Do We Get the Best Candidates When We Need Them the Most?

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Abstract

Do the right candidates for office choose to run at the right time? I analyze a model of repeated elections in which politicians differ in the probability of being competent. Voters update their beliefs about the office holder's ability upon observing his performance in office. In each period, the country faces either a safe situation or a crisis. A crisis has two key features: it exacerbates the importance of the office holder's competence and, as a consequence, the informativeness of his performance. I show that electoral accountability has the perverse consequence of discouraging good candidates from running in times of crisis. Precisely when the voter would need him the most, the politician who is most likely to be competent chooses to stay out of the race in order preserve his electoral capital. In contrast with results in the existing literature, this adverse selection emerges even if running is costless and if office is more valuable than the outside option.

Introduction

A growing empirical literature highlights that the quality of political leaders has a critical impact on a country's performance (e.g. Jones and Olken 2005, Besley, Montalvo and Reynal-Querol, 2011). From a theoretical perspective, it then becomes essential to understand under which conditions high-quality politicians are willing to run for office in the first place. One question is particularly important to evaluate the effectiveness of democratic elections in improving voters' welfare: do the right candidates self-select at the right time? More specifically, are the most competent politicians willing to run for office during times of crisis, when competence matters the most?

The formal literature has so far placed little emphasis on this question. Most extant models of elections in fact take the pool of candidates as exogenous, focusing instead on voters' ability to identify good politicians to be (re)elected and bad ones to be thrown out. A small recent literature allows for endogenous candidate entry, thereby analysing the equilibrium supply of good politicians. However, these works typically consider a static setting, focusing on *which types* self-select into politics and highlighting the difficulty of attracting competent politicians if office rents are too low compared to private market salaries. Little attention is instead paid to *when* the right candidates are willing to run.

In this paper, I adopt a very different perspective. I consider a world in which potential candidates are career politicians, for whom office is always more valuable than the outside option. As such, running for office is the statically optimal choice for all potential candidates, irrespective of their expected ability and the conditions in the country. I show that this does not always hold true when we take into account politicians' dynamic incentives. Under some conditions, good candidates are not willing to run for office during times of crisis. Precisely when the voter would need him the most, the politician who is most likely to be competent chooses to stay out of the race in order preserve his electoral capital. Crucially, this adverse selection does not arise due to weak electoral incentives, as it is the case the extant literature. Quite the opposite, it emerges precisely as a perverse consequence of accountability.

In the baseline model, I consider a game with two time periods and an election in each. Potential candidates are career politicians that differ in the probability of being competent. Expectations about a politician's ability may derive from his prior experience in office, or his qualifications. A politician's true type is however unknown both to the voters and to the politician himself. Before each election, the politicians simultaneously choose whether to run for office. The crucial feature of the model is that, in each period, the country experiences either a normal situation or a negative shock. This can represent a crisis, a war, or even a natural disaster. A negative shock has two key features: it exacerbates the importance of the office holder's competence and, as a consequence, it amplifies informativeness of governance outcomes. In particular, both types always deliver a good performance during normal times. If a crisis arises, a competent office holder is instead more likely to perform well. Politicians are office motivated, and their payoff from holding office is always higher than the outside option. This payoff consists of both monetary and ego rents. While monetary rents are always accrued in the same measure by all office holders, ego rents represent the legacy payoff that a politician only enjoys when he delivers a good performance in office.

As highlighted above, the model assumptions guarantee that holding office always increases a politician's immediate payoff. As such, all potential candidates are willing to run in the second period election, when future electoral concerns are absent. Consider instead the incentives that politicians face in the first period. When choosing whether to run, politicians will consider both the expected value of holding office today, and how it influences the chances of being elected tomorrow. The higher the probability of a crisis, the more likely that the voter will learn new information about the incumbent's true ability upon observing his performance. In this sense, holding office in the first period is always a gamble. Straightforwardly, this gamble is riskier the lower the probability of being a good type.

As such, it may seem counter-intuitive that precisely the politician who is ex-ante most likely to be competent would decide to stay out of the race during challenging times. However, while this politician has the highest chances of surviving a crisis, he also has the most to lose from failing. He has an important electoral advantage that he does not want to waste, especially if holding office tomorrow is, in expectation, more valuable (i.e., a crisis is less likely to arise). Thus, while he would have no reason to stay out of the race during normal times, he may choose to sit the first period election out if a negative shock is likely to arise. To make matters even worse for the voter, a necessary condition for this to occur in equilibrium is that the other potential candidates are sufficiently likely to be incompetent. This guarantees that the winner of the first period election is sufficiently unlikely to reveal himself as a good type and get re-elected for a second term. When this does not hold, the ex-ante best politician is always willing to run in the first period, since the risk of losing the second election is too high otherwise. The other potential candidates instead never have anything to lose and are therefore always willing to run, irrespective of how likely a crisis is to arise, and how unlikely they are to be able to manage it. In equilibrium, the voter then gets the wrong candidates at the wrong time.

I also show that negative shocks, by influencing the types of candidates that are willing to self-select into office, amplify the effect of incumbency status on electoral performance. The adverse selection documented above generates either an electoral advantage or a disadvantage for a term-limited incumbent. However, in both cases the electoral effect of incumbency is increasing in the probability of a crisis emerging in the upcoming term.

A robustness section highlights that, while the inefficiency documented here can be more or less severe, it is unlikely that any democracy may be completely immune from it. I analyse several variants of the baseline model, and show that the qualitative results survive even if we assume that solving a crisis yields a larger legacy payoff than producing a good outcome during normal times. Similarly, the results are unchanged if we suppose that all politicians, irrespective of whether they are in office or not, pay a cost from a bad governance outcome (either a direct cost, or an indirect one via an increased probability of a future crisis).

The baseline model supposes that office holders' payoffs are a function of their performance in office. When players live for two periods only, relaxing this assumption implies that all potential candidates are always willing to run for office in both. As such, while the two-period baseline is useful in illustrating the key intuition underlying the argument advanced in the paper, it is important to consider the incentives that arise under a longer time horizon, when politicians care solely about the monetary rents from office. For this purpose, I introduce an amended version of the model in which the game is repeated for infinitely many periods. I show that the key inefficiency emerging in the two-period baseline continues to hold. Importantly, this is true even when office holders are subject to a term limit of two.

The nature of the inefficiency highlighted in this paper is different from analogous results presented in the extant literature. Here, adverse selection emerges in equilibrium even if running is costless, and holding office is more valuable than the outside option. As such, the inefficiency documented above is not due to low powered electoral incentives. Rather, the source lies precisely in the accountability relationship between the voters and their representatives. The voters cannot credibly commit to ignoring valuable information that may be generated about the office holder. Precisely because competence matters the most during challenging times, this is also when most information is generated. Holding office constitutes a riskier gamble, and the best politicians choose to wait for safer times.

Literature Review

This paper contributes to the literature on the endogenous supply of good politicians (Caselli and Morelli 2004, Messner and Polborn 2004, Besley 2005, Dal Bo, Dal Bo and Di Tella 2006, Mattozzi and Merlo 2008, Fedele and Natticchioni 2013, Brollo 2013).[1] This literature has so far focused mainly on how an individual's outside option in the private market influences his decision to run for office. Political ability and private market salary are assumed to be correlated, therefore good politicians also have a higher opportunity cost of holding office. This potentially generates an adverse selection, whereby low ability individuals are more likely to enter politics.

As highlighted above, this paper adopts a completely different perspective. It considers a world in which potential candidates are career politicians, for whom the value of holding office is always higher than the expected payoff from the private market. Thus, rather than looking at the financial considerations that drive self-selection into politics, I focus on how politicians' dynamic electoral incentives influence the timing of their entry decision.

A crucial feature of the model is to allow exogenous shocks to influence the strategic environment. As such, this paper is in close conversation with a recent literature in formal theory, that highlights how events outside of the office holders' control may nonetheless impact their electoral fortunes, by altering the inferences voters draw upon observing their performance in office (see Ashworth, Bueno de Mesquita and Friedenberg, 2017 and 2018). These works complement the model presented here, since they take the pool of candidates as given and focus instead on how crises influence office holders' effort choice.

[1]Other scholars analyse endogenous entry, but focus on settings in which potential candidates differ in motivations (see Callander 2008) or ideology (see Osborne and Slivinski 1996, Besley and Coate, 1997), rather than quality.

Finally, this model connects with several papers that analyse political actors' incentives to gamble, within the framework of a multi-armed bandit model (e.g. Strulovici 2009, Dewan and Hortala-Vallve 2018). In these works, political actors must choose between a risky and a safe policy. The consequences of a risky choice inform voters and politicians about the underlying state of the world, or the office holder's true ability. In contrast, the outcome of a safe policy reveals no additional information. The crucial assumption is therefore that office holders can always manipulate the amount of information that is generated, and perfectly determine the amount of risk they are willing to take. In this paper, I instead assume that the informativeness of governance outcomes is determined exogenously by the 'riskiness' of the situation the country faces. Politicians cannot choose which arm of the bandit to pull, they can only choose whether to play.

The Baseline Model

Consider a model with two periods, and an election in each. At the beginning of the game, each party $P \in \{1, 2\}$ draws a potential candidate C^P from the pool of its members. Politicians differ in the probability of being competent. Specifically, each politician i can be one of two types, good or bad $\theta_i \in \{G, B\}$. A politician's type is unknown to all players, including the politician himself. Players share common beliefs that politician C^P is a good type with probability q_P. Formally, party P draws from a pool of mass one containing a proportion q_P of good types. Suppose that $q_1 > q_2$. In each period, C^1 and C^2 simultaneously choose whether to enter the race. If C^P chooses to stay out of the race, party P is unable to field a viable candidate and it resorts to the reserve candidate R^P that is a bad type with probability 1 and (in equilibrium) always willing to run. The assumption that the reserve candidate is known to be a bad type is without loss of generality.[2] Similarly, the results are robust to the presence of any number of potential candidates with heterogeneous expected ability. Once the candidates are endogenously determined, a representative voter decides whom to elect.

In each period, the country faces a normal situation $\omega_t = N$, or is hit by a negative shock $\omega_t = C$. A negative shock may represent an economic or financial crisis, a war, or even a natural disaster.

[2] Indeed, the existence of the reserve candidates plays no role in the results. The specific assumptions adopted here are simply for purposes of presentation, to avoid equilibria with uncontested elections.

The players share a common prior assigning probability $\bar{p}$ to a crisis arising in each $t \in \{1, 2\}$, with ω_t i.i.d. in each period.[3] In addition, players have more precise information about the state of the world in the current period. Formally, at the beginning of the game players observe a public signal that indicates the probability that $\omega_1 = C$. To avoid over-parametrization, I do not explicitly model the public signal and simply assume that in period 1 players assign probability p_1 to $\omega_1 = C$ and $\bar{p}$ to $\omega_2 = C$, where $p_1 \neq \bar{p}$ (in other words, p_1 represents the posterior probability of a shock in the first period, given the prior and the realization of the public signal).[4] Finally, without loss of generality, I assume that in each period players learn the realization of the state of the world after the voter makes her electoral decision.

To use Ashworth et al's (2017) terminology, I assume that crises amplify the effect of the office holder's type on governance outcomes. Specifically, in each period the office holder's performance results in either a good or a bad governance outcome, $o_t \in \{g, b\}$, $\forall t \in \{1, 2\}$. The governance outcome is a good one whenever a crisis does not arise, or if it arises but the office holder is able to solve it. Otherwise, the outcome is a bad one. The office holder's type determines the probability that he is able to solve a crisis. A good type always produces a good outcome under a negative shock, whereas a bad one does so with probability $\beta \in [0, 1]$:

- $prob(o_t = g|\omega_t = N, \theta_t = G) = prob(o_t = g|\omega_t = N, \theta_t = B) = 1$
- $prob(o_t = g|\omega_t = C, \theta_t = G) = 1$
- $prob(o_t = g|\omega_t = C, \theta_t = B) = \beta$

This specific parametrization is adopted for simplicity, but the results are robust to alternative assumptions. The complement probabilities hold for a bad outcome. We can interpret the parameter β either as the complexity of the crisis, or as the resilience of the country. For example, if the country can rely on a competent bureaucratic apparatus, it is more likely to survive a crisis even if a low competence politician is in office.

While there are arguably substantive reasons to defend the assumption that the office holder's competence matters the most during challenging times, the key normative implication of the paper

[3] In a robustness section, I relax this assumption and allow the probability of a shock in period 2 to be a function of the first period governance outcome.

[4] Notice that, because of the martingale property of posterior beliefs, the prior probability that $\omega_2 = C$ is always $\bar{p}$. Given risk neutral players, whether or not they also observe a signal at the beginning of the second period is irrelevant for the equilibrium results.

– i.e., the voter is less likely to get a good politician when she needs him the most – would continue to hold in the opposite case, that is if crises mute the effect of competence.

The voter cares about governance outcomes. She obtains a payoff $-\lambda$ in each period when a bad outcome is produced. The payoff from a good outcome is normalized to 0. Finally, politicians are office motivated. A politician's value from holding office has two components: monetary rents $K > 0$, and legacy payoffs $\gamma > 0$. While the monetary rents are always accrued by the office holder, the legacy payoffs are conditional on delivering a good performance. A politician's payoff when out of office is normalized to 0, guaranteeing that holding office is always more valuable than the outside option. K can then be interpreted as the monetary value of office net of the private market salary. Finally, I assume that running is costless. Relaxing this assumption would have no impact on the qualitative implications of the model, since I consider a deterministic election process.
To sum up, the timing of the game is as follows:

1. C^1 and C^2 choose whether to run in the general election. If party $P \in \{1, 2\}$ is unable to field a viable candidate it resorts to the reserve R^P.
2. The voter decides whom to elect
3. The first period state of the world ω_1 is observed by all players
4. The fist period governance outcome o_1 realizes
5. The second period starts, and proceeds as above

To avoid trivialities, I exclude equilibria in weakly dominated strategies. Since running for office is costless, this implies that a politicians' entry decision is conditional on winning the election. Finally, I will assume that $\mu_{C^2}(I, C, g) > q_1$, where $\mu_{C^2}(I_{C^2}, \omega_1, o_1)$ is the posterior probability that C^2 is a good type, given his incumbency status $I_{C^2} \in \{I, \emptyset\}$, the first period outcome and state of the world. This assumption guarantees that a good performance under a negative shock is sufficiently informative for C^2 to win re-election.

Analysis

As usual, we solve the game by backwards induction, starting from the voter's equilibrium behaviour. The voter cares exclusively about obtaining a good governance outcome. In each period, she optimally elects the candidate who is most likely to deliver one, i.e. most likely to be a good type. The voter's electoral decision in the second period will therefore be a function of her prior beliefs, as well as the incumbent's performance and the first period state of the world. The state of the world determines the informativeness of the realized governance outcomes. Since crises amplify the effect of competence, they also amplify the informativeness of the incumbent's performance. In other words, the voter obtains more information about the office holder's type if he is hit by a negative shock. Given the specific parametrization adopted here, performance is completely uninformative during safe times, since both types always produce a good outcome. Conversely, governance outcomes always reveal information about the incumbent's competence during times of crisis. Therefore, depending on the first period state of the world, a good performance in office may or may not be sufficient to obtain re-election. Consider a leading incumbent, i.e. one who is ex-ante more likely to be competent than his challenger. Straightforwardly, this incumbent will always be re-elected when a good governance outcome is produced, even if the outcome is completely uninformative. Thus, the above discussion implies that a leading incumbent is always guaranteed re-election when he experiences no crisis during his first term in office. The opposite holds for a trailing incumbent, who is ex-ante less likely to be competent than his challenger. This incumbent needs the voter to update positively about his type. As such, a good outcome during safe times is never enough. A trailing incumbent is re-elected only if he delivers a good performance despite being hit by a negative shock.

Consider now the politicians' optimal strategy. Running is costless, and holding office always increases their per-period payoff. Absent future electoral concerns, all politicians are therefore willing to enter the race in the second period.

Not so much in the first period. Politicians consider both the expected payoff from holding office today, and how it influences the chances of being (re)elected tomorrow. Running for office in the first period is always a gamble. The higher the probability of a crisis, the more likely that the voter will learn new information about the incumbent's true ability upon observing his performance. Straightforwardly, this gamble is riskier the lower the probability of being a good type.

Suppose that at $t = 1$ the country experiences a period of instability, and a crisis is particularly likely to arise (i.e., $p_1 > \bar{p}$). This implies that holding office in the second period is, in expectation, more valuable. As such, a politician may not be willing to take the gamble, and instead choose to stay out of the race in the first period in order to maximise the chances of being elected in the future, when the expected value of office is higher. This reasoning could lead us to conclude that a positive self-selection emerges in equilibrium, with the worst (in expectation) politicians having the lowest incentives to run. Instead, the opposite is true. The politician who is ex-ante most likely to be competent is the one that will sometimes be unwilling to stand for office.

To understand this result, let us focus first on the strategic incentives faced by politician C^2. It is easy to see that C^2 never has anything to lose from running in the first period. Suppose that C^1 chooses to run for office. Then, C^2 is always indifferent between entering the race and staying out, since he has no chance of winning the general election (recall that C^1 is ex-ante the most likely to be a good type). Suppose instead that C^1 chooses to stay out. Then, C^2 strictly prefers to run. Recall in fact that C^2 wins the second period election only if the voter updates positively about his ability, or negatively about C^1's type. If C^1 stays home in the first period, the voter will observe no new information about his competence. As such, C^2 wins the second period election only if he gets to office today, is hit by a negative shock, and demonstrates to be able to deliver a good performance. Thus, irrespective of how likely a crisis is to arise, and how unlikely he is to be able to solve it, C^2 always has incentives to gamble on his own success. Therefore, he has a weakly dominant strategy to run in both periods. It is easy to see that the same reasoning applies to the reserve candidates R^1 and R^2, that are therefore always willing to run.

Instead, C^1 faces very different incentives. On the one hand, he is more likely to deliver a good outcome even after being hit by a crisis. Further, given his ex-ante advantage, he is subject to a less demanding retention rule, whereby a good performance under a normal state of world is enough to guarantee re-election for a second term. Thus, he has higher expected payoff from holding office today, and higher probability of being re-elected tomorrow. On the other hand, however, C^1 also has a valuable electoral advantage that he does not want to waste, especially if holding office in the future is (in expectation) more valuable (i.e. $p_1 > \bar{p}$). As a consequence, C^1 experiences fear of failure when a crisis is likely to emerge in the first period. The problem that he faces is that there is no safe strategy. If he chooses to run, he gambles on his own success. That is, on the probability of being able to deliver a good performance even after being hit by a negative shock. If he chooses not to run, he gambles on his opponent's failure. That is, on the probability that if a crisis arises C^2 will not be able to solve. C^1's equilibrium choice will depend on the relative riskiness of the two gambles, and on the expected payoff of holding office today and in the future. Proposition 1 identifies the conditions under which he chooses to stay out of the race in the first period:

Proposition 1. *Suppose that the following conditions are satisfied:*

(i) The probability of a negative shock in period 1 (p_1) is sufficiently high

(ii) The probability that a bad type delivers a good outcome under a crisis (β) is sufficiently low

(iii) The probability that C^2 is a good type (q_2) is sufficiently low

Then, there exists an interval $[q_2, \bar{q}]$ such that if $q_1 \in [q_2, \bar{q}]$, C^1 chooses not to run in the first period, and R^1 is Party 1's candidate in the general election. C^2 is always Party 2's candidate.

The conditions are intuitive. C^1 has nothing to lose from holding office during safe times, when he is always guaranteed re-election. His incentives to run are therefore always decreasing in the probability of a negative shock in the first period. Similarly, there is little reason to stay out of the race if the likelihood of delivering a good performance conditional on being a bad type is too high. Thus, β must be sufficiently low. Finally, C^1 is always willing to gamble on his own success if gambling on his opponent's failure is too risky. Therefore, C^2 must be sufficiently likely to be a bad type, so that his chances to get re-elected for a second term are sufficiently low.

Proposition 1 presents a very stark inefficiency result. In equilibrium, the voter gets the wrong candidates at the wrong time. Precisely when competence matters the most (p_1 is high and β is low), the politician who is most likely to be competent has incentives to shy away from office. Further, this occurs in equilibrium when the quality in the rest of the pool is especially low.

Notice that the nature of this inefficiency is very different from analogous results presented in the extant literature. Previous works highlight the difficulty of attracting good politicians if office rents are too low to compensate for their outside option in the private market. In other words, adverse selection emerges due to weak electoral incentives. Here, the opposite is true. In this model, running is costless and holding office is always more valuable than the outside option. The inefficiency documented above emerges precisely as a perverse consequence of electoral accountability. The problem that the voter faces is that she can never credibly commit to ignoring valuable information that may be revealed about the incumbent. Precisely because competence matters the most in times of crisis, this is also when governance outcomes are most informative. The politician who is most likely to survive a crisis is also the one who has the most to lose, and is therefore unwilling to take the risk. As such, this result speaks to an open debate in the literature, that asks whether voter competence is *actually* good for voters. Scholars have argued that a rational and more informed electorate may paradoxically induce office holders to exert less effort, or adopt worse policies (see Ashworth et al. 2014). This paper suggests that the problem may run even deeper: rational voters' ability to process information may prevent them from attracting competent politicians to office during challenging times.

Incumbency Effect

In the model presented above I assume that the first period election is an open seat one. Suppose instead that C^1 must decide whether to run against an incumbent going up for re-election. Is he more or less likely to stand for office? Relatedly, does the incumbent office holder experience an electoral advantage or a disadvantage in the first period? How is the electoral impact of incumbency influenced by the probability of a crisis?

To address these questions, suppose that C^2 is the incumbent office holder at the beginning of the game (so that q_2 is the posterior probability that he is a good type, given the prior and his performance at t=0). Further, suppose that office holders face a term limit of two. Therefore, if C^2 is re-elected in the first period, he cannot run again in the second.[5] The replacement (potential) candidate for Party 2 is then drawn in the second period from a pool with a proportion q_r of good types.

To understand the electoral impact of incumbency, I compare the probability that C^2 wins the first period election in the baseline model (i.e., when the election is open seat) with his first period electoral performance under incumbency status. This is essentially equivalent to comparing C^1's

[5]If no term limits are imposed, the politicians' incentives are exactly as in the baseline model, and incumbency status has no effect on electoral performance.

incentives to run in the first period in the two cases. In order to generate continuous probabilities, I assume that q_1 is drawn at the beginning of the game from a uniform distribution on $[q_2, \mu_{C^2}(I, C, g)]$ (recall that $q_1 < \mu_{C^2}(I, C, g)$).

The results show that, depending on the expected quality of Party 2's replacement candidate, either an incumbency advantage or a disadvantage arises. In both cases, the electoral effect of incumbency is amplified by the probability of a crisis arising in the first period:

Proposition 2. *Suppose that $q_r > q_1$. Then, an incumbency disadvantage arises, and is increasing in the probability of a crisis in period 1. Suppose instead that $q_r < q_1$. Then, an incumbency advantage arises, and is increasing in the probability of a crisis in period 1.*

The first result is intuitive. When $q_r > q_1$, C^1 has no electoral capital to preserve for future elections. Indeed, in order to win the second period election he needs the voter to update positively about his type. Thus, C^1 has no reason to stay out of the race, and will always choose to run in equilibrium. This, in turn, generates an incumbency disadvantage: C^2 wins with strictly positive probability in the open seat election, but loses for sure when he runs as the incumbent office holder. The lower C^1's incentives to run in the open seat election, the larger the negative effect of incumbency. The disadvantage is therefore increasing in the probability of a crisis arising during the first period p_1.

Suppose instead that $q_r < q_1$: C^1 always wins the second period election if the voter receives no new information about his type. Here, incumbency status has a positive effect on C^2's electoral performance in the first period. To understand this result, consider the incentives C^1 faces in the open seat election. When he chooses not to run for office, C^1 gambles on his opponent's failure. Thus, he must take into account the risk that a crisis arises, and C^2 is actually able to solve it. Conversely, when C^1 must decide whether to run against a term limited incumbent, he does not need to worry about the office holder's expected performance. Indeed, if C^1 stays out of the race today, he always wins the second period election. C^1's incentives to run are stronger in the open seat election, and C^2 experiences an incumbency advantage. Notice that the source of this incumbency advantage is exactly the reverse of the 'scare off' effect typically discussed in the literature (Cox ane Katz 1996, Levitt and Wolfram 1997). C^1 is more likely (in the sense of set inclusion) to stay out of the race precisely because he has nothing to fear from the (term limited) incumbent.

An analogous reasoning explains why this incumbency advantage is increasing in p_1. As a crisis becomes more likely, both C^1's expected payoff from holding office today and his probability of being re-elected tomorrow decrease. Thus, a increase in p_1 always has a direct negative effect on C^1's incentives to run. However, in the open seat election an indirect effect also emerges. Recall that C^2 would be re-elected only upon producing a good governance outcome under a crisis. Thus, as p_1 increases, staying out of the race becomes a riskier gamble for C^1. The direct effect dominates, therefore his incentives to run are always decreasing in p_1. However, due to the indirect effect the decrease is at a slower rate in the open seat election. As a consequence, C^2's incumbency advantage is increasing in the probability of a negative shock.

Robustness

So far, I have assumed that governance outcomes affect a politician's payoff only when in office. Further, the legacy payoff from a good performance is invariant to the state of the world. However, these assumptions can be relaxed without altering the quality of the results from Proposition 1. In this section, I discuss several variants of the baseline model that continue to support the qualitative conclusions presented above. All the proofs can be found in the Appendix.

Negative Externalities from Office Holder's Poor Performance

There are several ways in which the office holder's poor performance may negatively affect the other politicians' payoffs. First, we may argue that governance outcomes directly influence politicians' utility even when they are out of office. Suppose then that politicians, just like the voter, suffer a cost $-\lambda$ whenever a bad governance outcome is produced. Denote $\mathbb{I}_g$ a binary indicator taking value 1 when $o_t = g$, and 0 otherwise. A politician's per period payoff is then $R + \mathbb{I}_g\gamma - (1 - \mathbb{I}_g)\lambda$ when in office, and $-(1 - \mathbb{I}_g)\lambda$ otherwise.

Straightforwardly, C^1's incentives to run are higher if compared to the baseline model. Further, the lower the probability that C^2 is a good type (q_2), the higher the likelihood that C^1 will suffer a negative externality if he decides to free ride and stay out of the race in the first period. We may be tempted to conclude that C^1 would always be willing to run when q_2 is too low. Instead, as in the baseline model, the opposite is true. The qualitative results are in fact exactly as indicated in

Proposition 1. When a crisis is sufficiently likely to arise, and C^2 is sufficiently likely to fail, there exists an interval $[q_2, \overline{q_1}_\lambda]$ such that, if $q_1 \in [q_2, \overline{q_1}_\lambda]$, C^1 chooses not to run. C^1 is willing to increase the risk of suffering the cost $-\lambda$ in the first period, in order to maximise the probability of getting to office in the second when a good performance is easier to deliver. Crucially, this holds for any value of λ. The comparative statics instead go in the expected direction: as λ increases, the interval $\overline{q_1}_\lambda - q_2$ becomes smaller.

Suppose instead that, as in the baseline model, politicians only care about their own performance in office. Nonetheless, governance outcomes may *indirectly* influence a politician's expected payoff, irrespective of his incumbency status. For example, we may argue that a bad governance outcome in the first period would increase the probability of a crisis arising (again) in the second. To account for this possibility, assume that $prob(\omega_2 = C|o_1 = g) = \bar{p}$ and $prob(\omega_2 = C|o_1 = b) = \alpha\bar{p}$, where $\alpha \in (1, \frac{1}{\bar{p}})$.

Consider the problem that C^1 faces under this specification. Recall that he has incentives to stay out of the race only if this increases the probability of getting to office when a crisis is less likely. Suppose that the probability of a negative shock in the first period is high, and the probability of C^2 being a good type is low. Then, if C^1 chooses not to run, there is a high chance that a bad governance outcome will materialize in the first period. In this case, the probability of a crisis at $t = 2$ increases from $\bar{p}$ to $\alpha\bar{p}$, and C^1's future expected payoff from holding office decreases. This tends to increase his incentives to run, but does not alter the conclusions from the baseline model. For any α, if q_2 and β are sufficiently low, there exists an interval of values of q_1 such that C^1 chooses to stay out of the race when a crisis is likely to arise. Notice that this equilibrium can be sustained even if I allow a bad outcome in the first period to push the probability of a future crisis arbitrarily close to 1.

Finally, a similar reasoning holds if we assume that crises are always exogenous (i.e., the probability that $\omega_2 = C$ is not a function of o_1), but a bad governance outcome decreases the country's future resiliency β. In other words, the first-period office holder's poor performance reduces the probability that the country would survive a future shock if an incompetent type is in power. Formally, $prob(o_2 = g|\omega_2 = C, \theta_I = B, o_1 = g) = \beta$ and $prob(o_2 = g|\omega_2 = C, \theta_I = B, o_1 = b) = \delta\beta$, where $\delta \in [0, 1]$. θ_I denotes the type of the second period office holder. As above, a bad governance outcome in the first period decreases all politicians' expected payoff from holding office in the future. Nonetheless, C^1's incentives to stay out of the race are stronger precisely when C^2 is likely to deliver a poor performance. The qualitative results are then exactly as in the baseline model.

State Dependent Legacy Payoffs

The baseline model assumes that the office holder always obtains the same payoff from a good performance, irrespective of the state of the world. However, we could argue that producing a good governance outcome under a crisis should yield a higher legacy payoff than performing well during normal times. Suppose then that the office holder's legacy payoff from a good performance is γ if $\omega_t = N$, and $\gamma\nu$ if $\omega_t = C$, where $\nu \geq 1$.

Straightforwardly, for a sufficiently large ν, C^1's payoff from running is increasing in the probability of a crisis p_1. Perhaps more surprisingly, the likelihood that he chooses to run in the first period (in the sense of set inclusion) is instead *always* weakly decreasing in p_1. Recall that C^1 is always guaranteed re-election if he gets to office during normal times. Irrespective of how large is the legacy payoff that he could obtain under a crisis, he therefore never has any reason to stay out of the race when $p_1 = 0$. As such, if ν is so large that his expected payoff from holding office is increasing in p_1, C^1 will always be willing to run. This implies that, in equilibrium, increasing p_1 can only reduce the probability that he stands for office in the first period. In short, the assumption that office holders obtain a larger legacy payoff under a crisis makes an equilibrium in which C^1 chooses to stay out of the race harder to sustain, but does not alter the qualitative conditions under which this occurs.

These robustness exercises highlight that the crucial inefficiency documented in Proposition 1 can be more or less severe, but it is unlikely that any democracy may be immune from it. This inefficiency seems to lie at the very core of the accountability relationship between voters and politicians.

A Longer Time Horizon

The baseline model supposes that a politician's value from holding office is a function of his performance. When players only live for two periods, relaxing this assumption implies that all politicians are always willing to run in equilibrium. As such, while the two-period game is useful in highlighting the key intuition underlying the argument advanced in the paper, it is important to consider politicians' incentives under a longer time horizon when $\gamma = 0$. For this purpose, I introduce an amended version of the model in which the game is repeated for infinitely many periods. In future iterations of the paper I will complete the analysis by characterising the Markov perfect equilibria of the infinite horizon game for all parameter values. For the moment, I focus on identifying the conditions under which an equilibrium with the same features of the one identified in Proposition 1 can be sustained.

Consider a game that lasts for infinitely many periods, $t \in \{1, 2, ..., \infty\}$. As in the baseline model, at the beginning of the game each party $P \in \{1, 2\}$ randomly draws a potential candidate from the pool of its members. Each potential candidate decides whether to run for office or not. The voter then makes her electoral decision. Office holders are subject to a two-terms limit. When an incumbent leaves office — whether because he hits the term limit, decides to stand down, or is outvoted — he cannot re-enter the pool of candidates. His party then draws a replacement (potential) candidate from the same pool. Notice that the above implies that an incumbent office holder is always willing to run for re-election.

As above, each party draws from a pool containing a mass 1 of politicians, and a proportion q_P of good types, $\forall\ P \in \{1, 2\}$.[6] Thus, q_1 is the probability that a randomly drawn politician from party 1 is a good type, and q_2 the probability for a politician from party 2. Let $q_1 \geq q_2$. Notice that all politicians belonging to the same party are ex-ante identical. This allows me to consider, in the equilibrium analysis, a generic potential candidate from party 1 and a generic potential candidate from party 2. As in the baseline model, when party P is unable to field a viable candidate it resorts to the reserve candidate R^P, that is known to be a bad type with certainty.

As in the two-period baseline, in each period the country experiences either a normal situation or a crisis $\omega_t \in \{N, C\}$. The state of the world realizes (and is observed by all players) in each period before politicians' entry decision.[7] A negative shock arises with probability $prob(\omega_t = C) = p$, with ω i.i.d in each period. The production function for the governance outcomes is as in the baseline model, but I assume that with probability ϵ an incompetent type delivers a poor performance even

[6]There is a slight technical difficulty associated with the fact that the pool depletes over time. To bypass this problem, I assume that whenever a party draws a new potential candidate, another politician with the same true type is born into the pool.

[7]This assumption would have no impact on the results of the baseline model.

under a normal state of the world , where ϵ takes an arbitrarily small value. This is simply to guarantee that the voter is never indifferent between the candidates.

Politicians obtain a payoff of 0 when not in office, and $R > 0$ when in office. Each politician discounts future payoffs by a factor $\delta \in [0, 1]$. The voter's utility in each period is as in the baseline model. However, I assume that she fully discounts the future (i.e., she maximises per-period payoff). This ensures that, in each period, the candidate who is most likely to be competent wins the election irrespective of incumbency status. This is not necessarily true in equilibrium with a forward looking voter. When choosing between a term limited incumbent and a challenger that is less likely to be competent but can run again in the following period, a forward looking voter would under some conditions elect the challenger. This is because the term limit would otherwise prevent her from efficiently using all the available information when making her electoral decision in the next period.

Finally, as in the two-period version, I assume that $\mu_{t,2}(I, C, g) > q_1$, where $\mu_{t,2}(I, \omega_{t-1}, o_{t-1})$ is the posterior probability that an incumbent from party 2 is a good type conditional on the previous period state of the world and governance outcome.

Analysis

Are the incentives that the politicians face in the amended model similar to those emerging in the two-period baseline? The answer is yes for the ex-ante advantaged potential candidates from party 1. Not necessarily for the politicians drawn from party 2.

Consider first a randomly drawn potential candidate from party 1. This politician is ex-ante more likely be competent than any randomly drawn challenger from the other party. As such, he is always guaranteed re-election for a second term if he gets to office during normal times, when no new information is generated about his type.[8] The best potential candidate therefore has no reason to stay out of the race when $\omega_t = N$. He may instead decide not to run when a negative shock arises, in order to preserve his electoral capital and maximise the probability of getting to office when re-election is more likely. Exactly as in the baseline model, the higher the probability of being competent q_1, the stronger the incentives to run irrespective of the state of the world.

[8] Recall that a new potential candidate for party $P \in \{1, 2\}$ is drawn whenever an incumbent from the same party loses power. This implies that an incumbent from party 1(2) always faces a randomly drawn challenger from party 2(1) that has never been in office.

Interestingly, the opposite holds for potential candidates drawn from party 2. These politicians are always willing to run during a crisis, irrespective of how likely they are to fail. In contrast, if the probability of being competent q_2 is sufficiently high, they may want to stay out of the race under normal times. Recall that governance outcomes are uninformative under $\omega_t = N$. Therefore, an incumbent from party 2 would only be re-elected if his potential challenger decides to sit the election out. Conversely, a negative shock potentially allows the ex-ante disadvantaged incumbent to prove himself, thereby increasing the probability that he wins re-election even if the challenger decides to run. As such, politicians from party 2 maximise the probability of being elected for two consecutive terms if they get to office during challenging times. This, in turn, generates incentives to stay out of the race during normal ones. Interestingly, as mentioned above, these incentives are stronger the higher the probability of being competent. When q_2 is high, a randomly drawn politician from party 2 that gets elected during challenging times is very likely to survive to a second term. The opportunity cost of getting to office during normal times is too high, and the politician would rather wait for a period of crisis.

The above discussion highlights that the incentives that arise in the infinite horizon model are not always similar to those emerging in the two-period case. Nonetheless, we can identify conditions under which the equilibrium has the same features. Furthermore, the conditions are qualitatively analogous to the ones identified in Proposition 1:

Proposition 3. *There exist unique $\widehat{q_2}$, $\widehat{\beta}$, and $\widehat{\delta}$ such that, if*

(i) A randomly drawn potential candidate from Party 2 is sufficiently likely to be a bad type
$0 \leq q_2 < \widehat{q_2}$

(ii) The probability that a bad type delivers a good outcome under a crisis is sufficiently low
$0 \leq \beta < \widehat{\beta}$

(iii) The politicians' discount factor is sufficiently high
$\widehat{\delta} < \delta < 1$

then, the game has an equilibrium in which any potential candidate drawn from Party 2 runs under both states of the world, whereas viable candidates drawn from Party 1 only run during normal times. During challenging times, Party 1 resorts to the reserve candidate R^1.

Two things are worth noticing. First, in contrast with the results of the baseline model, adverse selection emerges in equilibrium for any value of q_1. For a sufficiently high discount factor, potential candidates from party 1 choose not to run in times of crisis even if the probability of being competent gets arbitrarily close to 1. Second, as highlighted above, condition (i) is necessary to guarantee *both* that potential candidates from party 1 are willing to stay out of the race during challenging times, and that politicians from party 2 are willing to enter during normal ones.

Conclusion

Do the right candidates choose to run at the right time? I have addressed this question by analyzing a model of repeated elections, in which potential candidates are career politicians that differ in the probability of being a competent type. A key feature of the model is that, in each period, the country faces either a normal situation or a crisis. A crisis amplifies both the importance of the office holder's competence, and the informativeness of governance outcomes. I have shown that, in a world with these features, electoral accountability may have the perverse consequence of discouraging good candidates from running precisely when the voter needs them the most. When a crisis is likely to arise, and his opponents have a high probability of being of a low type, the politician who is ex-ante most likely to be competent is not willing to risk his electoral capital. He chooses to stay out of the race today so as to increase the probability of winning tomorrow, when good governance outcomes are easier to produce.

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Appendix

Proof of Proposition 1

As discussed in the main body, C^2, R^1 an R^2 always have a weakly dominant strategy to run in both periods.

Consider now politician C^1. C^1's utility from running in period 1 is:

$$K + q_1[2\gamma + K] + (1 - q_1)[1 - p_1(1 - \beta)][\gamma + K + \gamma(1 - \bar{p}(1 - \beta)] \quad (1)$$

Suppose instead that C^1 chooses not to run. Then, C^2 will win the first period election in equilibrium. C^1's expected utility from not running, given the probability that C^2 is re-elected in period 2, is therefore:

$$[K + \gamma(q_1 + (1 - q_1)(1 - \bar{p}(1 - \beta))][1 - p_1 + p_1(1 - q_2)(1 - \beta)] \quad (2)$$

Thus, C^1 chooses not to run in period 1 if and only if the following condition is satisfied:

$$\begin{aligned} &[K + \gamma(q_1 + (1 - q_1)(1 - \bar{p}(1 - \beta))][1 - p_1 + p_1(1 - q_2)(1 - \beta)] > \\ &K + q_1[2\gamma + K] + (1 - q_1)[1 - p_1(1 - \beta)][\gamma + K + \gamma(1 - \bar{p}(1 - \beta)] \end{aligned} \quad (3)$$

Which reduces to:

$$q_1 < 1 - \frac{(\gamma + K)(1 + q_2 p_1(1 - \beta) + \beta p_1)}{p_1(1 - \beta)(2\gamma + K - \gamma\bar{p}(1 - 2\beta - q_2(1 - \beta)))} = \overline{q_1} \quad (4)$$

Given $q_1 \geq q_2$, the above requires

$$(1 - q_2)p_1(1 - \beta)(2\gamma + K - \gamma\bar{p}(1 - 2\beta - q_2(1 - \beta))) - (\gamma + K)(1 + q_2 p_1(1 - \beta) + \beta p_1) > 0 \quad (5)$$

The condition establishes an upper bound $q_2 < \overline{q_2}$, and must always be satisfied at $q_2 = 0$. This requires

$$p_1[(1 - \beta)(2\gamma + K - \gamma\bar{p}(1 - 2\beta)) - \beta(\gamma + K)] - \gamma - K > 0 \quad (6)$$

This reduces to:

$$p_1 > \frac{\gamma + K}{(1-\beta)(2\gamma + K - \gamma\bar{p}(1-2\beta)) - \beta(\gamma + K)} = \underline{p_1} \tag{7}$$

Which requires:

$$\frac{\gamma + K}{(1-\beta)(2\gamma + K - \gamma\bar{p}(1-2\beta)) - \beta(\gamma + K)} < 1 \tag{8}$$

The above establishes an upper bound $\beta < \overline{\beta}$ (and it is always satisfied at $\beta = 0$).

Proof for Proposition 2

The proof of the first point follows straightforwardly from the proof of Proposition 1. Consider instead the second case: $q_r < q_1$.

C^1's utility from running in period 1 is exactly as in the baseline:

$$K + q_1[2\gamma + R] + (1-q_1)[1 - p_1(1-\beta)][\gamma + K + \gamma(1 - \bar{p}(1-\beta)] \tag{9}$$

Conversely, if C^1 chooses not to run he will always win the second period election. His expected utility is therefore:

$$K + \gamma(q_1 + (1-q_1)(1-\bar{p}(1-\beta)) \tag{10}$$

Thus, C^1 chooses not to run in period 1 if and only if the following condition is satisfied:

$$K + \gamma(q_1 + (1-q_1)(1-\bar{p}(1-\beta)) > K + q_1[2\gamma + K] + (1-q_1)[1-p_1(1-\beta)][\gamma + K + \gamma(1-\bar{p}(1-\beta)] \tag{11}$$

Which reduces to:

$$q_1 < 1 - \frac{(\gamma + K)}{p_1(1-\beta)[\gamma + K + \gamma(1-\bar{p}(1-\beta)]} \tag{12}$$

C^2's incumbency advantage is therefore:

$$\begin{aligned} 1 - \frac{(\gamma + K)}{p_1(1-\beta)[\gamma + K + \gamma(1-\bar{p}(1-\beta)]} - \\ [1 - \frac{(\gamma + K)(1 + q_2 p_1(1-\beta) + \beta p_1)}{p_1(1-\beta)(2\gamma + K - \gamma\bar{p}(1 - 2\beta - q_2(1-\beta)))}] \end{aligned} \tag{13}$$

Which is increasing in p_1.

Robustness

In this section I formally analyse the variants of the baseline model introduced in the main body.

Governance outcomes directly impact politicians' payoffs.

Consider an amended version of the baseline mode in which politicians' payoffs are as follows:

- $K + \mathbb{I}_g \gamma - (1 - \mathbb{I}_g)\lambda$ when in office
- $-(1 - \mathbb{I}_g)\lambda$ when not in office

Where $\mathbb{I}_g$ is a binary indicator taking value 1 if $o_t = g$ and 0 otherwise.

Straightforwardly, C^2, R^1 an R^2 still have a weakly dominant strategy to run in both periods. Instead, as in baseline model C^1 may have incentives to sit the first election out. In equilibrium, he chooses not to run in the first period if and only if the following condition is satisfied:

$$\begin{aligned} p_1(1-\beta)(1-q_2)(\gamma(1-(1-\beta)(1-q_1)\bar{p}) - (1-\beta)(1-q_1)\lambda\bar{p} - \lambda + K) \\ -p_1\beta(1-q_2)(1-\beta)\bar{p}\lambda \\ +(1-p_1)(\gamma(1-(1-\beta)(1-q_1)\bar{p}) - (1-\beta)(1-q_1)\lambda\bar{p} + K) > \\ K + q_1(2\gamma + K) \\ +(1-q_1)(1-(1-\beta)p_1)(\gamma(1-(1-\beta)\bar{p}) - (1-\beta)\lambda\bar{p} + \gamma + K) \\ -p_1(1-\beta)(1-q_1)((1-\beta)(1-q_2)\lambda\bar{p} + \lambda) \end{aligned} \tag{14}$$

This reduces to:

$$q_1 < 1 - \frac{(\gamma + K)(1 + q_2 p_1(1-\beta) + \beta p_1) + \lambda(1-\beta)(1-q_2)p_1(1+\beta\bar{p})}{p_1(1-\beta)(2\gamma + K - \gamma\bar{p}(1 - 2\beta - q_2(1-\beta)) + \lambda(1+\bar{p}\beta))} = \overline{q_1}_\lambda \tag{15}$$

The condition must be satisfied at $q_1 = q_2$:

$$1 - q_2 - \frac{(\gamma + K)(1 + q_2 p_1(1-\beta) + \beta p_1) + \lambda(1-\beta)(1-q_2)p_1(1+\beta\bar{p})}{p_1(1-\beta)(2\gamma + K - \gamma\bar{p}(1-2\beta-q_2(1-\beta)) + \lambda(1+\bar{p}\beta))} > 0 \tag{16}$$

The LHS is decreasing in q_2, therefore the condition establishes an upper bound $q_2 < \overline{q_2}_\lambda$ and must be satisfied at $q_2 = 0$.

$$p_1(1-\beta)(2\gamma + K - \gamma\bar{p}(1-2\beta) + \lambda(1+\bar{p}\beta)) - [(\gamma + K)(1+\beta p_1) + \lambda p_1(1-\beta)(1+\beta\bar{p})] > 0 \tag{17}$$

The above establishes a lower bound $p_1 > \underline{p_1}_\lambda$ and must always be satisfied at $p_1 = 1$:

$$(1-\beta)(2\gamma + K - \gamma\bar{p}(1-2\beta) + \lambda(1+\bar{p}\beta)) - [(\gamma + K)(1+\beta) + \lambda(1-\beta)(1+\beta\bar{p})] > 0 \tag{18}$$

The above is concave in β, never satisfied at $\beta = 1$ and always at $\beta = 0$, therefore the condition establishes an upper bound $\beta < \overline{\beta}_\lambda$.

A bad governance outcome increases the probability of a crisis arising in the future.

Suppose that politicians only care about their own performance in office, and consider an amended version of the baseline model where the probability of a negative shock in the second period is a function of the first period governance outcome:

- $prob(\omega_2 = C | o_1 = g) = \bar{p}$
- $prob(\omega_2 = C | o_1 = b) = \alpha\bar{p}$, where $\alpha \in (1, \frac{1}{\bar{p}})$

C^2, R^2 and R^1 have a weakly dominant strategy to run in both periods. Instead, C^1 will choose not to run in period 1 if and only if the following condition is satisfied:

$$\begin{gathered}[K + \gamma(q_1 + (1-q_1)(1-\bar{p}(1-\beta))](1-p_1) \\ +p_1(1-q_2)(1-\beta)][K + \gamma(q_1 + (1-q_1)(1-\alpha\bar{p}(1-\beta))] > \\ K + q_1[2\gamma + K] + (1-q_1)[1-p_1(1-\beta)][\gamma + K + \gamma(1-\bar{p}(1-\beta)]\end{gathered} \tag{19}$$

This reduces to:

$$q_1 < 1 - \frac{(\gamma + K)(1 + q_2 p_1(1-\beta) + \beta p_1)}{p_1(1-\beta)(2\gamma + K - \gamma\bar{p}(\alpha(1-q_2)(1-\beta) - \beta)} = \overline{q_1}_\alpha \tag{20}$$

The above must always be satisfied at $q_1 = q_2$:

$$1 - q_2 - \frac{(\gamma + K)(1 + q_2 p_1(1-\beta) + \beta p_1)}{p_1(1-\beta)(2\gamma + K - \gamma\bar{p}(\alpha(1-q_2)(1-\beta) - \beta)} > 0 \tag{21}$$

The above establishes a lower bound $p_1 > \underline{p_1}_\alpha$ and must always be satisfied at $p_1 = 1$:

$$1 - q_2 - \frac{(\gamma + K)(1 + q_2(1-\beta) + \beta)}{(1-\beta)(2\gamma + K - \gamma\bar{p}(\alpha(1-q_2)(1-\beta) - \beta)} > 0 \tag{22}$$

The LHS is decreasing in q_2, therefore it establishes an upper bound $q_2 < \overline{q_2}_\alpha$ and must always be satisfied at $\overline{q_2} = 0$:

$$1 - \frac{(\gamma + K)(1 + \beta)}{(1-\beta)(2\gamma + K - \gamma\bar{p}(\alpha(1-\beta) - \beta)} > 0 \tag{23}$$

The LHS is concave in β, never satisfied at $\beta = 1$ and always at $\beta = 0$. Thus, it establishes an upper bound $\beta < \overline{\beta}_\alpha$.

A bad governance outcome decreases the country's resiliency (β).

Suppose that politicians only care about their own performance in office, and the probability of a crisis in the second period is exogenous. Consider an amended version of the baseline model in which the first period governance outcome influences the probability that $o_2 = g$ if the country experiences a crisis and the office holder is a bad type:

- $prob(o_2 = g | \omega_2 = C, \theta_{I_2} = B, o_1 = g) = \beta$
- $prob(o_2 = g | \omega_2 = C, \theta_{I_2} = B, o_1 = g) = \delta\beta$, where $\delta \in [0, 1]$

C^2, R^1 and R^2 still have a weakly dominant strategy to always run. C^1 chooses not to run in the first period if and only if the following condition is satisfied:

$$\begin{aligned} p_1(1-q_2)(1-\beta)[K+\gamma[q_1+(1-q_1)(1-\bar{p}(1-\delta\beta))]+ \\ (1-p_1)[K+\gamma[q_1+(1-q_1)(1-\bar{p}(1-\beta))]]> \\ K+q_1(2\gamma+K)+(1-q_1)(1-p_1(1-\beta))(K+\gamma(2-\bar{p}(1-\beta))) \end{aligned} \tag{24}$$

This reduces to:

$$q_1 < 1 - \frac{(\gamma+K)(1+q_2p_1(1-\beta)+\beta p_1)}{p_1(1-\beta)(2\gamma+K-\gamma\bar{p}(1-\beta(1+\delta)-q_2(1-\beta)))} = \overline{q_1}_\delta \tag{25}$$

Given $q_1 \geq q_2$, this requires:

$$(1-q_2)p_1(1-\beta)[2\gamma+K-\gamma\bar{p}(1-\beta(1+\delta)-q_2(1-\beta))]-(\gamma+K)(1+q_2p_1(1-\beta)+\beta p_1)>0 \tag{26}$$

The above establishes an upper bound $q_2 < \overline{q_2}_\delta$. Thus, the condition must be satisfied at $q_2 = 0$. This requires:

$$p_1(1-\beta)[2\gamma+K-\gamma\bar{p}(1-\beta(1+\delta)]-(\gamma+K)(1+\beta p_1)>0 \tag{27}$$

The above establishes a lower bound $p_1 > \underline{p_1}_\delta$ and must always be satisfied at $p_1 = 1$:

$$(1-\beta)[2\gamma+K-\gamma\bar{p}(1-\beta(1+\delta)]-(\gamma+K)(1+\beta)>0 \tag{28}$$

The LHS is concave in β, always satisfied at $\beta = 0$ and never at $\beta = 1$ therefore the condition establishes an upper bound $\beta < \overline{\beta}_\delta$.

Solving a crisis yields a larger legacy payoff.

Consider an amended version of the baseline model in which an office holder's legacy payoff from a good performance is higher under $\omega_t = C$:

- K if $o_t = b$
- $K+\gamma$ if $o_t = g$ and $\omega_t = N$

- $K + \nu\gamma$, where $\nu > 1$, if $o_t = g$ and $\omega_t = C$

C^2, R^1 and R^2 always have a weakly dominant strategy to run. C^1 chooses not to run in the first period if and only if the following condition is satisfied:

$$[K + \gamma(1 - \bar{p} + \nu\bar{p}(q_1 + (1 - q_1)\beta))][1 - p_1 + p_1(1 - q_2)(1 - \beta)] > \tag{29}$$
$$K + q_1[K + \gamma(2 + (p_1 + \bar{p})(\nu - 1)] + (1 - q_1)[1 - p_1][\gamma + K + \gamma(1 - \bar{p} + \nu\bar{p}\beta)]$$
$$+(1 - q_1)p_1\beta[\nu\gamma + K + \gamma(1 - \bar{p} + \nu\bar{p}\beta)]$$

This reduces to:

$$q_1 < \frac{p_1((1 - 2\beta - q_2(1 - \beta))(K + \gamma(1 - \bar{p}(1 - \beta\nu))) + \gamma(1 - \beta\nu)) - (K + \gamma)}{p_1(1 - \beta)(\gamma(1 + \nu) + K - \gamma\bar{p}(1 - 2\nu\beta - \nu q_2(1 - \beta))} = \overline{q_1}_\nu \tag{30}$$

The above must always be satisfied at $q_1 = q_2$:

$$\frac{p_1((1 - 2\beta - q_2(1 - \beta))(K + \gamma(1 - \bar{p}(1 - \beta\nu))) + \gamma(1 - \beta\nu)) - (K + \gamma)}{p_1(1 - \beta)(\gamma(1 + \nu) + K - \gamma\bar{p}(1 - 2\nu\beta - \nu q_2(1 - \beta))} - q_2 > 0 \tag{31}$$

The LHS is decreasing in q_2, therefore it establishes an upper bound $q_2 < \overline{q_2}_\nu$ and must always be satisfied at $q_2 = 0$:

$$p_1((1 - 2\beta)(K + \gamma(1 - \bar{p}(1 - \beta\nu))) + \gamma(1 - \beta\nu)) - (K + \gamma) > 0 \tag{32}$$

The above establishes a lower bound $p_1 > \underline{p_1}_\nu$ and must always be satisfied at $p_1 = 1$:

$$(1 - 2\beta)(K + \gamma(1 - \bar{p}(1 - \beta\nu)) + \gamma(1 - \beta\nu)) - (K + \gamma) > 0 \tag{33}$$

The LHS is concave in β, always satisfied at $\beta = 0$ and never at $\beta = 1$ therefore the condition establishes an upper bound $\beta < \overline{\beta}_\nu$.

Proof of Proposition 3

Denote $U_P^w(\omega_t, e_t)$ the expected discounted payoff of a randomly drawn potential candidate from party $P \in \{1, 2\}$ when he chooses to enter and wins the election at time t. $e_t \in \{\emptyset, I\}$, where $e_t = \emptyset$ indicates the election at time t is open seat, and $e_t = I \in \{1, 2\}$ indicates an election in which the incumbent from the other party runs for office again (notice that if $P = 1$, then $e_t \in \{\emptyset, 2\}$ and if $P = 2$, then $e_t \in \{\emptyset, 1\}$). $U_P^l(\omega_t, e_t)$ is the expected discounted payoff when the potential candidate is willing to enter but loses the election, and $U_P^o(\omega_t, e_t)$ his payoff when he chooses to stay out.[9]

As discussed in the main body, a randomly drawn potential candidate from party 1 is always willing to run under $\omega_t = N$ and a randomly drawn potential candidate from party 2 is always willing to run under $\omega_t = C$. Further, all incumbents are always willing to run for re-election.

Consider instead a non-incumbent potential candidate from party 2 under $\omega_t = N$. In the conjectured equilibrium, he is indifferent between running and not running if the election is open seat, or if the incumbent from party 1 going up for re-election has produced a good outcome in the previous period. In both cases, he would in fact always lose the election in equilibrium. Consider instead the case in which the incumbent performed poorly in the previous period. The expected discounted payoff for a potential candidate from party 2 in the conjectured equilibrium is:

$$U_2^w(N, 1) = K + \delta K p \tag{34}$$

His expected discounted payoff from a deviation would instead be:[10]

$$\delta(pU_2^w(C, \emptyset) + (1 - p)U_2^l(N, \emptyset)) \tag{35}$$

Where

$$U_2^w(C, \emptyset) = K + \delta K[p + (1 - p)(q_2 + (1 - q_2)\beta)] \tag{36}$$

And

$$U_2^l(N, \emptyset) = \delta^2(pU_2^w(C, \emptyset) + (1 - p)U_2^l(N, \emptyset)) \tag{37}$$

[9] Notice that, for a non-incumbent politician $U_P^l(\omega_t, e_t) = U_P^o(\omega_t, e_t)$.

[10] Recall that the probability that a bad type performs poorly under a normal state is strictly positive but arbitrarily close to 0, and can therefore be ignored when computing the players' expected utility.

Solving for $U_2^o(N, \emptyset)$ we obtain that the deviation is not profitable if and only if the following condition is satisfied:

$$K + \delta K p > \delta K p \frac{(1 + \delta(p + (1-p)(q_2 + (1-q_2)\beta))}{1 - \delta^2(1-p)} \tag{38}$$

Rearranging we obtain:

$$q_2 < \frac{1 - \delta^2(p^2 + (1-p)(1+\delta p))}{\delta^2 p(1-p)(1-\beta)} - \frac{\beta}{1-\beta} \tag{39}$$

Since, $q_2 > 0$ the above requires:

$$\beta < \frac{1 - \delta^2(p^2 + (1-p)(1+\delta p))}{\delta^2 p(1-p)} \tag{40}$$

Consider now a non-incumbent potential candidate from party 1 under $\omega_t = C$. Intuitively, his incentives to run are stronger when a term limited incumbent is up for re-election (as compared to an open seat election). As such, it is sufficient to show that the equilibrium is robust to a deviation in this case.

His expected discounted payoff in the conjectured equilibrium is:

$$U_1^o(C, 2) = \delta((1-p)U_1^w(N, \emptyset) + pU_1^o(C, \emptyset)) \tag{41}$$

Where

$$U_1^w(N, \emptyset) = K(1 + \delta) \tag{42}$$

And

$$\begin{aligned} U_1^o(C, \emptyset) &= \delta(1-p)(1 - (q_2 + (1-q_2)\beta))U_1^w(N, 2) \\ &+ \delta(1-p)(q_2 + (1-q_2)\beta))U_1^l(N, 2) + \delta p U_1^o(C, 2) \end{aligned} \tag{43}$$

With $U_1^l(N, 2) = \delta p U_1^o(C, \emptyset) + \delta(1-p)U_1^w(N, \emptyset)$ and $U_1^w(N, 2) = U_1^w(N, \emptyset)$.

His expected discounted payoff from a deviation is instead:

$$K + \delta K(q_1 + (1-q_1)\beta) \tag{44}$$

Solving for $U_1^o(C,\emptyset)$ and rearranging we obtain that the deviation is not profitable if and only if the following condition is satisfied:

$$(K+\delta K)\delta(1-p)\frac{(1-q_2)(1-\beta)+\delta(p+(1-p)(q_2+(1-q_2)\beta)}{1-\delta^2 p(p+(1-p)(q_2+(1-q_2)\beta)} > K+\delta K(q_1+(1-q_1)\beta) \quad (45)$$

Rearranging we obtain:

$$q_2 < \frac{(1+\delta p)[\delta(1+\delta)(1-p)-(1-\delta p)(1+\delta(q_1+(1-q_1)\beta))]}{\delta(1-p)(1-\beta)[1-\delta^2(1-p(1-q_1)(1-\beta))]} - \frac{\beta}{1-\beta} \quad (46)$$

The RHS is convex in β and is never satisfied at $\beta=1$. The condition therefore establishes an upper bound $\tilde{\beta}$. $\tilde{\beta}>0$ requires:

$$(1+\delta p)[\delta(1+\delta)(1-p)-(1-\delta p)(1+\delta q_1)] > 0 \quad (47)$$

The LHS is increasing in δ, fails at $\delta=0$ and is always satisfied at $\delta=1$. The condition therefore establishes a lower bound $\widehat{\delta}$

Thus, the conjectured equilibrium exists if and only if the following conditions are satisfied:

- $0 < q_2 < \widehat{q_2} = \min\{\frac{1-\delta^2(p^2+(1-p)(1+\delta p))}{\delta^2 p(1-p)(1-\beta)} - \frac{\beta}{1-\beta}, \frac{(1+\delta p)[\delta(1+\delta)(1-p)-(1-\delta p)(1+\delta(q_1+(1-q_1)\beta))]}{\delta(1-p)(1-\beta)[1-\delta^2(1-p(1-q_1)(1-\beta))]} - \frac{\beta}{1-\beta}\}$
- $\beta < \widehat{\beta} = \min\{\tilde{\beta}, \frac{1-\delta^2(p^2+(1-p)(1+\delta p))}{\delta^2 p(1-p)}\}$
- $\delta > \widehat{\delta}$