

DICTATORS AND THEIR VIZIERS: ENDOGENIZING THE LOYALTY–COMPETENCE TRADE-OFF

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Abstract

The possibility of treason by a close associate has been a nightmare of most autocrats throughout history. More competent viziers are better able to discriminate among potential plotters, and this makes them more risky subordinates for the ruler. To avoid this, rulers, especially those who are weak and vulnerable, sacrifice the competence of their agents, hiring mediocre but loyal subordinates. Furthermore, any use of incentive schemes by a personalistic dictator is limited by the fact that all punishments are conditional on the dictator's own survival. We endogenize loyalty and competence in a principal-agent game between a dictator and his viziers in both static and dynamic settings. The dynamic model allows us to focus on the succession problem that insecure dictators face. (JEL: D72, H00, C72, C82)

Stanley: *Most mighty sovereign, You have no cause to hold my friendship doubtful.
I never was nor never will be false.*

King Richard: *Go then and muster men. But leave behind Your son, George Stanley. Look your
heart be firm, Or else his head's assurance is but frail."*

—William Shakespeare, *Richard III*, Act 4, Scene 4

The best way to understand the way Stalin worked is to . . . reread Shakespeare's Richard III.

—S. E. Finer, *The History of Government from the Earliest Times*

1. Introduction

Authoritarianism is one of the oldest forms of government (see Olson 1993; Tullock 1987), yet it has attracted little attention from political economists until very recently.¹

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1. For an overview of the state of the art in the formal work on dictatorship, see Acemoglu and Robinson (2006), Bueno de Mesquita et al. (2003), and Wintrobe (2004). Acemoglu (2003), Acemoglu, Robinson, and Verdier (2004), Acemoglu and Robinson (2006), Gallego and Pitchik (2004), and Overland, Simmons,

While the number of democratic countries increased significantly during the last decades of the 20th century, dictatorships still account for almost one-half of the world's current population. There is also a non-negligible number of relatively new dictatorships, especially in countries of the former Soviet Union, such as Turkmenistan, Uzbekistan, and Belarus. In this paper, we focus on the internal structure of the most personalized dictatorships, especially those that have exhibited strikingly poor governance (for the most recent examples, see, for example, Bueno de Mesquita et al. 2003; Haber 2005; Linz and Stepan 1978).

Why do dictators, who presumably fear that poor economic performance or the inability to carry out political repressions might cost them their position in power, appoint incompetent cronies or relatives to crucial economic and military positions in government? While incompetent ministers are arguably not unusual in democratic countries, historians and political scientists would agree that personalized dictatorships are especially marred by incompetence. (In Section 2, we discuss broad historic and political evidence.) In such regimes, the main problem for an autocrat might not be the incompetence but the possible disloyalty of a vizier. Haber (2005) observes that “virtually all constituents and colleagues in dictatorships – at least those who value their necks – profess loyalty to the dictator, even as they conspire against him.” Brooker (2000) finds that military coups are attempted against dictators at least twice as often as against democratic rulers. Not surprisingly, Wintrobe (1998) concludes that paranoia is “the most likely personality characteristic possessed by dictators.” Most recently, military experts have pointed out that even under increasing outside threat, Saddam Hussein placed incompetent loyalists to crucial positions and blocked communications between field-level commanders because he feared a plot (Gordon and Trainor 2006).²

We present a simple contract-theory model to analyze the loyalty versus competence trade-off in a dictatorial political environment. Facing a potential challenger of an unknown strength, a dictator hires a lieutenant (a vizier) who is more competent in determining the extent of the threat than the dictator himself; to do this, the dictator chooses from a pool of lieutenants of varying competence. Appointing a more competent vizier, the dictator benefits from both successful defense, and the detrimental effect on the enemy's incentives to launch a challenge. However, the very competence of the vizier makes him more prone to treason: better knowledge of the odds of winning allows him to participate in a plot even if he is offered a lower reward than a less competent person would require. A cunning vizier acts as a discriminating monopolist for possible enemies of the dictator, while an uninformed first minister acts as a normal monopolist. Assuming that the willingness of the first minister to accept a bribe is increasing, both in the size of the bribe and in the probability of success of the plot or a foreign invasion, the ruler trades off the loyalty of his first minister (lower

and Spagat (2005) suggest dynamic frameworks for studying modern dictatorships. Recent empirical studies of dictatorships include Epstein et al. (2006), Przeworski et al. (2000), Przeworski and Limongi (1993), Gandhi (2008), and Wantchekon (2004).

2. See also Gordon, R., Trainor, B. “Even as U.S. Invaded, Hussein Saw Iraqi Unrest as Top Threat,” *The New York Times*, March 12, 2006.

willingness to accept a bribe) and his competence (higher willingness to accept bribes for treason). The trade-off a personalistic dictator faces is especially pronounced as any use of incentive schemes by a dictator is constrained by the consideration that all rewards and punishments are necessarily conditional upon the dictator's own survival.³

The trade-off between loyalty and competence is not new in the corporate governance literature, where the principal-agent conflict was first studied. Although the commitment problem is not so extreme in the corporate world – there are contracts and courts that enforce them – a top manager concerned with the possibility of “betrayal” by a hired agent might be willing to hire a mediocre agent rather than one of either high or low ability. Prendergast and Topel (1996) show that a principal who values the power to affect his subordinate's welfare does not necessarily appoint the most competent agents (see also Friebe and Raith 2004, on how these considerations affect optimal information flows inside the firm). Although the principal's primary concern is somewhat akin to that of our dictator, the analysis does significantly rely on the fact that there is a third party (the firm's management). In Glazer (2002), when agents with high ability to run a firm also possess superior skills in internal rent-seeking, the owner might be willing to hire a low-ability agent. In contrast, our model highlights that it might not be that the same person has two complementary qualities, but the very quality for which the agent is hired (competence) might be the source of potential disutility to the principal.

Prendergast (1993) demonstrates that if a subordinate's activity is rewarded based on subjective performance evaluation, then high-powered incentives, while inducing the subordinate to work harder, make her conform to the opinion of the principal (see also recent works by Morris 2001; Wagner 2009). Although some of the features are similar to those of our model (e.g., that relevant information possessed by the agent is lost for the principal in equilibrium), the approaches are very different. First, we do not make use of subjective performance evaluation: if the plot fails, the dictator gets all the relevant information. Second, the vizier has no need to conform to the dictator's opinion, which he knows for sure. Burkart, Panunzi, and Shleifer (2003) investigate the trade-off between the competence of a hired manager and the loyalty of a family member generally lacking that competence. In our model, loyalty and incompetence are two sides of the same token.

The rest of the paper is organized as follows. In Section 2, we discuss evidence from historical and political sources. In Section 3, we introduce the set-up and we start the formal analysis. In Section 4, we consider the self-selection of would-be viziers, while in Section 5 we focus on the dynamic perspective and its implications. We conclude in Section 6.

3. North and Weingast (1989) – see also Shepsle (1991) and Acemoglu and Robinson (2001, 2006) – made the commitment issue central in political science, demonstrating in particular that a constitutionally restrained monarch (William III) might borrow more easily from his subjects than a more powerful one (the Stuarts from James I to James II). The same historical context seems to support our message as well: a constrained ruler is more likely to have better ministers.

2. Agency Problems in Dictatorships

Any historic and political evidence related to the loyalty–competence trade-off is bound to be anecdotal. While for loyalty there are relatively secure ex-post estimates, this is much less so for competence.⁴ This is not to say that the issue is intractable. In this section, we discuss some systematic studies of government, spanning across centuries and regimes (e.g., Domínguez 2002; Finer 1997; Gibbon 1781; Linz and Chehabi 1998) as well as individual-regime studies such as Conquest (1968), Gregory (2004), Montefiore (2003), and Petrov and Skorkin (1999) on Stalin’s Russia, Hartlyn (1998) on Trujillo’s Dominican Republic, Kiernan (2004) on Pol Pot’s Cambodia, Lewis (1978) on Salazar’s Portugal, Speer (1970) on Hitler’s Germany, Young and Turner (1985) on Mobutu’s Zaire, etc.

The word “vizier” comes from the Ottoman Empire, where the Grand Vizier was, essentially, a prime minister appointed by the sole sovereign (sultan). Viziers typically played a crucial role in palace revolutions throughout the 12th–19th centuries (Finer 1997). We use this word because our model can be most directly applied to “the palace” regimes in Finer’s typology of governments (Finer 1997, Vol. I, p. 38) and neo-sultanistic regimes (Linz and Chehabi 1998), their modern counterpart (see below). Historical examples include ancient kingdoms and empires, such as Byzantine, Roman, Persian, and Chinese, and the absolutist European monarchies of 17th and 18th centuries. Still, palace courts played enormous role even in modern dictatorships such as that of Hitler (Speer 1970) and Stalin (Montefiore 2003).

As early as 1965 BC (i.e., almost four thousand years ago), King Sesostri I of Egypt warned future kings in his instruction: “Be on your guard against all subordinates, because you cannot be sure who is plotting against you” (Rindova and Starbuck 1997). Han Fei Tzu, a Chinese philosopher of the third century BC, advised rulers to distrust subordinates and inspire fear in them. Finer (1997, Vol. I, p. 545) notes that until Trajan most Roman emperors lived in real or imaginary terror of enemies. Many ancient and medieval rulers hired foreign bodyguards, who were less able to take power themselves than the local military. Finer (1997, Vol. I, p. 18): “A ruler [in contrast with the political regime, of which he is a focal part] might fancy himself more secure when surrounded by a band of foreign mercenaries.” In *The Twelve Caesars*, written in 110 CE, Suetonius (1979) mentions foreign bodyguards protecting Caligula, the foremost example of an unconstrained ruler fearing betrayal.

The institute of eunuchs, infertile human males, is a specific example of how a ruler’s fears of betrayal and undesired succession have been institutionalized. The very idea of having a eunuch as a close subordinate is related to the fact that under no circumstances can a eunuch be a legitimate head of the state, exactly for the

4. Some econometric evidence comes from empirical work on military campaigns, where the definition of success or failure (and thus competence and incompetence of those responsible) is relatively clear. Peceny, Beer, and Sanchez-Terry (2002) and Reiter and Stam (2003) found that personalist dictatorships are especially prone to open military conflicts with democracies (the latter paper also demonstrates that unconstrained dictators are more likely to challenge a democracy than vice versa), despite the fact that personalist dictatorships fight wars poorly (at least since 1945).

reason that he is infertile. Throughout history, they have been a significant part of courts in Persia, Egypt, Ancient Greece, and the Roman Empire. In China, by the end of the Ming Dynasty, the Imperial Palace employed no less than seventy thousand eunuchs. Finer (1997, Vol. I, p. 575) observes that the careers of eunuch Grand Chamberlains Eusebius, Eutropius, Chrysaphius, and Euthерius demonstrate that each was the principal minister of their respective emperor. Hopkins (1978, p. 179) points out that not only these eunuchs, but many much humbler ones have had “tremendous and sustained influence” on court decisions and emperors’ successions. Discussing the rise and institutionalization of eunuchs, Finer (1997, Vol. I, p. 575) notes a close parallel between the Chinese Han empire and the decline of the Roman Empire; as an emperor became more sacred (which required more and more layers of bureaucrats between him and his subjects) and subsequently less accessible, he became more vulnerable. Gibbon (1781, Vol. II, Ch. 19) argues at length that Constantius II “feared his generals and mistrusted his ministers” and that was true of all of the Roman emperors in the 4th century.

Two millenia from Romans, Portugal’s Salazar and Germany’s Hitler, Soviet Russia’s Stalin and Cambodia’s Pol Pot, Zaire’s Mobutu and Iraq’s Hussein, Romania’s Ceausescu and Turkmenistan’s Niyazov might have exhibited considerably different life-paths and individual habits if taken individually. However, apart from being exceptional political manipulators, they were strikingly similar in the organization of their courts and broad regimes.

Considering the rule of Salazar, the Portuguese dictator in the period 1932–1968, Lewis (1978) identifies the problem of self-selection of subordinates: “[Salazar] was . . . intolerant of those who did not share [his own views] to the last degree. That discouraged many talented young men from entering the government service.” With Salazar’s power increasingly secure, “the patterns of recruitment show the regime evolving from its military and semi-fascist beginnings in the direction of a modern technocratic state” (Lewis 1978).

Petrov and Skorkin (1999) provide a striking illustration of the loyalty–competence trade-off through an examination of the educational level of top officers of the NKVD, Stalin’s praetorians that had been a major political authority during the era of “great purges” (1934–1941). Literally, NKVD stands for the “Ministry of Internal Affairs”, but in practice, as the “armed hand” of the Communist Party, it exercised control of almost all aspects of life in the USSR (Conquest 1968; Gregory 2004). In 1934, 41% of top officers (39 officers) had less than seven years of total schooling, and another 42% had less than ten years. In 1937, the peak year of purges, these numbers were 37% and 43%, respectively.

Montefiore (2003) focuses his work on Stalin’s inner circle, and provides overwhelming archival evidence on fear of betrayal, which was typical for Stalin and his closest subordinates; both Montefiore (2003) and Gregory (2004) use top-secret archival documents made available for researchers only recently. One result was a total devastation of the Russian military in the period immediately preceding World War II (Spahr 1997, p. 231; Volkogonov 1991, pp. 370–371, 405–409). At the same time, a sudden change in circumstances might bring a sudden change in the dictator’s strategy.

In the run-off to the German attack on Russia in 1941, Stalin brought back hundreds of top military commanders, purged three to five years before, from concentration camps and prisons (Glazer 2002; Spahr 1997).

In his memoirs, Albert Speer, once the second-highest ranked official in the Third Reich and a confidant of Hitler, used the words “negative selection” in his description of Hitler’s court, discussing at length the ignorance and incompetence of Hitler’s closest subordinates (Speer 1970).⁵ Further into World War II, more military commanders, even those who were successful in the battlefield (e.g., Field-Marshal Rommel), were replaced by Nazi loyalists; with the stakes rising, competence became less important than personal loyalty to the Führer. During the Nuremberg trials, one of the foremost Nazi loyalists, the foreign minister Ribbentrop, produced examples of both his unquestionable loyalty (he claimed that he was still eager to carry any Hitler’s orders) and outright stupidity.⁶

In more recent times, one dictator who apparently valued loyalty higher than even basic education was Pol Pot, the leader of the Khmer Rouge movement in Cambodia. Upon taking power in 1975, he attempted to execute all public servants, teachers, and anyone with a higher education or being a public servant or a teacher (Kiernan 2004). Pol Pot’s regime lasted for three years and cost Cambodia over 1.7 million lives, more than a fifth of the entire population (Cook 2004; Heder and Tittmore 2004).

Linz and Chehabi (1998) identify a certain type of dictatorship, which they dub, following Max Weber, “sultanistic regimes”. These include, among others, the regimes of Idi Amin in Uganda, Nguema in Equatorial Guinea, Duvalier in Haiti, Batista in Cuba, Trujillo in the Dominican Republic, Rezva Shah in Iran, Mobutu in Zaire, and Marcos in the Philippines.⁷ Each of the regimes has been characterized by the selection of dictator’s subordinates based on personal loyalty; economic performance, at least at their respective age of maturity, was dismal. Such different personalities as Mobutu Sese-Seko, Ferdinand Marcos, and Jean-Claude Duvalier brought up corps of technocrats in their governments so that they could, in the words of Marcos himself, “sit back and let technocrats run things”. However, “the political leadership then allowed the unconstrained introduction of exceptions that made complete mockery of the spirit and letter of the plans” (Hutchcroft 1991). At the same time, Mobutu encouraged military officers to report rumors to him personally; in 1978, nearly 10% of officer corps were dismissed overnight as the dictator doubted their loyalty (Young and Turner 1985). Katouzian (1998) observes that the Shah’s fear of a military plot made the Iranian army incapable of carrying out the most simple tasks.

Thompson (1998) bases his study of the Marcos regime on an account by Primitivo Mijares, who was the Philippines chief propagandist and a close of advisor of the

5. Apparently, Speer does consider himself a counterexample that only proves the rule.

6. Prosecution: “What further pressure could you put on the head of a country beyond threatening him that your Army would march in, in overwhelming strength, and your air force would bomb his capital?” Ribbentrop: “War, for instance.” Nuremberg Trial materials, April 1, 1946.

7. If in 1998, when the book edited by Linz and Chehabi came to print, the Turkmenian regime of Saparmurat Niyazov was a “sultanistic regime candidate” ; by 2006, it is certainly so.

dictator before publicly defecting and exposing the sultanistic nature of the regime. The “traitor” was later either lured or tricked into a return journey to the Philippines, where he was executed alongside his son. For the Marcos regime, the appointment of loyal and incompetent cronies to key government positions was a rule, rather than an exception (e.g., Marcos’s chauffeur was appointed the chief of all security forces; Thompson 1998).

The ultimate manifestation of emphasis on loyalty at the expense of competence is the appointment of close relatives to government positions that require either political or professional competence (i.e., making the regime less competitive and less stable). Linz and Chehabi (1998) consider this a characteristic trait of sultanistic regimes. In socialist Romania, reminiscent of medieval regimes, key government positions were held by four brothers, the wife (as a second-in-line in the ruling party leadership and the President of the Romanian Academy of Science), and the son (as a designated successor famous for his gambling and drinking habits) of President Ceausescu. In the secular dictatorship of Saddam Hussein, most government posts were occupied by his relatives. Stalin’s son Vassily was made a commander of an elite Air Force division (Montefiore 2003).

Hartlyn (1998) observes that the role of Ramphis, Trujillo’s son, who was made a full colonel at the age of four and brigadier general at the age of nine, “highlighted the fact that the morale, autonomy and abilities of the armed forces were affected by nepotism”. Analyzing both general patterns and specific examples of the replacement of professionals in the armed forces by personal loyalists in Batista’s Cuba, Domínguez (1998) concludes: “It was these unprofessional, politicized officers who faced Fidel Castro’s insurgency and lost.”

In the search for a “perfect dictatorship”, Domínguez (2002) studies the most successful dictatorships of the 20th century: Mexico, Brazil, Chile, and South Korea. He argues that all of these employed talented people, at least in the early years of the regime. However, in maturing regimes, personalist and institutionalized dictatorships diverged with respect to political competence. In a personalist dictatorship, such as South Korea under Park Chung Hee’s rule, competent people were driven out of the government with the establishment of the loyalty-based Yushin system in 1971. Brazil and Mexico, with their institutionalized succession within an authoritarian regime, have had significantly fewer of these problems.

3. The Model

There are three strategic players in the model: the incumbent Dictator, the Vizier, who is the Dictator’s agent, and the Enemy, who wants to oust the Dictator. The threat to the Dictator’s power depends on the Enemy’s type, which might be either strong, $t = \textit{Strong}$, or weak, $t = \textit{Weak}$. A strong enemy type will be the victor in the fight with the Dictator, unless the Vizier remains loyal; a weak enemy type will lose the fight. Obviously, t does not need to be interpreted exclusively as the Enemy’s attribute; it might easily reflect the vulnerability of the Dictator in a given period. To allow for

both interpretations, we assume that none of the players knows the Enemy's type for sure until the end of the game, but they get noisy signals about it.

For an Enemy, the ex-ante probability of being of type $t = \textit{Strong}$ is p . Before deciding whether or not to launch a coup, the Enemy acquires information about his chances to oust the incumbent Dictator. Formally, the Enemy receives a signal $z \in [0, 1]$, which is random with the following distribution. If $s = \textit{Strong}$, then the p.d.f. (probability density function) of z is given by $f_s(z) = 2z$; if $s = \textit{Weak}$, the p.d.f. is given by $f_w(z) = 2(1 - z)$. Hence, if signal z is received, the Enemy's posterior probability that he is strong equals

$$\mu(z, p) = \frac{2zp}{2zp + 2(1 - z)(1 - p)}.$$

For the sake of simplicity, we assume that the ex-ante probability p is equal to 0.5; then, the posterior probability of being strong equals $\mu(z, 0.5) = z$.

To protect himself, the Dictator needs to make a decision on whether or not he needs to take costly precautionary measures. Without these measures, the coup against the Dictator succeeds if the Enemy is strong, and fails if the Enemy is weak. If the Dictator survives the potential coup, he receives utility of Y ; if not, his utility is normalized to 0. Precautionary measures cost the Dictator C , $0 < C < Y$, and ensure the Dictator's safety. Thus, the Dictator trades off the benefits of taking precautionary measures and their costs.

From the Dictator's point of view, the probability that the Enemy is strong is $P(t = \textit{Strong}) = q$, which in turn is determined by the Enemy's equilibrium strategy. The Dictator is unable to obtain any information on the whether or not the Enemy is strong himself, so he hires an agent, the Vizier. An agent himself might be imperfectly informed; however, the Dictator has access to a pool of viziers with varying levels of competence, $\theta \in [0, 1]$. Conditional on the Enemy's true type being weak, $t = \textit{Weak}$, the Vizier of type θ gets the signal $s = \textit{Weak}$ with probability θ :

$$P(s = \textit{Weak} \mid t = \textit{Weak}) = \theta.$$

In contrast, the strong Enemy is recognized with certainty:⁸

$$P(s = \textit{Strong} \mid t = \textit{Strong}) = 1.$$

The Vizier reports the signal $a \in \{\textit{Strong}, \textit{Weak}\}$ to the Dictator. However, the Vizier might deliberately misinform the Dictator by reporting that the Enemy is weak when the signal is $s = \textit{Strong}$, or that the Enemy is strong when $s = \textit{Weak}$. We say that the Vizier *betrays* the Dictator whenever $a \neq s$.

The Vizier has incentives to betray as he expects to be rewarded by the Enemy, conditional on a successful coup. The Enemy's ability to pay for the Vizier's betrayal

8. The assumption is made for expositional simplicity: the results go through for any $P(s = \textit{Strong} \mid t = \textit{Strong})$.

is denoted by \bar{B} , and is stochastic from the Dictator's point of view. The p.d.f. is $g(x) = 1/\bar{B}$ if $x \in [0, \bar{B}]$, and $g(x) = 0$ otherwise.

The Dictator provides the Vizier with an incentive contract, in which payments are conditioned on all the information that the Dictator possesses if he stays in power. If the enemy decided not to mount a coup, the Dictator pays w_n to the Vizier. If the coup is unsuccessful, the Dictator learns that the Enemy's type was weak (for otherwise the Dictator would not have survived); if the Vizier betrayed, the Dictator knows this. Thus, an incentive contract includes four payments: w_f , w_b , w_e , and w_n , denoting "fight", "betray", "economize" and "no enemy", respectively. We normalize the most severe punishment to zero, so $w_f, w_b, w_e, w_n \geq 0$ must be satisfied.

After the Enemy observes whether or not the Dictator takes precautionary measures, he decides whether or not to mount a coup. The payoffs conditional on the outcome of the game are as follows. If measures are taken and the Enemy decides not to attack, the Dictator gets $Y - C - w_f$, the Vizier gets his wage w_f , and the Enemy gets 0. If there are no measures and the Enemy does not attack, the Dictator gets $Y - w_n$, the Vizier gets w_n unless he has betrayed, in which case he gets 0. If the Dictator takes measures and the Enemy attacks, the Dictator again gets $Y - C - w_f$ and the Vizier gets w_f , but the Enemy gets $-D$ (which is non-positive). If no measures are taken and the Enemy attacks, then the outcome depends on the Enemy's strength. If the Enemy is strong, then the Dictator is ousted, and the Vizier gets the agreed-upon reward B from the Enemy. If the Enemy is weak, the Dictator remains in power, and the Vizier gets either w_e (for economizing on the cost of defense) or w_b (for betrayal).

ASSUMPTION 1. *Throughout the paper, we assume $C < Y < A$.*

This assumption says, first, that a defense is not too costly. Thus, the Dictator, if he has full information, would prefer to defend against a strong Enemy. Second, the Enemy has a chance to accumulate more resources (A is high enough) than the Dictator is willing to pay the Vizier for his loyalty. Thus, if the Vizier is perfectly competent, sometimes there will be betrayals, as the Dictator is never willing to pay the Vizier more than Y .

Timing. The timing of the game is as follows. (The set-up of the dynamic succession game is relegated to Section 5.1.)

- (i) The Enemy gets an imperfect signal z about his type t , which parametrizes the Enemy's odds of ousting the incumbent Dictator. Knowing z , the Enemy decides whether or not to mount a coup. The Dictator chooses a Vizier of type θ and offers him an incentive contract $\mathbf{w} = (w_f, w_e, w_b)$, which specifies payments conditional on information available to the Dictator in all three possible outcomes, and w_n if there is no coup. The Enemy and the Dictator make their choices simultaneously.
- (ii) If the Enemy's choice is to prepare a coup, he acquires information about θ and \mathbf{w} , and he also accumulates a certain amount of resources \bar{B} , which are uniformly

distributed on $[0, A]$. If the Enemy decides not to prepare a coup, the game ends.

- (iii) If the Enemy prepares a coup, the Vizier recognizes the Enemy and gets a signal s about the Enemy's type t . The Enemy approaches the Vizier with a take-it-or-leave-it offer $B \leq \bar{B}$, which the Vizier would get, conditional on the Dictator's removal, if he gives the Dictator a certain report a .⁹
- (iv) The Vizier reports the signal to the Dictator, who then follows the Vizier's advice.¹⁰
- (v) The residual uncertainty is realized; the Dictator, Vizier, and Enemy receive their payoffs.

We analyze the perfect Bayesian equilibria of this game; we rule out equilibria in which the Dictator ignores the Vizier's advice.

4. Analysis

4.1. Optimal Contract for the Vizier

We solve for a perfect Bayesian equilibrium by backward induction. Therefore, we start by considering the Vizier's actions as a function of his competence θ and an incentive contract $\mathbf{w} = (w_f, w_e, w_b)$ offered by the Dictator. In doing this, we consider the Enemy characteristics given; below, we endogenize the Enemy's behavior, and we feed the results into the solution of the Dictator versus Vizier game.

If the Vizier receives a weak signal, he has two options. If the Vizier chooses to fight the Enemy, he would get w_f . Alternatively, the Vizier can allow the coup to unfold without taking precautionary measures. In this case, which is essentially a bet on the chance that the Enemy is indeed weak, Vizier gets w_e . Thus, if the Dictator wants to save C when the Enemy is weak, the incentive contract should satisfy the constraint

$$w_e \geq w_f.$$

If the Vizier receives a strong signal, he again has two options. Taking precautionary measures brings him w_f . Betraying, however, gives the Vizier B if the Enemy is indeed strong, which happens, using the Bayes formula, with probability

$$P(t = Strong \mid s = Weak) = \frac{q}{q + (1 - \theta)(1 - q)},$$

and w_b with complementary probability

$$P(t = Weak \mid s = Weak) = \frac{(1 - \theta)(1 - q)}{q + (1 - \theta)(1 - q)}.$$

9. In equilibrium, the Vizier never accepts money if $s = Weak$ and he accepts with a non-zero probability if $s = Strong$; the Enemy offers the Vizier the amount that makes the Vizier indifferent when $s = Strong$.

10. This assumption is without loss of generality; in equilibrium, the Dictator would never appoint a Vizier whose advice he does not intend to follow. We make this assumption to economize on pay-off specification for some out-of-equilibrium paths.

The Vizier remains loyal to the Dictator (i.e., he advises to take precautionary measures when warranted) if and only if the reward for loyalty in face of a strong Enemy exceeds the expected reward of betrayal:

$$w_f \geq \frac{qB + (1 - \theta)(1 - q)w_b}{q + (1 - \theta)(1 - q)}.$$

This is equivalent to

$$B \leq w_f + (1 - \theta)\frac{1 - q}{q}(w_f - w_b). \quad (1)$$

We denote the expected benefit of staying loyal for the Vizier, the right-hand side of inequality (1), by

$$L = w_f + (1 - \theta)\frac{1 - q}{q}(w_f - w_b).$$

The expected benefit of loyalty, L , decreases with the Vizier's competence. This is a consequence of the fact that the Dictator chooses an optimal contract to keep the Vizier loyal, and to incentivize a more competent Vizier requires a higher payment to him. Obviously, the Dictator needs to keep the Vizier's payoff as low as possible in the case of betrayal.

From the Dictator's point of view, a Vizier that receives a strong signal obeys with probability

$$G(L) = \frac{1}{A} \left(w_f + (1 - \theta)\frac{1 - q}{q}(w_f - w_b) \right).$$

The Dictator's payoff as a function of the Vizier's competence and the terms of incentive contract is determined as follows. If the Vizier gets a signal $s = \textit{Weak}$ (which happens with probability $\theta(1 - q)$), then the Dictator gets

$$Y - w_e$$

(provided that $w_e \geq w_f$). If the Vizier gets a signal $s = \textit{Strong}$ and the Enemy is indeed strong, $t = \textit{Strong}$ (which happens with probability q), then the Dictator's pay-off is

$$(Y - C - w_f)G(L) + 0 \cdot (1 - G(L)) = \frac{1}{A}(Y - C - w_f)L.$$

If the Vizier gets a signal $s = \textit{Strong}$, but the actual type $t = \textit{Weak}$, which happens with probability $(1 - \theta)(1 - q)$, then the Dictator gets

$$(Y - C - w_f)G(L) + (Y - w_b)(1 - G(L)) = \frac{1}{A}(w_b - w_f - C)L + Y - w_b.$$

LEMMA 1. *The incentive contract that maximizes the Dictator's utility, given that the Vizier betrays if and only if inequality (1) holds, has $w_n = w_b = 0$ and $w_f = w_e > 0$.*

Proof. See Appendix A.1. □

Lemma 1 allows us to denote $w = w_f = w_e$. Now, the pay-off of the Dictator equals

$$U^D = \theta(1 - q)(Y - w) + q(Y - C - w)G(L) + (1 - \theta)(1 - q)(Y - (w + C)G(L)), \quad (2)$$

where

$$G(L) = \frac{L}{A} = w \left(1 + (1 - \theta) \frac{1 - q}{q} \right).$$

Solving the Dictator's optimization problem,

$$\max_{\theta, w} U^D(\theta, w; Y, C, A, q),$$

we arrive at the following result (for the sake of tractability, we consider the case where all solutions are interior only; all qualitative results go through for corner solutions as well).

PROPOSITION 1. *Given the ex-ante probability that the Enemy is strong, q , the level of optimal competence for the Vizier is*

$$\theta^*(q) = 1 - \frac{1}{1 - q} \left(\sqrt{\frac{Aq}{C}} - q \right). \quad (3)$$

The Dictator pays such a Vizier an optimal wage

$$w^* = \frac{A + Y}{2} \sqrt{\frac{qC}{A}} - C, \quad (4)$$

and the bribe that the Enemy needs to offer is

$$B^* = \frac{A + Y}{2} - \sqrt{\frac{AC}{q}}. \quad (5)$$

Proof. See Appendix A.2. □

The formal results of Proposition 1 allow us to analyze comparative statics. The equilibrium competence θ^* decreases in A , which parametrizes the Enemy's expected ability to compensate the Vizier for betrayal, and increases in C , which is a cost of precautionary measures. This is intuitive: when prospective challengers have access to significant resources, the Dictator has to put more emphasis on loyalty, rather than on competence. A more loyal Vizier has lower benefits of betrayal as he is more uncertain about the Enemy's prospects, and thus requires a higher bribe for cooperation with the Enemy. With respect to the cost of taking precautionary measures, C , the economic

intuition is straightforward. A more competent Vizier allocates the Dictator's resources better than a less competent one. Thus, increasing the costs of protection requires a more competent Vizier to deal with them. Machiavelli wrote in *The Prince*: "Let him [the vizier] see that he cannot stand alone, so that many honors not make him desire more, many riches make him wish for more, and that many cares may make him dread changes. . . . otherwise, the end will always be disastrous for either one [the prince] or the other [the vizier]."

When are the challengers able to commit to rewarding the traitor? One such situation might be that the Vizier has his own political base, be it a certain ethnic or military faction, with a certain degree of affinity with the Dictator's potential enemies. Thus, a dictator who thinks of bringing a local warlord to the central government might be interested in increasing the vizier's loyalty. For instance, the practice of treating family members as de-facto hostages was common not only in medieval Khorezm and 12th century England (Bartlett 2002), but was widely practiced in most totalitarian dictatorships of the 20th century.

Proposition 2 summarizes the above discussion.

PROPOSITION 2. *In a unique Bayesian perfect equilibrium, the optimal competence of the Vizier, θ^* , chosen by the Dictator (i) decreases with the maximal amount of resources, A , available to Enemy, (ii) increases with the cost of precautionary measures, C , and (iii) decreases with the probability that the Enemy is strong relative to the incumbent Dictator, q . The wage of the Vizier that he gets in the case of no betrayal, w^* , and the equilibrium bribe B^* both increase with the Dictator's utility from being at power Y , and in the likelihood of a strong Enemy type q . Furthermore, the bribe level B^* decreases with C .*

Proof. See Appendix A.3. □

Proposition 2 states that a less competent lieutenant is more likely to be chosen when either the dictator is weak relative to potential challengers or the dictator values his power relative to the cost he bears when precautionary measures are taken. Indeed, a higher C , the cost of fighting that subtracts from the Dictator's value of staying in office, implies a higher competence of the Vizier. Moreover, high C increases the Dictator's tolerance to betrayals, as sometimes the Vizier gets a wrong signal, and betrayal saves the Dictator the cost of defense. As a result, the Dictator is willing to allow the Vizier to be bribed more easily. An increase in the probability that the Enemy is strong enough to unseat the incumbent, q , makes a Vizier's betrayal more likely. Thus, the Dictator has to put more emphasis on loyalty at the expense of competence. Furthermore, the Dictator has to compensate the Vizier more for his loyalty.

One instance where the above analysis has direct implications is the conduct of international negotiations by authoritarian regimes. Unlike their predecessors, modern dictators rarely negotiate on their own. Thus, the choice of a negotiator involves the trade-off we explore: the dictator has to choose a negotiator who is competent enough to bring agreement on favorable terms, yet too much competence might make the negotiator more sensitive to personal alternatives provided by the other side. Kydd

(2003) argues that a biased mediator might be more effective in conveying a message to a party in negotiations as a mediator biased towards the recipient of the signal can deliver more credible threats. Dictators, however, often treat suggestions to negotiate as treason, and this may be fatal for subordinates who offer to negotiate. (Because Kydd (2003) considers a mediator's loyalty as an exogenously parameter, this problem does not arise in his model.)

4.2. *Enemy's Problem*

At the previous step of the backward induction, we treated the Enemy's behavior as given. Now we consider the Enemy's decision to launch a coup against the incumbent as a function of information that he has about the stability of the regime. Thus, the optimal strategies of the Dictator and Vizier, chosen by the Dictator, which we have derived above, determine the Enemy's pay-offs.

Both the Dictator and Vizier know that the Enemy's ex-ante probability of being strong is $p = 0.5$, and that the Enemy makes his decision to launch a coup conditional on the private signal z he receives. Suppose that both the Dictator and the Vizier believe that upon receiving a signal of at least \bar{z} , the Enemy attacks. The ex-ante probability of getting such signal is

$$\frac{1}{2} \int_{\bar{z}}^1 2z \, dz + \frac{1}{2} \int_{\bar{z}}^1 2(1-z) \, dz = \frac{1}{2} \int_{\bar{z}}^1 2 \, dz = 1 - \bar{z}.$$

Conditional on the fact that the Enemy does launch a coup, the probability that the Enemy is strong, q , equals $q(\bar{z}) = 0.5(1 + \bar{z})$ (because the enemy's signal has a uniform distribution as we assumed $p = 0.5$). As follows from Proposition 1,

$$\begin{aligned} \theta^*(q(\bar{z})) &= 1 - \frac{1}{1 - q(\bar{z})} \left(\sqrt{\frac{Aq(\bar{z})}{C}} - q(\bar{z}) \right), \\ w^*(q(\bar{z})) &= \frac{A + Y}{2} \sqrt{\frac{q(\bar{z})C}{A}} - C, \\ B^*(q(\bar{z})) &= B^* = \frac{A + Y}{2} - \sqrt{\frac{AC}{q(\bar{z})}}. \end{aligned}$$

Let us compute the Enemy's utility if his type is z , and enemies with types of at least \bar{z} attack. The Enemy wins if the following conditions are met: he is strong (type $t = \textit{Strong}$) and the Vizier chooses to help the Enemy; otherwise he fails. The probability of winning, from the Enemy's perspective is, therefore, $z \cdot \Pr(\bar{B} \geq B^*) = z(1 - B^*/A)$. Indeed, the Vizier will help a strong Enemy whenever the latter has sufficient money to bribe the Vizier. However, the Enemy will bribe the Vizier whenever he has enough resources (see the Appendix for a formal proof). The Enemy, whenever he has the money to bribe the Vizier, will offer him B^* , while keeping $\bar{B} - B^*$ for himself. As a result of uniform distribution, the average pay-off the Enemy gets, conditional on winning, is $Y_e + (A + B^*)/2$. Conditional on losing, the Enemy gets his punishment

– D . Summing up, the utility of the Enemy equals

$$\begin{aligned} U(z, \bar{z}) &= z \left(1 - \frac{B^*(q(\bar{z}))}{A} \right) \left(Y_e + \frac{A + B^*(q(\bar{z}))}{2} \right) \\ &\quad - \left(1 - z \left(1 - \frac{B^*(q(\bar{z}))}{A} \right) \right) D \\ &= z \left(1 - \frac{B^*(q(\bar{z}))}{A} \right) \left(Y_e + D + \frac{A + B^*(q(\bar{z}))}{2} \right) - D. \end{aligned}$$

This equation is clearly continuous in z ; hence, a type \bar{z} of enemy must be indifferent between attacking and not attacking. This gives us the following equilibrium condition (for an interior equilibrium, i.e., one where $\bar{z} \in (0, 1)$; in the Appendix we prove that under Assumption 1 all equilibria are interior):

$$\bar{z} \left(1 - \frac{B^*(\bar{z})}{A} \right) \left(Y_e + D + \frac{A + B^*(\bar{z})}{2} \right) = D. \quad (6)$$

Before proceeding, let us discuss the following trade-off for the enemy. If fewer Enemy types attack, the average attacker is perceived, by both the Dictator and the Vizier, to be stronger. This inspires the Vizier, all things equal, to betray with a higher probability. The Dictator has two means to counter this: to raise the Vizier's wage or to choose a dumber Vizier. As we know from Proposition 2, in this case the Dictator uses both tools: he chooses a less competent Vizier and pays him more. These two effects unambiguously increase the equilibrium bribe that the Enemy has to pay, and this makes each Enemy's type worse off. Potentially, this could lead to multiple equilibria: if many Enemy types attack, an average plot is weak, the Vizier is smart and he gets a relatively small wage – so attacking is profitable even for relatively weak Enemies. If few Enemy types attack, each plot is a real threat, so the Dictator chooses a smart Vizier and pays him a lot. This is an interesting possibility, and for some parameter values this may be the case. However, under very natural assumptions the equilibrium is unique, and we focus on this case.

PROPOSITION 3. *There is a unique equilibrium characterized by a threshold $\bar{z} \in [0, 1]$, where Enemies with types higher than \bar{z} attack and Enemies with types lower than \bar{z} do not attack. This threshold \bar{z} is increasing in D (a higher punishment implies that only very confident Enemies attack), increases in Y and decreases in Y_e (a plot is less likely if the Dictator values power a lot and the Enemy values power a little, but, on average, plots are relatively dangerous). It also decreases as C increases (more costly defense implies the Dictator is more reluctant to use it, and this gives more Enemy types a chance).*

Proof. See Appendix A.4. □

The result of Proposition 3 is very intuitive. The equilibrium is unique and is characterized by an interior threshold $\bar{z} \in (0, 1)$. A higher threshold \bar{z} means less

frequent, but more fierce plots. Not surprisingly, this would be the case if the Enemy is strongly punished if he fails, or does not value power very much, while the Dictator values power (this would be the case, for example, if the Dictator is an autocrat and the Enemy is a collective body, or a potential democratic ruler who would not be able to get all the benefits of power). The comparative statics with respect to the value of power, Y , Y_e , and C , follow from the fact that the left-hand side of equation (6) is increasing in q .

We now combine the results of Propositions 2 and 3 to obtain our main comparative statics result.

PROPOSITION 4. *The Vizier's competence level, θ^* , increases in C and Y_e , but decreases in D and Y .*

Proof. This is a corollary to Propositions 2 and 3. □

5. Extensions and Discussion

5.1. Succession

Once an absence of ordered continuance was considered a major drawback of non-hereditary dictatorship as a form of government (Herz 1952; Olson 1993; Spearman 1939). However, in the first half of the 20th century a number of once-dictatorial regimes survived the death of their founding fathers (e.g., Lenin in Russia and Kemal Ataturk in Turkey). Nowadays, the technology of succession appears to be advanced enough to produce successful transitions in such diverse countries as Syria in 2000, North Korea in 1994, China in 1989, and Congo in 2003. Our model predicts that a ruler with a longer time horizon (e.g., resulting from the assurance of a desired succession) has more incentives to hire the most able agents. Additional support for this result comes from the the last years of kings from the largest European monarchies in England, France, and Russia, before they were executed by revolutionaries. At the time they lost the crown, all these monarchs had very young heirs incapable of grasping power if their fathers were dead. Also, the last years of each of these rulers were marred by the colossal incompetence of their prime ministers.

Consider the following extension to the previous formal analysis. There are an infinite number of periods, and in each period there is a ruler. The rulers live for one period; however, they might care about the next ruler (their dynasty). Specifically, the successor might be either desirable for the dictator or not. In the first case, the successor's utility is added to that of the dictator with a discount factor $\beta < 1$. In the latter case, the dictator does not care about his successor's utility at all. We can interpret β as a measure of affinity between the dictator and his successor. It is natural to think that β is high in the case of monarchy, but low in the case of army colonels succeeding one another.

Each period is characterized by the incumbent dictator's ability to ensure succession to a desirable heir. Specifically, the state either provides for a secure

succession (S) or not (I). If the Dictator wins his encounter with the Enemy, he is able to ensure that (i) the successor is desired and (ii) the next state is S . However, if the Dictator loses in state S , then his successor is the Dictator's heir with probability $P_S < 1$, and the state becomes I . If the Dictator loses to the Enemy in state I , his successor is the Dictator's heir with probability P_I , $P_I < P_S$, and the next state is I . With complementary probabilities ($1 - P_S$ if the current state is S and $1 - P_I$ if the current state is I), the Enemy takes over and becomes the next dictator; the next state is I .

PROPOSITION 5. *In the dynamic game, there exists a unique Markov perfect equilibrium. In this equilibrium, $U_S > U_I$, and thus the competence of the Vizier is lower in state I , than in state S . If the Dictator cares less about his predecessors (β is smaller), the competence of the Vizier is higher in both secure and insecure states.*

Proof. See Appendix A.5. □

Proposition 5 asserts that a less sure succession leads to less competent agents. The first result can be used to explain the poor governance of monarchs whose immediate heirs are small children, or those who have other contenders for the throne (i.e., relatives they do not like). Then, Proposition 5 demonstrates that less desired succession leads to better agents. It helps to explain the difference between “party-machine” dictatorships, such as Mexico in 1940–1990, where members of a non-representative selectorate succeed each other as leaders of the country, but have neither desire nor possibility to pass this post to their children, and monarchies, whose rulers have such desire and possibility. The model predicts that a personalist dictatorship is less likely to witness competent advisors than an institutionalized dictatorship. Domínguez (2002) reaffirms that “the most successful authoritarian regimes, namely, historical bureaucratic empires, had means of succession from one monarch to the next and featured bureaucratic organizations for the sharing and exercise of power”. Not coincidentally, Mexico, probably the most successful of 20th century dictatorships, had a well-institutionalized procedure for succession for almost six decades.

5.2. Negative Selection

Political scientists (e.g., Lewis 1978; Linz and Chehabi 1998) and retired politicians (Speer 1970) have long been aware that dictatorial rule keeps able people from joining high-level politics. For an economist, this is a familiar case of the Akerlof adverse selection problem: the more severely the dictator punishes those who betrayed him (if he survives the betrayal), the less the ability of agents applying for the job. Hence, the dictator faces a trade-off between high incentives for agents already on the job, which are provided by harsh punishment for betrayal, and low incentives to encourage potential applicants to apply for the job. Indeed, the harsher the punishment for betrayal is, the lower the expected utility of a competent advisor. Because it is the agent's

competence that allows him to discriminate among potential plotters, he would never need to use his competence when the price of betrayal is infinite disutility.

Equation (1) allows us to extend the analysis to the environment where potential viziers have a choice whether or not to enter politics at all. The expected benefit of staying loyal for the Vizier is equal to $L = w_f + (1 - \theta)(1 - q)/q(w_f - w_b)$. Above, we focused on the case where $w_b \geq 0$. However, the Dictator can induce more loyalty on the Vizier's behalf if he can actually punish the Vizier for treason should he survive (i.e., $w_b < 0$). Although providing better incentives for those who are on the job, this reduces the expected utility of competent Viziers. Thus, if there is some reservation utility of an agent of type θ , $H(\theta)$, which is a continuously differentiable function of θ and $H'(\theta) > 0$, then certainly there is a trade-off between "loyalty" and "attractiveness of the job". Then, for a sufficiently high punishment, only relatively incompetent advisors are self-selected.¹¹

Thus, a dictator has incentives to commit to an optimal punishment that is less than execution. However, the very nature of dictatorships precludes such a commitment; in a democracy, it is easier to commit to a mild punishment. In a democracy, though a punishment for political betrayal might be politically severe, it rarely brings significant personal harm. A U.S. President is bound by laws not to kill a cabinet member who pursues his own presidential ambitions, as was the case with Treasury Secretary Salmon Chase in Lincoln's first cabinet (e.g., Dudley 1932), or Attorney General Robert Kennedy in the first cabinet of President Johnson.¹² Betraying a dictator such as Saddam Hussein, Castro, or Marcos might have been more costly for their ministers.¹³ Thus, in a relatively mild autocracy, leaders are more exposed to political treason, but the pool of applicants to the agent's position is likely to be better. Conversely, the bloodiest dictator might feel relatively safe from betrayal, but the agents he will have to choose from will be extremely incompetent.

One potential counter argument is that the dictator could enter the private labor market and selectively depress rewards for competence, say, by threatening the family members of potential agents if the agent refuses to enter his service.¹⁴ While this argument certainly does have merit when applied to a single agent, this approach

11. The working paper version contains formal assertions and proofs.

12. In a non-technical note, Edwards (2001) points to the same loyalty versus competence trade-off in recent low-level presidential appointments in the U.S.

13. In January 1984, the honorary title of "Hero of the Cuban Republic" was conferred upon Gen. Arnaldo Ochoa in recognition of his extraordinary contributions to the insurrection against Batista, to the consolidation of the nation's defense, and for his service in international missions. In June 1989, MINFAR Minister Raul Castro explained that Gen. Ochoa "was no longer the rebel soldier, the invader of Camilo's column, the internationalist in Venezuela, the commander of our troops in Ethiopia." In July 1989, the prosecutor's closing remarks stated that "it became evident that we were confronted with a crime of treason committed against the fatherland, against the people, against his superiors, and against the very idea of what a revolutionary, a military chief, and a Cuban internationalist fighter really is." In accordance with the "sentence dictated by the Special Military Court, Case No. 1 of 1989", Gen. Arnaldo Ochoa and three others faced a firing squad in July 1989 (Alfonso 1995, and references therein).

14. Gershenson and Grossman (2001) analyze how both cooption and repression were employed to encourage loyalty to the Soviet regime.

seems impossible on a large scale.¹⁵ Mass emigration is a most clear indication of unfavorable circumstances for talented people. In the first five years of the Mussolini regime, 1.5 million people left Italy (Cannistraro and Rosoli 1979). In Haiti, Trujillo “used all means at his disposal to reinforce the natural isolation” (Hartlyn 1998). Furthermore, the exile of the political and intellectual elite, which is a tiny fraction of any country’s population, might not be easily detected by crude statistical data. For example, the departure of Albert Einstein, Joseph Schumpeter, Thomas Mann, and John von Neumann preceded mass emigration of the intellectual elite from Europe. However, this might have had a more profound impact on the intellectual and, by implication, political life of their home countries. Thus, even for individual geniuses, providing the incentives to work in a certain political environment might be a complicated task for the dictator.¹⁶

6. Conclusion

In a recent inquiry into the dynamic nature of dictatorships, Acemoglu, Robinson, and Verdier (2004) suggest that “while the academic study of strongly institutionalized polities is well advanced, there are few studies, and less of a consensus, on the nature of weakly institutionalized polities.” Poor governance in, and the degeneration of, mature dictatorships allow for a number of plausible explanations. These include the greediness and selfishness of the dictator, as well as his personal incompetence and inability to listen and follow advice. We use the formal apparatus of economic theory to investigate agency problems in dictatorships as compared to democracies. We demonstrate that it is the unwillingness and inability of the dictator, fearful of opportunistic behavior by the agent and potential betrayal, to surround himself with competent associates that causes the poor performance of dictatorships in the long run. As the definition of competence we use is, in a sense, all-encompassing, the resulting incompetence will sooner or later have an adverse effect on the policies carried out, and consequently on economic performance and social welfare. The most profound effect is felt in neo-sultanistic regimes (Linz and Chehabi 1998) and “control regimes” (Bates 2007), which rely on government intervention as the primary mechanism of resource allocation.¹⁷

15. Political scientists working on modern dictatorships have long been aware of the problem to find a rationale for either “random” terror against the population or “purges” against loyal members of the regime (see Friedrich and Brzezinski 1956, pp. 150–151 for a discussion of the difference; see also Arendt 1951). The idea of suppressing the reservation utility of those who might have chosen to deliberately abstain from politics/government might provide such a rationale. Another possible policy is restrictions on emigration, a common feature of many authoritarian regimes.

16. In the much less frightening circumstances of the last decades of the Soviet rule, talented young Russians chose mathematics and the natural sciences, generally avoiding politics (and, for example, political science) as an occupation. One result, besides flourishing science, was that political positions were often occupied by profoundly mediocre appointees.

17. The economic performance of dictatorships is a recurring topic for empirical research. See Epstein et al. (2006) and Przeworski et al. (2000) for opposing views; see also Persson (2002) and Gandhi (2005). While

There is a strand in the literature on dictatorships in which it is argued that dictators have an advantage in choosing the most able man for government positions, while in democracies the first-best choice might be impossible (e.g., de Tocqueville 2000, originally published in 1831). Although there is a certain merit to this point, the circumstances in which a dictator has this advantage are limited. One such situation appears when a new dictator emerges after years of political stagnation or political turmoil, bringing a whole class of politically young and able people with him. However, although the emergence of new faces in politics or government might coincide with the accession of a dictator, it might be the same political wave that removed the former elite, which both made a new dictator possible and extended the opportunities of other talented individuals. One example might be Napoleon's famous marshals, a group of brilliant military officers of plebeian origin, who pursued their army careers to a point previously reserved for people of noble origin only. Although their military glory came in full under Napoleon's command in the early 1800s, it was the French revolution of the earlier decade that made the dramatic break in their careers possible.¹⁸

Probably the most prominent modern theory highlighting the advantages of dictatorship is Mancur Olson's "stationary bandit" paradigm (Olson 1993).¹⁹ As Wintrobe (2004) rightly observes (see also Haber 2005), "the problem with Olson's analysis is that, comparing dictatorships, the worst regimes in human history appear to be precisely those such as Nazi Germany, Soviet Russia, or Cambodia, which appear to have been the most encompassing". The agency theory of dictatorships suggests an explanation why even a benevolent dictator might fail to implement a socially desirable policy. The loyalty–competence trade-off, which is much more severe when commitment mechanisms are weak, is in a sense an indispensable feature of any unconstrained dictatorship. Even if a powerful dictator reads this paper, and understands the logic, it gives no help to him if he is insistent on keeping his power unrestricted. Until he opts for a sustainable delegation of power to other political institutions, he will have no opportunity to improve the quality of his ministers.

acknowledging that the emerging consensus in recent empirical studies does emphasize the advantages of democracy, Glaeser et al. (2004) argue that a dictatorial rule might be conducive for economic growth. For medieval times with unreliable estimates of the economic growth, De Long and Shleifer (1993) find that "a region ruled by an absolutist prince saw its total urban population shrink by one hundred thousand people per century relative to a region without absolutist government."

18. Supporting our basic story, Napoleon's Marshal Jean-Batist Bernadotte – in Napoleon's opinion, one of the two marshals with a war talent equal to that of the Emperor himself – left Napoleon not out of fear of ultimate defeat, but at the zenith of Napoleon's power in 1811. The other military genius, General Moreau, left Napoleon – via participation in an unsuccessful plot – even earlier, in 1803.

19. The idea of a stationary bandit can, of course, be traced back to Hobbes, who appraised monarchy as a system where public affairs are run perfectly because they are actually private. A formal model can be found in McGuire and Olson (1996). Epstein and Rosendorff (2004) analyze what might prevent an autocrat from pursuing a growth-enhancing policy.

Appendix A: Proofs

A.1. Proof of Lemma 1

The payment to the Vizier when the Enemy decides not to attack, w_n , should certainly be set to the minimal value 0. Suppose $w_b > 0$. Then, the Dictator would be better off by decreasing w_b , as this would increase L , thus making the Vizier more loyal and decreasing the Dictators's payment to the Vizier in case of betrayal. Hence, $w_b = 0$ in the optimal contract. Suppose $w_f > w_e$. In this case, the Vizier, when facing a weak plot (i.e., getting a signal $s = \text{Weak}$, which unambiguously means $t = \text{Weak}$), will strictly prefer to fight (in which case he gets w_f) rather than to allow the plot to unravel (in which case he gets w_e , as this is not a betrayal). If, however, the Vizier gets a strong signal, he might betray the Dictator. Given this, the Dictator would be better off choosing to fight regardless of the Vizier's advice. If, instead, $w_e > w_f$, then the Dictator would be better off if he decreased w_e slightly. Finally, consider the possibility $w_f = w_e = 0$. Then, the Vizier would betray the Dictator every time he receives a strong signal (i.e., he would never defend). However, then the Dictator would not need the Vizier.

A.2. Proof of Proposition 1

We denote $k = 1 + (1 - \theta)(1 - q)/q \geq 1$. Then, the Dictator's utility (if the Enemy chooses to attack) equals

$$U^D = Y \left(1 - q + \frac{1}{A} k q w \right) - (1 - k q) w - \frac{1}{A} k^2 q w (C + w).$$

Here, the first term reflects the benefits of survival times the probability of survival, the second term is the wage paid if the Vizier receives a weak signal and does not defend, while the last term is the expenses on defense and wage if the Vizier chooses to fight. We now have (omitting the index "D"):

$$\begin{aligned} \frac{\partial U}{\partial k} &= \frac{1}{A} q w (A + Y - 2Ck - 2kw), \\ \frac{\partial U}{\partial w} &= -\frac{1}{A} (A + Ck^2 q + 2k^2 q w - Akq - Ykq), \\ \frac{\partial^2 U}{\partial k^2} &= -\frac{2}{A} q w (C + w) < 0, \\ \frac{\partial^2 U}{\partial w^2} &= -\frac{2}{A} k^2 q < 0, \\ \frac{\partial^2 U}{\partial k \partial w} &= \frac{1}{A} (Akq + Yq - 2Ckq - 4kqw). \end{aligned}$$

The first two equations give us the first-order conditions, while the last three allow us to compute the Hessian, which equals

$$\frac{2}{A}qw(C+w)\frac{2}{A}k^2q - \left(\frac{1}{A}(Aq + Yq - 2Ckq - 4kqw)\right)^2.$$

We need to verify that it is negative, provided that the first-order conditions hold. Substituting $k = 0.5(A + Y)/(C + w)$ (which follows from the condition $\partial U/\partial k = 0$), the Hessian reduces to

$$Cw \frac{(A + Y)^2 q^2}{(C + w)^2 A^2} > 0.$$

Consequently, the solution to the first-order conditions $\partial U/\partial k = 0$, $\partial U/\partial w = 0$ gives a global maximum, provided that it is unique. To verify the uniqueness, let us find the optimal w for a given k from $\partial U/\partial w = 0$. We obtain

$$w = \frac{Akq + Ykq - Ck^2q - A}{2k^2q}.$$

Inserting this into the equation

$$A + Y - 2Ck - 2kw = 0,$$

which follows from $\partial U/\partial k = 0$, we obtain

$$\frac{1}{kq}(A - Ck^2q) = 0.$$

Consequently,

$$k = \sqrt{\frac{A}{Cq}}.$$

From this we obtain the required equations, which give the unique solution to the Dictator's maximization problem:

$$\theta^*(q) = 1 - \frac{1}{1-q} \left(\sqrt{\frac{Aq}{C}} - q \right),$$

$$w^* = \frac{A+Y}{2} \sqrt{\frac{qC}{A}} - C,$$

$$B^* = \frac{A+Y}{2} - \sqrt{\frac{AC}{q}}.$$

A.3. Proof of Proposition 2

The comparative statics of the Vizier's competence θ^* with respect to A and C follows straightforwardly from equation (3). To find that it decreases in q , we compute the derivative

$$\frac{d\theta^*(q)}{dq} = -\frac{1}{2Aq(1-q)^2} \left(1 - 2\sqrt{\frac{C}{A}}q + q \right) \sqrt{\frac{q}{AC}}.$$

We have

$$1 - 2\sqrt{\frac{C}{A}}q + q > 1 - 2\sqrt{q} + q = (1 - \sqrt{q})^2 \geq 0,$$

as $C < A$ by assumption. Consequently, θ^* is decreasing in q .

The Vizier's wage and the equilibrium bribe are increasing in Y and q , as immediately follows from equations (4) and (5). Similarly, the equilibrium bribe is decreasing in C , as follows from equation (5).

A.4. Proof of Proposition 3

Because the equilibrium threshold \bar{z} is defined by equation (6) and $\bar{z} = 2q - 1$, to prove uniqueness it suffices to show that

$$(2q - 1) \left(1 - \frac{B^*(q)}{A} \right) \left(Y_e + D + \frac{A + B^*(q)}{2} \right)$$

is increasing in q . From Proposition 2 we know that $B^*(q)$, and thus the entire last factor is increasing in q . Consequently, it is sufficient to prove that $(2q - 1)(1 - B^*(q)/A)$ is increasing in q . We have

$$\begin{aligned} (2q - 1) \left(1 - \frac{B^*(q)}{A} \right) &= (2q - 1) \left(1 - \frac{(A + Y/2) - \sqrt{(AC/q)}}{A} \right) \\ &= (2q - 1) \left(\frac{1}{2} - \frac{Y}{2A} + \sqrt{\frac{C}{Aq}} \right). \end{aligned}$$

Differentiating with respect to q yields

$$\begin{aligned} \frac{\partial}{\partial q} \left((2q - 1) \left(\frac{1}{2} - \frac{Y}{2A} + \sqrt{\frac{C}{Aq}} \right) \right) \\ = \frac{1}{2Aq} \left(A \sqrt{\frac{1}{A} \frac{C}{q}} + 2Aq - 2Yq + 2Aq \sqrt{\frac{1}{A} \frac{C}{q}} \right) > 0, \end{aligned}$$

because by Assumption 1 $A > Y$. Hence, equation (6) has at most one solution. If it does, this is the only equilibrium, as $\bar{z} = 0$ cannot be an equilibrium threshold (enemies

who get signal $z = 0$ will never find it optimal to attack). However, if $\bar{z} = 1$ so that no Enemy attacks, the strongest enemies would deviate and attack, as then the right-hand side of equation (6) is larger than D . If D is large enough, equation (6) might fail to have solutions on $[0, 1]$. Then, $\bar{z} = 1$ provides an equilibrium threshold, so no Enemy attacks because of prohibitively high punishment. This proves the uniqueness of equilibrium threshold.

To show that the solution to equation (6) is increasing in D , we observe that

$$\begin{aligned} \frac{\partial}{\partial D} \left(\bar{z} \left(1 - \frac{B^*(q(\bar{z}))}{A} \right) \left(Y_e + D + \frac{A + B^*(q(\bar{z}))}{2} \right) - D \right) \\ = \bar{z} \left(1 - \frac{B^*(q(\bar{z}))}{A} \right) - 1 < 0. \end{aligned}$$

So, if D increases, a higher \bar{z} is required to satisfy equation (6). Similarly, the left-hand side of equation (6) is increasing in Y_e (as $B^*(q(\bar{z}))$ does not depend on Y^e), so \bar{z} is decreasing in Y_e . We observe now that the left-hand side is decreasing in B^* , as it can be rewritten as

$$\bar{z} \left(\left(1 - \frac{B^*}{A} \right) (Y_e + D) + \frac{1}{2A} (A^2 - (B^*)^2) \right).$$

Consequently, it is decreasing in Y and increasing in C , as follows from Proposition 2. This implies that \bar{z} is increasing in Y and decreasing in C , which completes the proof.

A.5. Proof of Proposition 5

We start by writing the utility functions of the Dictator and the Enemy in each of the two situations. For $X = S, I$ we have

$$\begin{aligned} U_X &= f_X(U_S, U_I) \\ &= (2q_X - 1)(Y + \beta U_S) + (Y + \beta U_S - \beta P_X U_I)(1 - q_X + q_X G_X)(2 - 2q_X) \\ &\quad - w_X(\theta_X(1 - q_X) + (q_X + (1 - \theta_X)(1 - q_X)) G_X)(2 - 2q_X) \\ &\quad - C(q_X + (1 - \theta_X)(1 - q_X)) G_X + \beta(P_X U_I)(2 - 2q_X), \\ 0 &= (2q_X - 1) \left(1 - \frac{B^*(q_X)}{A} \right) \left((1 - P_X)\beta U_I + D + \frac{A + B^*(q_X)}{2} \right) - D. \end{aligned}$$

To show that the equilibrium is unique, suppose that U_I increases. This means, using the results of Proposition 3, that both q_S and q_I should be lower for the latter equation to hold, as more enemies would now prefer to attack. However, both f_S and f_I are increasing in q_S and q_I , respectively, as higher q implies that fewer enemies actually attack. Consequently, if q_S and q_I decrease, it must be that f_I decreases. However, in equilibrium it equals U_I ; hence, U_I is uniquely defined in equilibrium. Then, q_S and q_I are uniquely defined, and the equation $U_S = f_S(U_S, U_I)$ defines a contracting mapping for U_S , which is thus also uniquely determined. Because utilities on the right-hand sides

are uniquely defined, we immediately obtain uniqueness as an immediate corollary of Proposition 3.

To show that in this equilibrium, $U_S > U_I$, we consider the mapping for the equilibrium values of q_S and q_I given by $U_S = f_S(U_S, U_I)$ and $U_I = f_I(U_S, U_I)$. The mapping is contracting (in sup-metrics), and iterations converge to the equilibrium values of U_S and U_I . It is easy to see, however, that the inequality $U_S > U_I$ is preserved under this mapping, and so in the limit $U_S \geq U_I$. However, as $U_S \neq U_I$, we must have that $U_S > U_I$. Now Proposition 2, together with inequality $P_S > P_I$, implies that $\theta_S > \theta_I$.

Finally, we need to show that lower β leads to a higher competence of the Vizier. Suppose, to obtain a contradiction, that βU_I increases. Then, q_S and q_I are lower and, as before, we find that both U_S and U_I must decrease (lower β reinforces the effect). Hence, βU_I decreases, which implies that q_S and q_I are higher. Now, again, consider the mapping (f_S, f_I) for the new lower β and higher q_S and q_I . For any arguments U_S and U_I such that $U_S > U_I$, f_S and f_I are now lower. This implies that in the new equilibrium, U_S and U_I are lower. Moreover, because $\theta_S > \theta_I$ and thus $q_S < q_I$, U_S is decreasing faster than U_I , and so $Y + \beta U_S - \beta P_S U_I$ and $Y + \beta U_S - \beta P_I U_I$ are decreasing. Then, the competence of the Vizier becomes higher as β becomes lower, both in state S and in state I .

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