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Political checks and balances are certainly among the most debated desiderata in the construction of democratic systems and their evaluation. This paper suggests a conceptual framework that could be useful to inform this debate. We propose a model where the pros and cons of a strengthening of checks and balances are respectively the reduction of type-I errors and the increase of potential type-II errors in policy decision-making. Checks and balances are less desirable for intermediate levels of competence of the political class and more desirable when the bureaucracy is slower or when the political system involves frequent turnover, and in policy areas where the welfare effects of a reform are harder to evaluate and effective accountability is low.

JEL Classification: N/A

Keywords: Checks and balances, Information, Uncertain policy quality, effective accountability

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Optimal Checks and Balances Under Policy Uncertainty*

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Abstract

Political checks and balances are certainly among the most debated desiderata in the construction of democratic systems and their evaluation. This paper suggests a conceptual framework that could be useful to inform this debate. We propose a model where the pros and cons of a strengthening of checks and balances are respectively the reduction of type-I errors and the increase of potential type-II errors in policy decision-making. Checks and balances are less desirable for intermediate levels of competence of the political class and more desirable when the bureaucracy is slower or when the political system involves frequent turnover, and in policy areas where the welfare effects of a reform are harder to evaluate and effective accountability is low.

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1 Introduction

Democracies feature three types of checks on political decisions. First, after a political decision is implemented, it is subject to the scrutiny of the voters, who hold political leaders accountable for the consequences of their decisions—*electoral accountability*. Second, after a political decision has been taken, it is subject to the legal scrutiny of the judicial and bureaucratic systems—*separation of powers*. Finally, before a political decision is taken, it is subject to the preventive veto of multiple political actors—what we refer to as *political checks and balances*.

In fact, political scientists and economist alike maintain that liberal democracies entail a necessary combination of both direct political accountability through elections and checks and balances that constrain the power of individual politicians or institutions.¹ Both these elements are essential in the provision of good public policies and they may play distinct roles in determining policies. For example, Besley (2020) shows with a cross-country analysis that constraints on the executive are likely to drive a country’s ability to be prepared for the rare event of a major pandemic more than electoral accountability. Yet the same constraints do not appear to be very important in determining continuing healthcare policies and outcomes, which instead seem to be driven by the level of electoral accountability.²

Recently, Mounk (2018) argued that political accountability to voters and constitutional checks and balances, while essential for the functioning of a liberal democracy, are naturally in conflict with each other, making liberal democracy both fragile and historically rare. Mounk’s argument is that voters in democracies are likely to demand that the policymaker they elected has the power to deliver on his or her promises. Therefore, checks and balances, which limit the action of elected politicians, may appear to voters as limits to their democratic rights, especially when voters demand swift changes in policies. More broadly, in times of crisis, as in the recent COVID-19 emergency, checks and balances may be eroded away, either because voters demand swift, decisive actions, or because governments use emergency powers to bypass parliamentary discussions.³

¹“In framing a government which is to be administered by men over men, the great difficulty lies in this: you must first enable the government to control the governed; and in the next place oblige it to control itself. A dependence on the people is, no doubt, the primary control on the government; but experience has taught mankind the necessity of auxiliary precautions.” (The Federalist Papers, 51). This famous principle by Madison must be credited to Montesquieu (1750) in *The Spirit of Laws*. See also Barro (1973) and Ferejohn (1986) as classic references on accountability.

²Similarly, Cox and Weingast (2018) show that political checks and balances are more important than electoral accountability in moderating the economic downturns associated with leadership turnover.

³The intellectual basis for this goes back to Locke’s *Second Treatise of Civil Government* (1689, Sec. 160-161).

In this paper we develop a simple stylized framework to study political checks and balances. We study the pros and cons of political checks and balances and how they interact with the effectiveness of the judicial system, the bureaucracy, and electoral accountability. Our aim is to understand when accountability is insufficient to deliver effective policies for the voters and therefore checks and balances are optimal. Nevertheless, we show that checks and balances may also reduce voters' welfare and that their optimality depends on the specific policy area, the quality of the accountability, the political stability of the country, the quality of the bureaucracy and of the politicians, and the potential costs and benefits of reforms *vis à vis* inaction. In particular, policy decisions that voters would find difficult to evaluate and that are likely to produce effects only in a distant future require more checks and balances than policies that can be more transparently evaluated on a routine basis (e.g., healthcare expenditure). Furthermore, some variables, such as the relative risk of inaction, vary over time. Therefore, optimal constitutional systems may at times perform worse than more decisive systems, prompting voters to demand more powers for elected officials.

Political checks and balances affect both legislative and executive decisions. For example, in most democratic constitutions, executive appointments are subject to the approval of parliament. Similarly, in bicameral legislatures, bills approved by the lower house must pass the scrutiny of the upper house before being enacted. Political checks and balances also affect the relation between different levels of government, as national presidents or regional and state legislatures may have veto power over bills passed by the national parliament. Whether individual decisions are subject to the scrutiny of multiple political actors or not is likely to determine the quality and the quantity of policies. As a result, the amount of political checks and balances is at the center of the debate over the merits of a constitution.

For example, the debate over the merits of bicameral legislative systems dates back at least to Madison, who warned against the risks of the "excess of law-making" and defended the bicameral system on the basis of the "check on legislation" provided by the U.S. Senate (The Federalist Papers, 62). The view that bicameralism's main merit rests on hindering excessive change is widespread among political scientists (e.g., Tsebelis and Money, 1997).⁴ In the 20th Century, progressive political scientists questioned the merits of the bicameral checks on legislation. For example, Orfield (1935) writes that "[T]he present system results in too much check and balance. For every poor measure that may be defeated under the bicameral system, it is likely that two or more good measures fail." Similarly, Stouffer, Opheim, and Day (1996) write that in bicameral systems "although

⁴See Rogers (2003) for a critical review of this literature.

careless stupid action is less likely, wise or sensible action is more difficult to accomplish.” In summary, the collective wisdom on checks and balances points to a tradeoff: while subjecting policies to the preventive scrutiny of a veto player helps to stop bad reforms, it may also stop good ones. Borrowing from the terminology of statistical inference, the scrutiny of a veto player decreases the frequency of type-I errors, but increases that of type-II errors.⁵

We propose a stylized framework that captures this tradeoff between type-I and type-II errors and allows us to study the relative merits of political checks and balances. Our framework is based on three key ingredients. First, we posit that politicians design and attempt to implement reforms in order to signal their competence, for example because of reelection incentives or other career concerns (Ash, Morelli, and Van Weelden, 2017; Canes-Wrone, Herron, and Shotts, 2001; Morelli and Van Weelden, 2013). Second, within this framework excessive law-making and bad reforms arise because voters learn the quality of enacted reforms only with delay, as complex reforms take time to realize their impact on voters’ welfare, or because measuring such impact, or judging on their legality, may require rich information, time, and specialized scrutiny (Gratton, Guiso, Michelacci, and Morelli, 2020; Gratton, Holden, and Kolotilin, 2018). Finally, we introduce political checks and balances by allowing the system to prescribe that reforms need to pass the scrutiny of a political veto player, who is also driven by the desire to signal her competence (Buisseret, 2016; Fox and Van Weelden, 2010; Tsebelis, 1995).

Our model delivers normative as well as positive insights about the optimal level of checks and balances. We show that optimal checks and balances depend on other features of the political system, as well as on the specific policy area and the quality of the state bureaucracy and media. We also study how checks and balances interact with these features, and more broadly with all factors which affect the degree of electoral accountability of politicians. Finally, we use our model to shed light on when and why sub-optimal constitutions may arise and why constitutional designers may fail to update a constitution to reflect changes in the political environment.

Related literature. Our parsimonious model captures the tradeoff between type-I and type-II errors and allows us to draw simple and yet powerful conclusions regarding the relative merits of checks and balances. By focusing on politicians’ career concerns only, we are able to draw these conclusions independently of the specific and additional effects of divided or unified government (Fox and Van Weelden, 2010) and joint or individual accountability (Buisseret, 2016).

⁵Sah and Stiglitz (1986) study a similar tradeoff in their seminal contribution to team theory.

Our contribution is complementary to other approaches to the study of checks and balances. Most of this literature focuses on spatial models of politics and studies how the number and location of veto players affect policy stability (how difficult it is to make new reforms) (Tsebelis, 2002). The fundamental result is that an increase in the number of veto players reduces the ability of the system to produce significant legislation (see Tsebelis, 1999, for an empirical investigation of this hypothesis). Riker (1992) shows that, in two-dimensional policy spaces, bicameral legislatures are an efficient way to generate delay in decision-making so to force the adoption of compromises when Condorcet cycles exist. Acemoglu, Robinson, and Torvik (2013) argue that checks and balances reduce politician rents, thus favoring political influence through bribes. Grunewald, Hansen, and Pönitzsch (2017) show that the concentration of political power favors politicians more aligned with the median voter, but induces politicians to pursue more risky policies to signal their competence. Finally, a larger literature focuses on a different type of checks and balances, pertaining to the separation of political authority over differing policy areas (Ashworth and Bueno de Mesquita, 2017; Besley and Coate, 2003; Hatfield and Padro i Miquel, 2006). Nakaguma (2014) studies an interesting historical example where the form of government reform that voters have been called to decide on affected both checks and balances and the conditions under which they can be optimal.

An influential book in political science on the issues discussed in this paper is the volume edited by Przeworski et al. (1999). Some contributions therein look at the role of elections in fostering representation, while others study checks and balances between the government, the parliament, and the bureaucracy.

The remainder of the paper is organized as follows. Section 2 presents our model; Section 3 analyzes equilibrium behavior with and without checks and balances. We compare the two systems in Section 4. where we also discuss how we interpret our results. Section 5 studies the interaction between accountability and checks and balances. Finally, in Section 6 we discuss further implications of our model for constitutional design with a particular focus on why sub-optimal constitutions may arise.

2 The Model

We model a polity with two politicians and a single voter. The relevant politicians determine whether a reform, which can either increase or decrease the voter's welfare, is implemented. The voter observes the actions taken by the politicians and may also observe the impact of the reform on his welfare. Each politician maximizes her reputation

for competency in the eyes of the voter.

Formally, there are two politicians: a proposer P and a veto player V . Each politician $i \in \{P, V\}$ is competent, $\theta_i = C$, with probability $\pi \in (0, 1)$. Otherwise she is incompetent, $\theta_i = N$. Politician i 's type θ_i is her private information.

The proposer chooses whether to design a reform, $a_P = 1$, or not, $a_P = 0$. A competent proposer always chooses to design a reform,⁶ and her reform is good: if implemented, it adds $A > 0$ units of voter's welfare. An incompetent proposer strategically chooses whether to design a reform, but her reform is bad: if implemented, it destroys $D > 0$ units of voter's welfare.

Whether a reform that has been designed is implemented depends on whether the political system features checks and balances or not.

No checks and balances. Under a political system with no checks and balances, the reform is implemented if and only if the proposer chooses to design it.

With checks and balances. Under a political system with checks and balances, if the proposer chooses to design a reform, then the veto player chooses whether to pass it, $a_V = 1$, or veto it, $a_V = 0$. If the veto player is competent, then she passes a good reform and vetoes a bad reform,⁷ i.e., she observes θ_P and passes any designed reform if and only if $\theta_P = C$. If the veto player is incompetent, she is unable to tell good reforms from bad ones, i.e., she strategically chooses whether to pass or veto any reform without observing θ_P . The reform is implemented if and only if the proposer chooses to design it and the veto player passes it.

The voter observes whether the proposer has designed a reform and, if checks and balances are in place, whether the veto player has passed it or vetoed it. If a reform has been implemented, then with probability $\alpha \in (0, 1)$ the reform produces visible fruits before the end of the legislature and the voter learns whether the reform is good or bad, i.e., the voter observes the proposer's type, θ_P (effective accountability). With probability $1 - \alpha$ the voter only observes the politicians' actions but not the quality of the reform (ineffective accountability).

⁶As we shall see, this behavior is optimal in equilibrium whether the competent proposer maximizes her public reputation for competency, as an incompetent proposer does, or if she maximizes the voter's welfare.

⁷As we shall see, this behavior is optimal in equilibrium whether the competent veto player maximizes her public reputation for competency, as an incompetent veto player does, or if she maximizes the voter's welfare.

The parameter α is meant to capture the combined effects of multiple factors that directly affect electoral accountability. Whether the quality of a reform is revealed by the end of a legislature clearly depends on the length of the legislature itself. Furthermore, a political system may be more or less transparent, so that voters may observe the true quality of a reform with different degrees of delay and noise. Finally, α is likely to be specific to the policy area of the reform. In all these interpretations a higher α implies a greater ability for the voter to keep the politicians accountable for their actions. Greater electoral accountability is also likely to affect the average quality of politicians, π , as it allows voters to select better politicians.

Let $s_i, i \in \{P, V\}$, be the voter's posterior belief that politician i is competent at the end of the legislature. Each politician's i payoff equals s_i .⁸

In the following sections we characterize the unique perfect Bayesian equilibrium of this model with and without checks and balances. All proofs are in Appendix A.

3 Equilibrium

3.1 No checks and balances

Proposition 1 characterizes equilibrium behavior when there are no checks and balances.

Proposition 1. *If there are no checks and balances, there exists a unique equilibrium. In equilibrium, an incompetent proposer designs a reform with probability 1. Therefore, a good reform is implemented with probability π and a bad reform is implemented with probability $1 - \pi$. The voters's expected welfare is given by $\pi A - (1 - \pi) D$.*

Intuitively, abstaining from designing a reform immediately reveals the proposer's incompetence. Therefore, an incompetent proposer strictly prefers to design a reform in the hope that the voter will not observe the fruits of the reform before the end of the legislature—hence incompetent politicians prefer ineffective accountability.

Proposition 1 highlights an important feature of the model we study in this paper, namely that electoral accountability has no direct effect on the amount of reforms that are designed by the proposer. That is, our model isolates the effects of electoral accountability through the strategic incentives it gives to the veto player, without any direct effect on the strategic incentives for the proposer. The reason for this result is that we assume that a competent proposer designs a reform with probability 1. Gratton et al. (2020) study a

⁸It is immaterial for the results in the paper whether politicians value their reputation for competency because of reelection incentives or other types of career concerns.

model in which even competent politicians can design good proposals with probability $p < 1$. In this case, even in the absence of a veto player, a higher α decreases the amount of reforms designed by incompetent politicians, therefore reducing the frequency of type-I errors. As it shall be clear in the next section, this further comparative static would go in the direction of reinforcing our results.

3.2 With checks and balances

We now turn to the analysis of equilibrium behavior when checks and balances are in place. The focus is on the veto player's choice to pass or veto a reform that has been designed. Proposition 2 says that in equilibrium an incompetent proposer always designs a reform while an incompetent veto player passes a designed reform with interior probability that decreases with α and increases with π .

Proposition 2. *If there are checks and balances, there exists a unique equilibrium. In equilibrium, an incompetent proposer designs a reform with probability 1; an incompetent veto player passes a designed reform with probability $\sigma_V^*(\alpha, \pi) < \pi$ which decreases with α and increases with π . Therefore, a good reform is implemented with probability $\pi (\pi + (1 - \pi) \sigma_V^*(\alpha, \pi))$ and a bad reform is implemented with probability $(1 - \pi)^2 \sigma_V^*(\alpha, \pi)$. The voter's expected welfare is given by*

$$\pi (\pi + (1 - \pi) \sigma_V^*(\alpha, \pi)) A - (1 - \pi)^2 \sigma_V^*(\alpha, \pi) D.$$

To see the intuition behind this result, recall first that an incompetent veto player cannot tell good from bad reforms. All she knows is that the reform has been designed. Therefore, in equilibrium she believes that the reform is good (the proposer is competent) with probability π .⁹

An incompetent veto player then takes a calculated risk. On the one hand, passing the reform exposes her to the risk that the reform will reveal to be bad, revealing to the voter that the veto player is incompetent. On the other hand, if the veto player were to veto most reforms, then the voter would conclude that vetoes most often come from incompetent politicians. Therefore, vetoing would signal incompetence.

⁹Let $\mu_P(1)$ be the veto player's (and the voter's) interim belief that the proposer is competent given that she designed a reform, but before the reform produces fruits. Also, let σ_P be the incompetent proposer's probability of designing a reform. By Bayes's rule,

$$\mu_P(1) = \frac{\pi}{\pi + (1 - \pi) \sigma_P}.$$

In equilibrium, $\sigma_P = 1$ and so $\mu_P(1) = \pi$.

To understand the tradeoff faced by an incompetent veto player, we consider what the voter believes about the veto player if she passes or vetoes the reform. Let $\mu_V^*(a_V)$ be the voter's equilibrium¹⁰ interim belief that the veto player is competent given that she took action a_V . Also, let σ_V be the incompetent veto player's probability of passing a designed reform. By Bayes's rule,

$$\begin{aligned}\mu_V^*(1) &= \frac{\pi^2}{\pi^2 + (1 - \pi)\sigma_V} \\ \mu_V^*(0) &= \frac{\pi}{\pi + (1 - \sigma_V)}.\end{aligned}$$

If a reform is implemented, then the voter observes the fruits produced by the reform and therefore learns the proposer's type with probability α . If the reform is bad, then the voter learns that both the proposer and the veto player are incompetent. Indeed, a competent veto player would be able to tell that the reform is bad and veto it. Therefore, the voter's belief that the veto player is competent given that a bad reform has been passed equals 0. In contrast, if the reform is good, the voter can conclude with certainty only that the proposer is competent, but cannot tell with certainty whether the veto player is. Indeed, a good reform may be passed by both a competent or an incompetent veto player: conditional on the reform being good, a competent veto player passes it with probability 1; an incompetent veto player passes it with probability σ_V .

Let $s_V^*(G)$ be the voter's equilibrium¹¹ posterior belief that the veto player is competent given that the reform has produced fruits and it is good. By Bayes's rule,

$$s_V^*(G) = \frac{\pi^2}{\pi^2 + (1 - \pi)\sigma_V\pi} = \frac{\pi}{\pi + (1 - \pi)\sigma_V}.$$

If she were to pass the reform, an incompetent veto player expects to receive this payoff with probability $\alpha\pi$. Therefore, the expected payoff of passing a reform for an incompetent veto player is given by

$$(1 - \alpha)\mu_V^*(1) + \alpha\pi s_V^*(G).$$

The expected payoff of vetoing a reform is instead given by $\mu_V^*(0)$. Thus, an incompetent veto player prefers to pass the reform whenever

$$(1 - \alpha)\mu_V^*(1) + \alpha\pi s_V^*(G) \geq \mu_V^*(0). \quad (1)$$

¹⁰I.e., given that $\sigma_P = 1$ and so $\mu_P(1) = \pi$.

¹¹I.e., given that $\sigma_P = 1$ and so $\mu_P(1) = \pi$.

In equilibrium, an incompetent veto player vetoes with interior probability $\sigma_V^*(\alpha, \pi)$ that induces voter's beliefs such that she is indifferent between passing and vetoing a reform (i.e., (1) holds with equality). A greater α increases the risk that the reform will reveal to be bad, thus making a veto more palatable to the veto player. A greater π implies that most reforms are designed by competent proposers, thus reducing the risk of passing a reform and making a veto less palatable for the veto player.

4 Comparing the systems

An important implication of Proposition 2 is that checks and balances reduce the amount of good reforms. In fact, without checks and balances, the probability that a good reform is implemented is simply given by the probability that the proposer is competent, π . With checks and balances, a fraction $(1 - \pi)(1 - \sigma_V^*(\alpha, \pi))$ of good reforms are vetoed, meaning that the probability that a good reform is implemented is $\pi[\pi + (1 - \pi)\sigma_V^*(\alpha, \pi)] < \pi$.

Corollary 1 (Type-II error). *The probability that a good reform is implemented is strictly lower when checks and balances are in place.*

Checks and balances are a double-edged sword. On the one hand, the veto player vetoes some bad reforms, thus reducing the loss in voter's welfare generated by type-I errors. On the other hand, when the veto player is incompetent herself, she vetoes some good reforms as well, thus reducing the gain in voter's welfare—a type-II error. Which of these two effects dominates depends on the net effect of good and bad reforms, as well as on the probability α that an implemented reform produces fruits in time, and the quality of the politicians, π .

Comparing the voter's expected welfare with (Proposition 2) and without (Proposition 1) checks and balances, we obtain that the voter prefers checks and balances if and only if

$$\pi(\pi + (1 - \pi)\sigma_V^*(\alpha, \pi))A - (1 - \pi)^2\sigma_V^*(\alpha, \pi)D > \pi A - (1 - \pi)D. \quad (2)$$

Solving this inequality delivers Proposition 3, the key result that allows to form precise predictions as to how the tradeoff between type-I and type-II errors is resolved.

Proposition 3 (Comparing the systems). *If $\pi \leq D/A$, then checks and balances are optimal for the voter for any $\alpha \in (0, 1)$. If $\pi > D/A$ but not too large, then there exist values of π , A , and D such that checks and balances are optimal for the voter if and only if α is below a threshold*

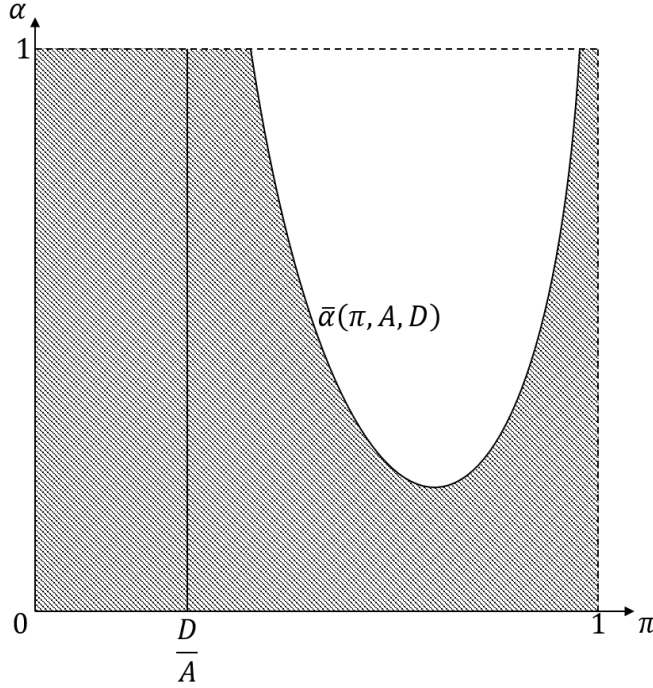


Figure 1: Checks and balances in the $\alpha \times \pi$ space. Shaded areas represent the combinations of α and π for which checks and balances are optimal.

$\bar{\alpha}(\pi, A, D) < 1$. For $\pi < 1$ but sufficiently large, checks and balances are optimal for the voter for any $\alpha \in (0, 1)$.

We offer a graphical representation of Proposition 3 in Figure 1, where the shaded areas represent the parameter values for which checks and balances are optimal for the voter.

Let us describe the intuition for Proposition 3. When π is sufficiently small, then most reforms that are designed are bad. Therefore, type-I errors are the main concern for the voter and hence checks and balances are optimal. Similarly, if D is large and A is small, so that bad reforms yield great damages while good reforms are of little benefit, then type-I errors are more likely to be the main concern for the voter. In fact, an immediate consequence of Proposition 3 is that checks and balances are always optimal for the voter whenever the damages D produced by a bad reform are at least as large as the benefits A produced by a good one.

When $D/A < \pi < 1$, the relative merits of checks and balances depend on the strategic incentives for the veto player. When α is low, the voter is unlikely to discover the quality of the reform in time. Hence passing a reform exposes an incompetent veto player to little risk that the reform will reveal to be bad—revealing to the voter that the veto player is incompetent. As a result, an incompetent veto player passes a reform with high

probability, making type-II errors infrequent. On the contrary, when α is high, an incompetent veto player prefers to veto most reforms, making type-II errors very frequent. Thus checks and balances are optimal only when α is sufficiently low. However, when π is so large that most designed reforms are good, even an incompetent veto player who expects most reforms to produce fruits by the end of the legislature does not veto too many reforms. More precisely, she passes a reform with probability close to π . Therefore, type-II errors are sufficiently infrequent even if α is close to 1, and checks and balances are optimal for any $\alpha \in (0, 1)$.

To better quantify this intuition, consider a reform that has been blocked by the veto player. The voter will never know whether this reform is good—all he knows is that the reform was blocked. By Proposition 2, the voter rationally concludes that this reform is good with probability

$$\frac{\pi (1 - \pi) (1 - \sigma_V^* (\alpha, \pi))}{\pi (1 - \pi) (1 - \sigma_V^* (\alpha, \pi)) + (1 - \pi) (\pi + (1 - \pi) (1 - \sigma_V^* (\alpha, \pi)))}.$$

Therefore, if the voter had the power to override the veto player, she would not do so if and only if

$$\frac{\pi}{1 - \pi} \frac{(1 - \pi) (1 - \sigma_V^* (\alpha, \pi))}{\pi + (1 - \pi) (1 - \sigma_V^* (\alpha, \pi))} < \frac{D}{A}.$$

which is equivalent to (2). Therefore, the condition for the optimality of checks and balances is that the voter would never (ex-post) prefer to override the veto player.

It may be useful to consider an extension of our model in which the veto player partially internalizes the voter's welfare. For example, she may maximize a convex combination of s_V and the voter's equilibrium utility:

$$\omega s_V + (1 - \omega) a_V [\pi A - (1 - \pi) D], \omega \in (0, 1).$$

In this case it is easy to see that checks and balances become more appealing to the voter. In the limit as ω approaches 1, the veto player blocks a reform if and only if the voter would block it himself. As a result, checks and balances are always optimal. While this may be considered an argument in favor of a non-elective veto player, it comes with an important caveat: even when ω is 1, any conservative bias of the veto player has potentially catastrophic consequences. To see this, assume that the non-elective veto player has relatively more conservative views in the sense that it perceives the cost of enacting a bad

reform¹² as equal to $D_V > D$ such that

$$\frac{D_V}{A} > \frac{\pi}{1 - \pi}.$$

A non-elective incompetent veto player would then veto all reforms, generating a voter's welfare equal to $\pi^2 A$ —checks and balances would be optimal if and only if $\pi < D/A$.¹³

4.1 Interpreting the main result

We can interpret our results by considering which factors are likely to affect the parameters α , π , and D/A . Our key result is that the need for checks and balances depends on the degree of electoral accountability, as captured by α , and π . When electoral accountability is greater and voters observe results fast (a large α) veto players have too large incentives to block reforms, producing too frequent type-II errors. Therefore checks and balances are optimal when this risk is lower—i.e., when electoral accountability is lower.¹⁴ Greater electoral accountability is also likely to affect the average quality of politicians, π , as it allows voters to select better politicians. Again, when electoral accountability is sufficiently great, so that the average politician is sufficiently competent ($\pi > D/A$) it is possible that checks and balances are sub-optimal, as type-I errors are less likely and veto players are only likely to introduce too many type-II errors. Instead, when electoral accountability is lower, so that the average politician is sufficiently incompetent ($\pi < D/A$) we show that checks and balances are always preferable, because reducing type-I errors is of paramount importance.

Several factors can induce a smaller α and therefore a lower degree of electoral accountability. Shorter legislatures, as well as a more inefficient bureaucracy, jointly determine a lower probability that a reform yields tangible fruits in time. Similarly, a less transparent bureaucracy, as well as a less active role of media reporting on the quality of reforms, lower the chances that voters learn the quality of reforms. Proposition 3 says that all these factors increase the appeal of checks and balances. More broadly, a more unstable political system, in which politicians focus on short term visibility while reforms affect long-term outcomes is one that would demand greater checks and balances.

The policy area affected by the reform is also likely to affect α . For example, reforms in education, environment, or healthcare are unlikely to yield immediate results. Whereas

¹²A similar statement could be described in terms of risk-aversion.

¹³Maskin and Tirole (2004) study a similar tradeoff between elective and non-elective proposers.

¹⁴As we mentioned in Section 3.1, if we allow for electoral accountability to have a direct effect on the amount of reforms that are designed, a greater α reduces the frequency of type-I errors. Therefore, greater accountability (in this case, of the proposer) reduces the possible advantage of having checks and balances.

financial or fiscal reforms are easier to evaluate for voters. Thus our model provides a rationale for the observation that executive constraints are probably more important for policies that are unlikely to produce fruits in the short term, such as plans for future pandemics, than for policies which produce fruits faster, such as health expenditure (Besley, 2020). More broadly, our model suggests that different policy areas should be allocated to different legislative procedures, or to different levels of government with differing amounts of checks and balances. For example, most federal constitutions allocate different policy areas to either the federal or state governments, which may have differing legislative processes. Similarly, most federal constitutions prescribe different levels of state veto power on differing lists of policy areas.¹⁵ Political scientists, as well as law scholars and economists, evaluate the allocation of policy areas to different levels of government mostly on the basis of the tradeoff between policy coordination and the subsidiarity principle. Our results suggest an additional dimension, namely the delay and precision with which voters can evaluate the effects of reforms. This calls for the development of empirical tools that can measure such dimension.

Whether checks and balances are optimal also depends on the relative cost of type-I and type-II errors, as captured by D/A . When D/A is small, type-I errors are not very costly, while type-II errors are relatively more costly. This is likely to be the case in periods of emergencies and crises. For example, when a country is hit by a large economic or health shock, the cost of inaction (A) is likely to be much larger than the cost of taking an incorrect action (D). Voters would then prefer a system with fewer checks and balances, demanding that the policymaker they elected have the power to direct policy swiftly and effectively. Our discussion in Section 4 of the problem of non-elective bureaucrats also highlights how voters may be very contrarian to non-elective veto players, such as supreme courts or supra-national organizations, if these institutions become more conservative than the voters are. This may explain why constraints that are in the long run optimal in a liberal democracy come under attack in period of crises, with voters demanding a more authoritarian form of government Mounk (2018).

5 Transparency, accountability, and checks and balances

In the previous section we evaluated whether factors that enhance electoral accountability, such as a more transparent bureaucracy or a more active media, affect the relative

¹⁵For example, in Germany all *Land* legislatures are unicameral, while the federal level is bicameral. Furthermore, the power of the house representing the *Länder* (the Bundesrat) to veto legislation passed in the federal house of representatives (the Bundestag) is limited to a prescribed list of policy areas in the Basic Law.

appeal of checks and balances. We now turn to the analysis of how these factors interact with checks and balances, when they exist, in generating better (or worse) policies for the voter. Proposition 4 shows how this interaction hinges again on the tradeoff between type-I and type-II errors.

Proposition 4. *If there are checks and balances, then the voter’s expected welfare increases with α if*

$$\frac{D}{A} \leq \frac{\pi}{1 - \pi}$$

and decreases with α otherwise.

Intuitively, a greater α increases the veto player’s probability of blocking reforms because σ_V^* is decreasing in α (see Proposition 2). Therefore, a greater α decreases the risk of type-I errors and increases the risk of a type-II errors. When D is large, so that bad reforms are more costly, or when $(1 - \pi)$ is large, so that more designed reforms are bad, type-I errors are a greater concern, and therefore a greater α increases the voter’s welfare. On the contrary, when A is large, so that good reforms bring large benefits, or when π is large, so that more designed reforms are good, type-II errors are a greater concern, and therefore a greater α decreases the voter’s welfare.

Proposition 4 offers us an insight into the role of transparency (and, more broadly, electoral accountability) in the presence of political checks and balances. A more transparent bureaucracy, or more effective mass media, are more likely to reveal to the voter whether an enacted policy is benefiting them. They therefore expose the veto player to a greater risk when she chooses to pass a reform she is unsure about. As a result, a more transparent bureaucracy and more effective media reduce the amount of reforms (both good and bad) that are passed by the political system.

Corollary 2. *If there are political checks and balances, then a greater α decreases the amount of reforms that are passed.*

Thus, in addition to the above comparisons, we remark that in the presence of political checks and balances a higher level of electoral accountability or transparency has positive effects on the mechanical reasons for bureaucratic inefficiency (see Gratton et al, 2020).

6 Discussion

We developed a model that allows us to make normative recommendations as to when political checks and balances increase public welfare. We concluded that political checks

and balances are surely optimal for sufficiently low quality of politicians and for sufficiently low electoral accountability, whereas high electoral accountability makes political checks and balances too costly when the quality of politicians is intermediate, due to the excessive frequency of equilibrium vetoing in such cases. Moreover, we proved that, conditional on having chosen a constitution with political checks and balances, adding more accountability or transparency is welfare improving only if the cost of bad reforms (or the cost of too many reforms) is sufficiently high.

A natural question is whether constitutions tend to reflect this normative implications and when and why they may not. In practice, when designing a new constitution it may be hard to predict the quality of future leaders and bureaucracies. In this sense, a “Rawlsian” founding father may prefer to choose a system that maximizes welfare in the worst case scenario of low quality politicians operating in a polity with a non-transparent and slow bureaucracy.¹⁶ In our model, this corresponds to the case in which both α and π are small. A founding father particularly preoccupied about future incompetent politicians will choose a system with many checks and balances, even if he knows that such system may delay (or even hinder) good reforms. This may, for example, capture the motivations of the German and Italian constitutional designers after the tumultuous experience of the 1920’s and 30’s.

Alternatively, the constitution may be designed by a “Buchananian” founding father, whose only concern is his personal payoff as he remains in power. A competent¹⁷ founding father would not maximize public welfare. In fact, his main concern is to maximize the informativeness of the political system, so that he may better distinguish himself from incompetent politicians. For such a founding father, then, checks and balances have both positive and negative effects. On the one hand, competent veto players veto bad reforms and pass good reforms. Therefore, the presence of checks and balances helps the voter in telling competent and incompetent proposers apart. On the other hand, incompetent veto players also veto good reforms. Thus a competent proposer knows that some of his reforms will never reveal their good fruits to the voters. Which of these two effects dominates depends on both π and α . When α is very close to 1, in fact, in the absence of checks and balances all information is revealed to the voter. In this case, checks and balances may only affect a competent proposer negatively, because they hide some information from the voter. A “Buchananian” founding father would then prefer no checks and bal-

¹⁶Alternatively, he may maximize the welfare of those voters who are particularly damaged by bad reforms (D/A large).

¹⁷We note that an incompetent founding father would necessarily choose the same system that a competent founding father would choose, as otherwise he would immediately reveal his incompetence to the voter.

ances, especially if π is low. Instead, when α is very close to 0, a system without checks and balances reveals no information to the voter. Checks and balances would allow for some information to be revealed, because of the possibility of a competent veto player that selects good reforms, thus providing a signaling tool to the proposer. A “Buchananian” founding father would then prefer a system with checks and balances, especially if π is large. When we compare these predictions with our normative results we conclude that, when α is very large, a “Buchananian” founding father would err on too few checks and balances. Instead, when α is very small, he would err on too many checks and balances.

In future research, our model could be extended in several directions. For example, politicians may strategically choose which policy areas to reform, the complexity of the reform, and when to do so during a legislature. If so, how much voters learn, α , may be an endogenous choice of proposers (see also Gratton et al., 2018), in turn affecting veto players’ incentives. Furthermore, non-political veto players, such as constitutional courts, may also have career concerns, but their horizon is likely to be farther, so that this corresponds to the case where the veto player in our model behaves as if $\alpha \approx 1$.

Finally, we note that the quality of politicians endogenously responds to the relative opportunity politics offer to competent and incompetent citizens (Caselli and Morelli, 2004). When α is low, competent citizens have little space to show their talent in politics. On the contrary, when α is high, competent citizens can shine when they become politicians. Therefore, the relative supply of competent politicians, π , is increasing in α . Our results then suggest a dynamic relation between optimal constitutional rules and political development. At lower levels of political development, when α and π are low, checks and balances increase the quality of policy-making. But after reaching a higher level of political development, these checks and balances may become redundant and pose an excessive limit on the good reforms proposed by competent politicians. At such intermediate levels of political development, a more centralized system with one strong decision-maker would increase welfare and perhaps accelerate political development. But this will not go on forever. In fact, once α and π are sufficiently large, the optimal system is one that introduces some amount of checks and balances on the decision-maker. Yet, we note that a “Buchananian” proposer in charge of reforming the constitution, would not choose to introduce checks and balances at this stage. Therefore our model suggests that constitutions may not evolve optimally.

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A Omitted proofs

Proof of Proposition 1. Let $\mu_P(a_P)$ be the voter's interim belief that the proposer is competent given that she took action a_P , but before the reform produces fruits. Also, let σ_P be the incompetent proposer's probability of designing a reform. By Bayes's rule,

$$\begin{aligned}\mu_P(1) &= \frac{\pi}{\pi + (1 - \pi)\sigma_P} > 0 \\ \mu_P(0) &= 0.\end{aligned}$$

If an incompetent proposer designs a reform, then she receives a payoff of $\mu_P(1)$ if the reform does not produce fruits in time (which happens with probability $1 - \alpha$) and a payoff of 0 if the reform produces fruits in time and the voter observes θ_P . If she does not design a reform, her payoff equals $\mu_P(0)$. Thus, an incompetent proposer prefers to propose a reform if

$$(1 - \alpha)\mu_P(1) \geq \mu_P(0) = 0$$

which is trivially satisfied for all $\alpha \in (0, 1)$. This immediately implies the proposition. \square

Proof of Proposition 2. Preliminaries. Let $\mu_V(a_V)$ be the voter's interim belief that the veto player is competent given that she took action a_V . Also, let σ_V be the incompetent veto player's probability of passing a designed reform. By Bayes's rule,

$$\begin{aligned}\mu_V(1) &= \frac{\pi\mu_P(1)}{\pi\mu_P(1) + (1 - \pi)\sigma_V} \\ \mu_V(0) &= \frac{\pi(1 - \mu_P(1))}{\pi(1 - \mu_P(1)) + (1 - \pi)(1 - \sigma_V)}.\end{aligned}$$

Let $s_V(G)$ be the voter's posterior belief that the veto player is competent given that the reform has produced fruits and it is good. By Bayes's rule,

$$s_V(G) = \frac{\pi\mu_P(1)}{\pi\mu_P(1) + (1 - \pi)\sigma_V\mu_P(1)} = \frac{\pi}{\pi + (1 - \pi)\sigma_V}.$$

Therefore, the expected payoff of passing a reform for an incompetent veto player is given by

$$(1 - \alpha)\mu_V(1) + \alpha\mu_P(1)s_V(G).$$

The expected payoff of vetoing a reform is instead given by $\mu_V(0)$. Thus, an incompetent

veto player prefers to pass the reform whenever

$$(1 - \alpha) \mu_V(1) + \alpha \mu_P(1) s_V(G) \geq \mu_V(0). \quad (3)$$

Let

$$\sigma_V^*(\alpha, \pi) \equiv \frac{1}{2} \frac{\pi}{1 - \pi} \left[\sqrt{(2 - \pi)^2 + ((1 - \pi) \pi \alpha)^2 - 2(1 - \pi)(2 - \pi^2) \alpha - \pi(1 - (1 - \pi) \alpha)} \right]$$

Existence. We construct the equilibrium as follows. First, given $\sigma_V = \sigma_V^*$, the proposer strictly prefers to make a proposal. This is trivially satisfied given Lemma 2 below.

Second, given $\sigma_P = 1$, the indifference condition for the veto player is given by

$$(1 - \alpha) \mu_V(1) + \alpha \mu_P(1) s_V(G) = \mu_V(0)$$

$$(1 - \alpha) \frac{\pi^2}{\pi^2 + (1 - \pi) \sigma_V} + \alpha \frac{\pi^2}{\pi + (1 - \pi) \sigma_V} = \frac{\pi(1 - \pi)}{\pi(1 - \pi) + (1 - \pi)(1 - \sigma_V)}$$

from which we obtain $\sigma_V = \sigma_V^*$.

Uniqueness. We begin by showing that whenever $\sigma_P > 0$, then $\sigma_V < 1$.

Lemma 1. *In any equilibrium, if $\sigma_P > 0$, then $\sigma_V < 1$.*

Proof. By contradiction, suppose $\sigma_V = 1$ and $\sigma_P > 0$. Then, upon observing a veto, the voter must conclude that the veto player is competent: $\mu_V(0) = 1$. But the veto player risks nothing by vetoing, as there is no way to prove that the reform was instead a good one if it is not passed. Therefore, she would strictly prefer to veto, a contradiction. \square

We now show that in equilibrium an incompetent proposer chooses to propose the reform with probability 1 whenever some reform is passed by the veto player with positive probability.

Lemma 2. *In any equilibrium, if $\sigma_V > 0$, then $\sigma_P = 1$.*

Proof. Let $\bar{s}_P(a_P, a_V)$ be the voter's posterior belief about the proposer after observing the profile of actions (a_P, a_V) but before observing the fruits of the reform. The expected payoff of proposing a reform for an incompetent proposer is given by

$$(1 - \pi) \sigma_V (1 - \alpha) \bar{s}_P(1, 1) + (\pi + (1 - \pi)(1 - \sigma_V)) \bar{s}_P(1, 0)$$

That is, if the reform is eventually passed (only if the veto player is incompetent and

passes it) and it is not completed, she receives a payoff equal to

$$\bar{s}_P(1,1) = \frac{[\pi + \sigma_V(1 - \pi)] \pi}{[\pi + \sigma_V(1 - \pi)] \pi + \sigma_V \sigma_P(1 - \pi)^2}.$$

If instead the reform is passed and the voter observes its fruits, the incompetent proposer receives a payoff of 0, as her incompetence is revealed. Otherwise, she receives a payoff equal to

$$\bar{s}_P(1,0) = \frac{(1 - \sigma_V)(1 - \pi) \pi}{(1 - \sigma_V)(1 - \pi) \pi + [\pi + (1 - \sigma_V)(1 - \pi)] \sigma_P(1 - \pi)}.$$

It is easy to see that the expected payoff of proposing a reform for an incompetent proposer is strictly positive for any $\sigma_V \in (0,1)$. Instead, the expected payoff of not making a proposal is $\mu_P(0) = 0$. Therefore the proposer strictly prefers to design a reform. \square

Notice that this last lemma also implies that in equilibrium $\mu_P(1) = \pi$.

We now show that in equilibrium an incompetent veto player passes a proposed reform with strictly positive probability.

Lemma 3. *In equilibrium, $\sigma_V > 0$.*

Proof. By contradiction, suppose $\sigma_V = 0$. Then an incompetent veto player strictly prefers to pass a reform if and only if (using $\mu_P(1) = \pi$)

$$(1 - \alpha) \mu_V(1) + \alpha \pi s_V(G) \geq \mu_V(0),$$

where

$$\begin{aligned} \mu_V(1) &= 1 \\ \mu_V(0) &= \frac{\pi(1 - \pi)}{\pi(1 - \pi) + (1 - \pi)} = \frac{\pi}{1 + \pi} \\ s_V(G) &= 1. \end{aligned}$$

That is,

$$1 > \frac{\pi}{1 + \pi},$$

which is satisfied for all π . A contradiction. \square

Therefore, all equilibria must feature $\sigma_P = 1$ and $\sigma_V \in (0,1)$. They have to satisfy the indifference condition above and therefore $\sigma_V = \sigma_V^*$.

Finally, we show by contradiction that $\sigma_V^*(\alpha, \pi) < \pi$ for all $(\alpha, \pi) \in (0, 1)^2$. Suppose $\sigma_V^*(\alpha, \pi) \geq \pi$. Then for any $\alpha > 0$, the left hand side of (3) is strictly less than the right hand side of (3). Therefore, an incompetent veto player strictly prefers to veto, contradicting $\sigma_V^*(\alpha, \pi) \geq \pi > 0$.

Comparative statics. Taking the first derivative of $\sigma_V^*(\alpha, \pi)$ with respect to α and π we obtain that σ_V^* is decreasing in α and increasing in π for all $\alpha \in (0, 1)$ and $\pi \in (0, 1)$. \square

Proof of Proposition 3. By Propositions 1 and 2, voter's welfare with checks and balances is greater than without checks and balances if and only if

$$\pi (\pi + (1 - \pi) \sigma_V^*(\alpha, \pi)) A - (1 - \pi)^2 \sigma_V^*(\alpha, \pi) D > \pi A - (1 - \pi) D \quad (4)$$

$$\iff [\pi A - (1 - \pi) D] \sigma_V^*(\alpha, \pi) > \pi A - D. \quad (5)$$

We first show that $\pi \leq D/A$ is a sufficient condition for (4) to hold, thus proving the first part of the proposition. Notice that whenever $\pi < D/(A + D) < D/A$, the condition in (4) yields

$$\sigma_V^*(\alpha, \pi) \leq \frac{D - \pi A}{(1 - \pi) D - \pi A}$$

which is always satisfied. Also, if $D/(A + D) < \pi \leq D/A$, the condition yields

$$\sigma_V^*(\alpha, \pi) > \frac{\pi A - D}{\pi(A + D) - D} =: \Phi(\pi, A, D).$$

The right hand side is non-positive while $\sigma_V^*(\alpha, \pi) > 0$. Therefore, the condition is always satisfied for any $\pi \leq D/A$.

We now show that whenever $\pi > D/A$, whether (4) holds depends on α being sufficiently small. By Proposition 2, $\sigma_V^*(\alpha, \pi)$ decreases with α . Instead, the right hand side is constant in α . Therefore, (4) holds if and only if

$$\begin{aligned} \sigma_V^*(\alpha, \pi) > \sigma_V^*(\bar{\alpha}(\pi, A, D), \pi) &\equiv \Phi(\pi, A, D) \\ \iff \alpha < \bar{\alpha}(\pi, A, D). \end{aligned} \quad (6)$$

We now show that there indeed exist $(\pi, D, A) \in (0, 1) \times \mathbb{R}_+^2$ such that $\bar{\alpha}(\pi, A, D) < 1$, so that (6) is binding. By Proposition 2, $\sigma_V^*(\alpha, \pi) < \pi$ for all $(\alpha, \pi) \in (0, 1)^2$. Therefore,

$\bar{\alpha}(\pi, A, D) < 1$ whenever $\Phi(\pi, A, D) \geq \pi$, which yields

$$\pi \in \left[\frac{1}{2} - \frac{\sqrt{1 - \frac{4D}{A+D}}}{2}, \frac{1}{2} + \frac{\sqrt{1 - \frac{4D}{A+D}}}{2} \right].$$

Hence, a sufficient condition for there to exist (π, D, A) such that $\bar{\alpha}(\pi, A, D) < 1$ is $A \geq 3D$.

Finally, we now show that the limit of $\sigma_V^*(\alpha, \pi)$ as $\pi \rightarrow 1$ equals 1. To see this, notice that the limit of the indifference condition (3) yields (after using De L'Hôpital's rule)

$$(1 - \alpha) + \alpha - \frac{1 - 2}{\lim_{\pi \rightarrow 1} \sigma_V^*(\alpha, \pi) - 2} = 0$$

and therefore $\lim_{\pi \rightarrow 1} \sigma_V^*(\alpha, \pi) = 1$. Also, the limit of $\Phi(\pi, A, D)$ as $\pi \rightarrow 1$ equals $1 - D/A < 1 = \lim_{\pi \rightarrow 1} \sigma_V^*(\alpha, \pi)$. Therefore, when $1 > D/A$, since both Φ and σ_V^* are continuous at $\pi = 1$, (4) does not hold for sufficiently large $\pi < 1$ for any $\alpha \in (0, 1)$. If $1 \leq D/A$, then (4) also does not hold for sufficiently large $\pi < 1$, because $\pi \leq D/A$. \square

Proof of Proposition 4. By Proposition 2, the voter's expected welfare is given by

$$\mathbb{E}V(\alpha, \pi) \equiv \pi(\pi + (1 - \pi)\sigma_V^*(\alpha, \pi))A - (1 - \pi)^2\sigma_V^*(\alpha, \pi)D.$$

Using (see Proof of Proposition 2)

$$\sigma_V^*(\alpha, \pi) \equiv \frac{1}{2} \frac{\pi}{1 - \pi} \left[\sqrt{(2 - \pi)^2 + ((1 - \pi)\pi\alpha)^2 - 2(1 - \pi)(2 - \pi^2)\alpha - \pi(1 - (1 - \pi)\alpha)} \right]$$

and taking the derivative of $\mathbb{E}V(\alpha, \pi)$ with respect to α yields

$$\frac{\partial \mathbb{E}V(\alpha, \pi)}{\partial \alpha} \leq 0 \iff \frac{D}{A} \leq \frac{\pi}{1 - \pi}.$$

\square