent will face a challenger from the opposing party in the coming election. The outcomes of these two pairs of contests will determine 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 to first establish the conditions under which a majority of voters prefer the incumbent to the challenger, then solve for the equilibrium outcome when two new candidates compete with each other in the event that term-limit referendum is passed, and finally show that it is possible that a majority of voters prefer one of two new candidates to the incumbent.

Assume that in each district two candidates, C_1 and C_2, 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 $u_x(y) = -(x - y)^2$, 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 of 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 will implement if elected. Formally, we assume that when a challenger proposes 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

$$\begin{aligned} u_x(x_c) &= -\int_0^1 (\tilde{x}_c - x)^2 g(\tilde{x}_c) d\tilde{x}_c = -\int_0^1 (\tilde{x}_c^2 - 2\tilde{x}_c x + x^2) g(\tilde{x}_c) d\tilde{x}_c \\ &= -\int_0^1 \tilde{x}_c^2 (g)(\tilde{x}_c) d\tilde{x}_c + 2xm(\tilde{x}_c) - x^2 \\ &= -v(\tilde{x}_c) - E(\tilde{x}_c^2) + 2xm(\tilde{x}_c) - x^2 \\ &= -v(\tilde{x}_c) - [m(\tilde{x}_c) - x]^2; \end{aligned}$$

where $m(\tilde{x}_c)$ is the mean of the random variable $\tilde{x}_c$ and $v(\tilde{x}_c)$ its variance.[4] 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 of 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 perceived by voters. The positions of the two parties are denoted by x_{p_1} and x_{p_2}, 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. $0 < x_{p_1} < \frac{1}{2} < x_{p_2} < 1$.

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

A2. $x_I < \frac{1}{2} < x_c < 1$.

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 platform; the farther away his platform is from his party's, the greater the uncertainty he will be perceived by voters.[5] Formally, we assume that the variance term, $v(x_c)$, can be decomposed into $v(\tilde{x}_c) = v_0 + k(x_c - x_p)^2$, 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 $\tilde{x}_c$ 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 $u_x(x_c) = -v_0 - k(x_c - x_p)^2 - (x_c - x)^2$. 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 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 stir great suspicion if his platform is not the same as his past policy. In terms of the utility function, this means that the value of k is much greater for the incumbent than the challenger. For simplicity, we assume that the incumbent does not have a 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.[6] 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, strategically to maximize votes. 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 there is nothing to prevent the incumbent from choosing his past policy, x_I, as platform. If, despite k being larger, he still chooses a platform $x_0 \neq x_I$, then it must be that he garners even more votes with x_0 than x_I. In other words, he enjoys an *even greater* advantage than when he is not allowed to choose platform and Theorem holds under even less stringent conditions. Thus, by assuming that the incumbent's platform is fixed does not affect the generality of our argument because our results can only be strengthened if the incumbent can choose platforms strategically.

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 $-v_0-k(x_c-x_{p_2})^2-(x_c-x)^2$. Define $\overline{x}$ such that $-(x_I-\overline{x})^2 = -v_0-k(x_c-x_{p_2})^2-(\overline{x}-x_c)^2$. $\overline{x}$ 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 $\overline{x}$ will vote for the incumbent (challenger). Solving for $\overline{x}$ we have $\overline{x} = \frac{(x_I+x_c)}{2} + \frac{[v_0+k(x_c-x_{p_2})^2]}{2(x_c-x_I)}$. The share of votes obtained by the challenger is thus

$$\int_{\overline{x}}^{1} f(x)dx = 1 - F(\overline{x}).$$

The challenger chooses x_c to maximize vote share $1 - F(\overline{x})$. The first-order condition yields $x_c^* = x_I + \sqrt{k(k+1)(x_I - x_{p_2})^2 + (k+1)v_0}/(k+1)$.[7] The second-order condition holds trivially. Plugging this into the solution for $\overline{x}$ we have

$$\overline{x} = (1+k)x_I + \sqrt{k(k+1)(x_I - x_{p_2})^2 + (k+1)v_0} - kx_{p_2}.$$

Thus, the incumbent wins the election if

$$(1+k)x_I + \sqrt{k(k+1)(x_I - x_{p_2})^2 + (k+1)v_0} - kx_{p_2} > \frac{1}{2}. \tag{1}$$

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 $\overline{x}_{tm}$ to be the value of x that satisfies $-v_0 - k(x_{p_1} - x_{C_1})^2 - (x - x_{C_1})^2 = -v_0 - k(x_{p_2} - x_{C_2})^2 - (x - x_{C_2})^2$. As can be seen from the above equation, since both candidates are newcomers, each is constrained by his party's position, (x_{p_1} and x_{p_2}), respectively. Solving for the equation yields $\overline{x}_{tm} = \frac{1}{2}\left\{k\frac{(x_{p_2} - x_{C_2})^2 - (x_{p_1} - x_{C_1})^2}{(x_{C_2} - x_{C_1})} + x_{C_1} + x_{C_2}\right\}$. $\overline{x}_{tm}$ is the position of a voter who is indifferent between x_{C_1} and x_{C_2}. Voters to the left (right) of $\overline{x}_{tm}$ prefer x_{C_1} (x_{C_2}). C_1 (C_2) wins if $\overline{x}_{tm} > (<)\frac{1}{2}$. C_1 chooses x_{C_1} to maximize $\int_{\overline{x}_{tm}}^{1} f(x)dx = F(\overline{x}_{tm})$. C_2 chooses x_{C_2} to maximize $\int_0^{\overline{x}_{tm}} f(x)dx = 1 - F(\overline{x}_{tm})$. From the first-order conditions we have

$$\begin{aligned} x_{c_1}^* &= \frac{2k+1}{2(k+1)}x_{p_1} + \frac{1}{2(k+1)}x_{p_2}; \\ x_{c_2}^* &= \frac{1}{2(k+1)}x_{p_1} + \frac{2k+1}{2(k+1)}x_{p_2}. \end{aligned}$$

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 $x_{p_1} = x_I$.

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 $\overline{x}_{tm}$, we see that $\overline{x}_{tm} = \frac{(x_{p_1}+x_{p_2})}{2}$. C_1 (C_2) wins if and only if $\frac{(x_{p_1}+x_{p_2})}{2} > (<)\frac{1}{2}$.

Paradox Resolved

In this section we set out to explain why voters who were satisfied with the incumbent chose to prevent incumbents from seeking reelections. The most obvious reason why voters will limit the term of a reelectable incumbent is that they believe the outcome of competition between two new candidates is even more preferable. 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 is not 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_I 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_I 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_I. But we already know that a majority of voters prefer x_I 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 quite 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 their hopes. This result is consistent with Cain's (1996) finding that an increasing number of open seats will not necessarily lead to an increasing number of victorious challengers.

Thus far, we have shown that the paradox can be resolved if voters prefer the new candidate from the incumbent's party to the incumbent and prefer the incumbent to the challenger from the opposing party. In the following theorem, we show that the conditions always exist under which voters will 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 majority of voters will support both the incumbent and term limits.*

The formal proof of Theorem 1 can be found in the Appendix. From the proof we can see that the conditions needed for Theorem 1 to hold is fairly general. That means the fact that a majority of voters elect the incumbent and pass term limits is not a rare phenomenon, but is one which can be commonly seen.

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 offer some 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 will 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 position of the incumbent's party is moderate, the new candidate from the incumbent'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, it is more difficult for Theorem 1 to hold. This implies that if voters are overly risk averse toward new candidates, incumbents would enjoy a tremendous advantage, and it will be impossible that the voters will prefer a candidate (regardless of which party he belongs to). Consequently, term-limit referendum wil not pass. On the other hand, if k is very small, then the incumbent will enjoy no incumbency advantage. Thus the voters need not resort to term limits as an instrument in removing the incumbent as they will simply vote him out of office directly if his policy is far from the median position. Thus only in district where the voter's degree of risk-aversion is moderate will reelect the incumbent and pass term limits simultaneously. [8]

Who Will Vote for Term Limits? By Lemma 1, the new candidate from the incumbent's party is preferred by a majority of the voters to the incumbent. Since the new candidate is also more moderate than the incumbent, voters whose ideas points are closer to the incumbent will not vote for the term-limits referendum. 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 from our model can be applied to explain both legislative and executive term limits with equal strength.

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. 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 incumbent 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 Antifederalist notion of responsive policy-making. 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 voter utility as specified in our model, the Antifederalist's claim finds support in the model.

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, $\overline{x}_{tm} = \frac{(x_{p_1}+x_{p_2})}{2} > \frac{1}{2}$ or, equivalently,

$$x_{p_1} + x_{p_2} > 1. \tag{2}$$

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 $-(x_I - x)^2 = -v_0 - k(x^*_{c_1} - x_{p_1})^2 - (x^*_{c_1} - x)^2$, which can be solved to be $\overline{x}_0 = \frac{1}{2}[x_I + x^*_{c_1} + k(x^*_{c_1} - x_{p_1})^2/(x^*_{c_1} - x_I) + v_0/(x^*_{c_1} - x_I)]$. 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

$$\begin{aligned} \overline{x}_0 &< \frac{1}{2} \qquad if x_I < x^*_{c_1}; \\ \overline{x}_0 &> \frac{1}{2} \qquad if x_I > x^*_{c_1}. \end{aligned}$$

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

$$x_I < x^*_{c_1} = \frac{2k+1}{2(k+1)} x_{p_1} + \frac{1}{2(k+1)} x_{p_2}; \qquad and \tag{3}$$

$$\overline{x}_0 = \frac{1}{2}[x_I + x^*_{c_1} + k\frac{(x^*_{c_1} - x_{p_1})^2}{x^*_{c_1} - x_I} + \frac{v_0}{x^*_{c_1} - x_I}] < \frac{1}{2}. \tag{4}$$

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

$$0 \quad < \quad (x_I - \frac{1}{2})^2 - \frac{k}{k+1}(x_{p_2} - \frac{1}{2})^2 < v_0$$

$$< \quad (x_I - \frac{1}{2})^2 - [\frac{2k+1}{2(k+1)}x_{p_1} + \frac{1}{2(k+1)}x_{p_2} - \frac{1}{2}]^2 - \frac{k}{4(k+1)^2}(x_{p_1} - x_{p_2})^2. \quad (5)$$

Since there is no other restriction on v_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,

$$\begin{aligned} & (x_I - \frac{1}{2})^2 - [\frac{2k+1}{2(k+1)}x_{p_1} + \frac{1}{2(k+1)}x_{p_2} - \frac{1}{2}]^2 \\ & - \frac{k}{4(k+1)^2}(x_{p_1} - x_{p_2})^2 - [(x_I - \frac{1}{2})^2 - \frac{k}{k+1}(x_{p_2} - \frac{1}{2})^2] \\ = \; & \frac{1}{4(k+1)}(x_{p_1} + x_{p_2} - 1)[1 - (1-4k)x_{p_2} - (1+4k)x_{p_1}] > 0. \end{aligned}$$

By (2) we know that the above inequality holds if and only if $1-(1-4k)x_{p_2}-(1+4k)x_{p_1} > 0$, that is,

$$x_{p_1} < \frac{1}{1+4k} - \frac{1-4k}{1+4k}x_{p_2}. \quad (6)$$

This means that regardless of the values of x_I, x_{p_1} and x_{p_2}, as long as (6) holds, we can always adjust the value of v_0 so that (5) holds. Since there is no other restriction on v_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 $\frac{1}{2} - [\frac{1}{(1+4k)} - \frac{(1-4k)x_{p_2}}{(1+4k)}] = \frac{(x_{p_2}-\frac{1}{2})(1-4k)}{(1+4k)} > 0$ if $k < \frac{1}{4}$, by assuming $k < \frac{1}{4}$ we can have

$$1 - x_{p_2} < x_{p_1} < \frac{1}{1+4k} - \frac{1-4k}{1+4k}x_{p_2}. \quad (7)$$

The first inequality in (5) is implies by

$$x_I < \frac{1}{2} - \sqrt{\frac{k}{k+1}(x_{p_2} - \frac{1}{2})^2} = \frac{1}{2} - \sqrt{\frac{k}{k+1}}(x_{p_2} - \frac{1}{2}). \quad (8)$$

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), $\frac{1}{2} - \sqrt{\frac{k}{k+1}}(x_p - \frac{1}{2}) < \frac{(2k+1)x_{p_1}}{2(k+1)} + \frac{x_{p_2}}{2(k+1)}$. But this inequality holds if the follows is true: $(\sqrt{\frac{k}{k+1}}(x_p - \frac{1}{2}))^2 > (\frac{(2k+1)x_{p_1}}{2(k+1)} + \frac{x_{p_2}}{2(k+1)} - \frac{1}{2})^2$. 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 A1 and A2, 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 $x_I = \frac{1}{2} - \sqrt{\frac{k}{k+1}}(x_{p_2} - \frac{1}{2})$. l_2 can cut through l_3 from either below (figure A1) or above (figure A2). 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 $k > (<)\frac{1}{8}$, 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.

Notes

[1]Much of this normative history is based on the excellent account in Petracca (1992).

[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 twenty-three to twenty.

[3]For general arguments about the pros and cons of term-limit legislation, see also Adam and Kenny (1986), Cohen and Spitzer (1992), Corwin (1991), Lopez (2003a, 2003b), Mansfield (1993), and the articles collected in Benjamin and Malbin (1992).

[4]We have used the fact that $v(\tilde{x}_c) = E(\tilde{x}_c^2) - (m(\tilde{x}_c))^2$.

[5]We thank an anonymous referee for this suggestion.

[6]This implicitly assume that k is infinity for the incumbent.

[7]In fact there are two solutions to the first-order condition. Since the challenger is of the right-wing party, we only consider the one that is greater than x_I.

[8]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 (Goldenberg, Traugott, and Baumgartner (1986); Goidel and Gross (1994); Hersch and McDougall (1994); Jacobson (1997); Box-Steffensmeier (1996); Sorauf (1988); and Hogan (2001)). There are two possible effects 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.

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