

The Morning After: Cabinet Instability and the Purging of Ministers after Failed Coup Attempts in Autocracies

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Short title: Cabinet Instability after Failed Coup Attempts

All autocrats rely on inner-circle elites to stay in power. It is commonly assumed that dictators will purge these elites if they unsuccessfully try to unseat the dictator in a coup. However, this assumption has never been tested in a global analysis. Furthermore, little is known about whom dictators target in such purges. This article focuses on the highest levels of the regime, namely cabinet ministers. Using a new global dataset, our analysis covers over 23,000 cabinet members in 115 autocracies from 1967 to 2016. We demonstrate that failed coups induce autocrats to increasingly purge their cabinets, and that they do so selectively by targeting higher-ranking cabinet members and those who hold strategic positions, while keeping more loyal and veteran ministers in post. The article presents the most detailed individual-level evidence to date on purges and offers key insights into power-sharing mechanisms in autocracies.

Keywords: cabinets, purges, dictatorship, coup attempts, dictator-elite relations

Supplementary material for this article is available in the online appendix. Replication files are available in the JOP Data Archive on Dataverse (<http://thedata.harvard.edu/dvn/dv/jop>). The empirical analysis has been successfully replicated by the JOP replication analyst.

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It is fundamental for autocrats to surround themselves with people who can be trusted. Without the support of inner-circle elites, few autocrats can survive in office (Bueno de Mesquita et al., 2003; Wintrobe, 1998). However, autocratic leaders may face a breach of this trust at any given time (Reuter and Szakonyi, 2019; Svoblik, 2012) and commonly do so in the form of coup attempts. Whether a coup attempt succeeds or fails (Goemans, Gleditsch and Chiozza, 2009), the surviving autocrat is left with the important decision of how to respond towards inner-circle elites: Should they be replaced, and if so, who should experience this fate?

Based on prominent examples, like Saddam Hussein's purge of the Ba'ath Party 1979 (Karsh and Rautsi, 2002, 115) or Mengistu Haile Mariam's purge of the Derg in Ethiopia in 1976 and 1977 (Dikötter, 2020, 190), it is generally assumed that autocrats respond to failed coup attempts by engaging in large-scale purges (Svoblik, 2012, 59; Easton and Siverson, 2018; Geddes, Wright and Frantz, 2018, 68). Yet, this is essentially untested in a global perspective, and those who do discuss the general timing of purges provide conflicting accounts: Some argue that dictators will engage in purging when they face a high threat of being overthrown (e.g. Belkin and Schofer, 2003; Quinlivan, 1999; Roessler, 2011), while others expect the opposite pattern (Sudduth, 2017*a,b*).

Importantly, we know very little about *who* is purged after failed coup attempts. Studies tend to focus primarily on purges of the military (e.g. Boutton, 2019; Braithwaite and Sudduth, 2016; Sudduth, 2017*a,b*), which ignores a crucial facet of elite conflict management in autocracies, namely the targeted purging of the central government following a failed coup (for exceptions, see Kroeger, 2020). An underlying assumption in the literature on autocratic survival is that members of the "winning coalition" are largely interchangeable (Bueno de Mesquita et al., 2003), and that the ruler can react to such failed challenges by ousting all regime opposition uncovered by the coup in sweeping purges. Yet in practice, there is high uncertainty over who participated directly in the failed deposition attempt. Purges also come at a cost in terms of governing capacity and increase the risk of future challenges by discontented elites. We should thus expect autocrats to be highly selective in which individuals to keep and exclude after their rule has been openly challenged.

We address this lacuna and present the most comprehensive evidence to date on whether autocrats purge inner-circle elites after failed coup attempts and precisely whom they decide to purge. We do so by focusing on autocrats' purging at the highest levels of the regime: cabinet members. This is all the more relevant as most leaders have a political background (Ellis, Horowitz and Stam, 2015), and a substantial number of coups are organized by civilians, including cabinet members (Bjørnskov and Rode, 2020). Famous recent examples include Mnangagwa in Zimbabwe, who had been Mugabe's vice-president before coming to power via a coup in November 2017. While ministerial cabinets are not perfect reflections of the ruling elite or "winning coalition" (Bueno de Mesquita et al., 2003), they are an executive body made up of top-level regime officials with substantial decision-making power and direct links to other elites (Kroeger, 2020; Meng, 2019). Thus, even when coups emanate from other institutions like the military, their perpetrators are often (in)directly tied to cabinet members, who may consequently be held responsible.¹ In addition, cabinets have high public visibility and include the various factions of the ruler's inner circle, making them perhaps the most relevant point of focus when we study the reshaping of dictator-elite relations following insiders' failed attempts at deposition.

We expect the aftermath of failed coups to see a marked increase in cabinet purges. In an otherwise secretive environment, failed coups are pivotal events: they reveal that some inner-circle elites have not been loyal to the ruler, and at the same time they put the ruler in a temporary position of strength to eradicate threats and consolidate power *vis-à-vis* a reeling opposition. Following a failed coup attempt, we thus expect rulers to purge their cabinets in a bid to both evict disloyal ministers and consolidate their own power within the regime by eliminating potential threats. Consequently, we expect ministers who exhibit more loyalty to the ruler, through their history in government or partisan affiliation, to be less likely to be purged. Moreover, ministers who have more responsibility because they hold portfolios with access to strategic resources involving control over armed forces and cabinet members who are higher ranked in title and prestige should

¹Such was the case in the Democratic Republic of Congo when Major Eric Lenge unsuccessfully tried to overthrow Joseph Kabila's government in 2004. While Lenge is allegedly still on the run, over 90 percent of the cabinet was dismissed the following year, including senior ministers who were suspected of involvement.

be more likely to be dismissed as they constitute potentially larger threats to the ruler. In cases where loyalty and responsibility are at odds, we expect the former to outweigh the latter.

To test these arguments, we rely on a new and comprehensive dataset, WhoGov, covering all individual cabinet members in our full sample of 115 autocracies from 1967 to 2016 (Nyrup and Bramwell, 2020). WhoGov is based on the *Chiefs of State and Cabinet Members of Foreign Governments* directory compiled by the Central Intelligence Agency (CIA) and contains yearly and detailed individual-level data on members of governments. We examine the effect of failed coup attempts on cabinet purges and find that cabinet ministers are replaced at a markedly higher rate following unsuccessful coups. On average, an extra 8-11 percent of the cabinet are replaced in the aftermath of a failed coup compared to other years. The results prove robust to an array of specifications that address issues of endogeneity, including fine-grained leader fixed effects models and a battery of placebo tests using other major destabilizing events such as civil war onset and protests as alternative main independent variables.

To investigate whether specific ministers see a higher/lower risk of purging after failed coup attempts, we exploit novel features of our data, which contains detailed information on the identity, portfolio, party affiliation, and experience for over 23,000 cabinet members in autocracies worldwide. In line with our theoretical argument, we find that dictators value loyalty in the wake of coup attempts: Cabinet members who have served longer under the dictator and those who are affiliated to his/her party are significantly less likely to be purged. In comparison, ministers with strategic responsibility – in particular ministers of defense – are significantly more likely to be purged after failed coups, and so are higher-ranking cabinet members with important positions, such as prime ministers and vice-presidents. We also find that loyalty outweighs responsibility in individual-level purging decisions.

We thus present the most comprehensive and detailed evidence to date on how dictators use targeted purges to secure their hold on power after unsuccessful coup attempts. This is the first study to investigate purges of ministerial cabinets in a global sample, and the first to examine the individual determinants of purging on such a scale. Our work sheds light on an under-investigated

facet of authoritarian politics, namely the relationship between ruler and governing elite in times of acute tensions. The specific context of the morning after a failed coup is a uniquely suited setting to understand with whom dictators decide to share power and whom they choose to exclude. The fact that in such times, rulers value an inner circle of loyal, veteran ministers but are wary of high-profilers with access to strategic resources carries important implications for our understanding of autocrats' survival strategies in general and their post-crisis responses in particular.

Existing research

It is generally assumed that leaders respond to failed coup attempts by purging regime elites (Svolik, 2012, 59; Easton and Siverson, 2018; Geddes, Wright and Frantz, 2018, 68). Easton and Siverson (2018, 599), for example, argue that "coup plotters who fail to successfully overthrow their country's government are usually at the mercy of the state's leader," and hence we should expect dictators to "impose the most severe sanctions possible on coup conspirators in order to deter future coup plotters." Yet, no cross-country study has ever investigated this question globally, and we thus contribute with the first global analysis of cabinet purges following failed coup attempts in dictatorships.

Those who discuss the timing of purges in a more general sense reach contradictory conclusions. Sudduth (2017*a,b*) argues that strong dictators are more likely to purge the military as it decreases the risk that the purge might trigger a coup. She finds accordingly that dictators who are strong, either because they have just entered power or because the latent risk of military coup is low, are more likely to purge their military. Further supporting this argument, Boutton (2019) shows that military purges are more likely when dictators can expect military support from abroad. By contrast, several studies have argued and found evidence in favor of the opposite relationship, namely that dictators who face a high threat of deposition are more likely to pursue coup-proofing strategies such as purges (Belkin and Schofer, 2003; Biddle and Zirkle, 1996; Easton and Siverson, 2018; Quinlivan, 1999; Roessler, 2011). The general argument in this line of research is that

purges reduce potential plotters' ability to organize a coup, making dictators more likely to purge when they face a high risk of being overthrown. Supporting the first part of the argument, Roessler (2011) finds that autocrats' exclusion of rival ethnic elites in sub-Saharan Africa decreases the risk of coups, while Easton and Siverson (2018) find that more intense purges after failed coups significantly increase dictators' tenures. These conflicting accounts highlight that disagreements regarding the determinants of the timing of purges are far from settled.

Even more importantly, we know very little about *who* is purged after failed deposition attempts. One reason may be that much of the research on autocratic purges remains focused on the military (e.g. Boutton, 2019; Braithwaite and Sudduth, 2016; Sudduth, 2017*a,b*). This leaves aside a substantial and important part of autocratic politics, the civilian elite, including top government officials such as cabinet ministers, when the latter are key to understanding the distribution of power between the ruler and the elites (Meng, 2019). A subset of studies have investigated the determinants of cabinet instability in Africa, finding that authoritarian institutions, leader's rebel background, and timing all matter for the likelihood of cabinet reshuffles (Francois, Rainer and Trebbi, 2014; Ishiyama, Breuning and Widmeier, 2018; Kroeger, 2020). Building on this, we argue that civilians do matter in the aftermath of coups, and present a theory and global analysis of cabinet purges in autocracies.

In doing so, we counter the (implicit) assumption on which some of the most influential theories of autocratic stability are built, namely that members of the "winning coalition" are basically interchangeable (e.g. Bueno de Mesquita et al., 2003). By contrast, some have argued that we should expect autocrats to be selective and take individual characteristics into account when it comes to power-sharing and purging. Flores and Smith (2011), for example, develop a formal model that predicts that autocrats will remove high-performing ministers and retain mediocre and poorly performing ones due to internal competition; while Woldense (2018) finds evidence of a trade-off between eliminating rivals and maintaining expertise in the case of Ethiopia under Sélassié. Scholars of the loyalty-competence literature similarly suggest that autocrats will sacrifice ability on the altar of allegiance, especially when they feel vulnerable (Egorov and Sonin, 2011;

Zakharov, 2016). Despite these far-reaching contributions, we have very limited empirical knowledge about the individual-level determinants underlying autocratic purges. We tackle this research gap by laying out and testing an original theoretical argument specifying why failed coup attempts increase the risk of cabinet purges, and how ministers' loyalty and level of responsibility jointly inform the ruler's purging decisions.

Failed Coup Attempts and Cabinet Purges

No leader, no matter how powerful or charismatic, governs alone. Even the strongest dictators in history had to rely on subordinates to maintain order, enforce decisions, and extract rents (Besley and Kudamatsu, 2008; Bueno de Mesquita et al., 2003; Wintrobe, 1998). The elite brings the dictator to power and thereafter has the power to remove him/her (Reuter and Szakonyi, 2019; Tullock, 1987). Though elite subversion is costly and unlikely to succeed, open challenges to the dictator's rule are always an option (Reuter and Szakonyi, 2019; Svobik, 2012). Yet, because of the high secrecy that characterizes autocratic environments, latent tensions between ruler and the elite do not always come to the forefront.

One instance when they do is coup attempts. Coups, or the threat thereof, are an integral part of any autocrat's rule as they are the single most frequent way autocrats are removed from power (Goemans, Gleditsch and Chiozza, 2009; Svobik, 2012). However, given that only half of these attempts succeed (Powell and Thyne, 2011), *failed* coup attempts are particularly relevant albeit under-investigated points of focus in the study of authoritarian politics. Despite being unsuccessful, failed coups are pivotal and often unexpected events revealing that the ruler has been subject to a direct threat from disloyal regime-affiliated elites (Easton and Siverson, 2018).²

The meaning of failed coups is twofold. First, they disclose previously unknown informa-

²In this respect, coup attempts are inherently different from other types of destabilizing events such as mass protests and civil or interstate wars because only the former come from *within*. By contrast, in the case of popular uprisings or armed conflict, the threat to the ruler's survival usually emanates from outside regime elites.

tion about the strength of the surviving rulers *vis-à-vis* opposing factions. Surviving a coup attempt momentarily puts rulers in a position of power in the face of a disorganized and weakened internal opposition. Second, failed attempts inform rulers about the loyalty and competence of members of their inner circle. Through the coup attempt, dictators learn that some factions of the elite are untrustworthy and tried to unseat them, but also that the rule was inefficient to the extent that the remaining members of the inner circle failed to prevent the coup from being staged (Egorov and Sonin, 2011). Surviving rulers are also forced to consider that powerful subordinates on whom they used to rely may turn against them if given the opportunity. In other words, these rulers become aware that they face threats that go beyond the plotters of the failed attempt. The aftermath of the failed coup thus gives rulers a brief window of opportunity to eliminate said threats, thereby consolidating their hold on power (Sudduth, 2017b).

The morning after a failed coup attempt consequently marks the shift from one autocratic equilibrium to another. The information revealed by the internal threat warrants costly action by the rulers to prevent future coups and secure their grip on power. We thus expect that temporarily empowered and distrustful autocrats will seek to eliminate future threats from within the regime. The best way to do so is to selectively purge regime elites with a twofold aim: removing untrustworthy elements and potential threats from positions of power (Easton and Siverson, 2018), first among which are cabinet posts (Meng, 2019), and consolidating executive power. Following Reuter and Szakonyi (2019, 554), we define purges as “instances in which regime elites are involuntarily pushed out of the ruling coalition by regime leaders”.³

Following a failed coup attempt, we therefore expect rulers to purge their cabinets in a bid to evict disloyal ministers and potential threats, as well as to consolidate their own power within

³Purges thus involve the systematic and targeted exclusion, possibly involving threats and/or violence, of members of high-level regime institutions. Focusing on cabinet members, the highest-level formal positions in the regime, we view cabinet departures as symptomatic of a general regime purge. In addition, we assume that cabinet turnovers in the aftermaths of failed coup attempts equal involuntary removals from the cabinet. A defection or voluntary departure is unlikely right after a failed coup: It would be risky as it could signal involvement in the attempt, and it would be costly since losing the cabinet positions would entail loss of access to considerable spoils.

the regime. We acknowledge that removing powerful ministers from their positions may be risky for autocrats, as dismissed elites might have an incentive to retaliate. Nevertheless, the post-coup environment is favourable to the leader, who benefits from a position of strength with regard to a temporarily unsettled opposition, since he/she survived the coup attempt.⁴ One may also think that the unsuccessful coup would make autocrats wary about changing their surroundings, and thus keener on keeping ministers whom they know (Ishiyama, Breuning and Widmeier, 2018). However, the information revealed by the coup attempt reduces autocrats' trust in their ministers' loyalty and competence to such an extent that targeted purging becomes the optimal strategy. This should result in increased cabinet instability in the short run as all ministers are, on average, more likely to get fired than they would have been had no coup attempt occurred. For that reason, at the country-level, we expect that:

Hypothesis 1: Coup attempts increase cabinet purges.

Selective purging of ministerial cabinets after a coup attempt

As mentioned, cabinet purges following failed coups respond to a twofold aim: reducing the risk of future coups by removing disloyal individuals from the cabinet (Easton and Siverson, 2018) and consolidating executive power by re-taking control of the cabinet composition. Consequently, we do not expect the risk of removal from the cabinet to be equal across types of ministers or independent of individual ministers' characteristics. A dictator's choices of whom to purge – and keep, respectively – are highly strategic as they have an effect on the dictator's tenure, regime stability, and economic performance (Reuter and Szakonyi, 2019; Reuter and Robertson, 2012; Zakharov, 2016). The questions that emerge after a failed coup attempt are therefore: Who gets to stay, and who has to go?

Through the coup, the ruler becomes aware of threats beyond the conspirators themselves. Because there is high uncertainty about who participated directly or indirectly in the attempt, the

⁴Recent studies in autocratic politics indeed suggest that autocratic rulers take advantage of upheavals and structural changes to increase their own personal power, see Sudduth (2017*b*) and Fails (2020).

dictator relies on cues to infer who is under most suspicion and therefore should be fired.⁵ We distinguish between two dimensions that inform the probability of being purged after a failed coup attempt. The first is loyalty – how sure the autocrat can be that a minister will not defect and turn against him/her (Reuter and Robertson, 2012; Zakharov, 2016). In the terminology of the loyalty-competence trade-off in autocracies (Egorov and Sonin, 2011), a failed coup attempt increases the relative value of loyal subordinates, including ministers, relative to other characteristics. Coups provide an opportunity to consolidate power by ridding oneself of non-loyal subordinates, and it therefore serves as a coup-proofing strategy.

Loyalty, being a latent characteristic, can only ever be proxied indirectly. We view it as having two main components: history and affinity. History has to do with how far back the personal relationship between ruler and minister goes; in other words, how long a minister's experience in government under the leader's rule is. Veteran ministers have survived previous purges and had the opportunity to demonstrate their loyal support to the ruler on several occasions. Affinity refers to how close a minister is to the ruler along ideological lines, which can be expressed through a number of vectors such as family ties or ethnic relationship. Political parties play an important part in the politics of many autocracies and are distinct from other forms of political organizations, such as military rule or ethnic bases of power (Bizzarro et al., 2018; Gehlbach and Keefer, 2011; Magaloni, 2006). Furthermore, new research shows that many authoritarian regimes include multiple parties in their governing coalition (Arriola, DeVaro and Meng, 2021; Nyrupe and Bramwell, 2020; Reuter and Szakonyi, 2019). In the case of cabinet members, partisan affiliation should be particularly relevant, since ministers who are closer to the ruler on that dimension share the same political and organizational interests and therefore have less incentive to betray him/her.⁶

⁵In the absence of systematic, global data on coup conspirators, we cannot directly test for a link between coup perpetrators and purged ministers. Our argument nonetheless suggests that it would not be so straightforward, since purges aim to punish traitors, those who failed to prevent the coup from being staged, and to prevent future threats, which are unrelated to involvement in the coup. Furthermore, ministers could easily be falsely framed as coup conspirators in order to justify their removal.

⁶While the vast majority of authoritarian regimes have some kind of party structure, there are cases where all parties are prohibited. The Autocratic Ruling Parties Dataset shows that up to 90 percent of

Hence veteran and ministers from the dictator's party should be less likely to be purged than their counterparts, which leads to the following expectations regarding loyalty:

Hypothesis 2a: Ministers with longer experience in governmental service under the dictator's tenure are less likely to be purged.

Hypothesis 2b: Ministers who show partisan alignment with the ruler are less likely to be purged.

The second dimension that informs the probability of being purged is responsibility – how strategic and how important is one's position in government? Control over security and/or military forces and connections with insider elites or external powers are among the key resources that can be considered strategic in terms of executive unseating. Ministers “with guns” – typically defense and security ministers – have access to more strategic resources because of their portfolios compared to ministers in charge of economic or peripheral affairs. Due to their links to and authority over the army or other key regime security forces such as police and intelligence agencies, these ministers pose a potentially larger threat to the ruler in the wake of a failed coup.⁷ Similarly, the minister of foreign affairs may have access to foreign support/power, connections, and diplomatic clout – all strategic resources making them potential threats after the coup. Removing these ministers from office and replacing them with loyalists would be a central part of the ruler's coup-proofing strategy. This is in line with Lee and Schuler (2020)'s recent finding that autocrats value technical competence but fear political competence.

In addition, ministers who hold more prestigious positions in terms of title (e.g. president or prime minister *versus* deputy or junior ministers) and portfolio (major realms of competence, typically finance or foreign affairs) are also likely to be better connected and hence pose a more

autocracies have some kind of party structure (Miller, 2020). In these cases, this particular hypothesis is not applicable, but all the others remain testable.

⁷The case of Morocco is a good illustration: Following a failed coup attempt in 1971 against King Hassan II, Minister of the Interior Mohammad Oufkir was promoted to Minister of Defense. He proceeded to lead another (unsuccessful) attempt to assassinate that same king the following year.

serious menace to the autocrat's rule. Because of their "public profiles" and the clout that their rank entails, these cabinet members are greater potential threats to the ruler (Gueorguiev and Schuler, 2016). This leads to the following expectations regarding responsibility:

Hypothesis 3a: Ministers who hold strategic portfolios in defense and diplomacy are more likely to be purged.

Hypothesis 3b: The highest ranking cabinet members are more likely to be purged.

Responsibility and loyalty do not necessarily go hand in hand. In other words, we do not expect rulers to have systematically appointed old-guard loyalists to the cabinet positions that entail the highest institutional power before the coup. Co-optation mechanisms in autocracies are such that autocrats often have an incentive to concede key posts to individuals outside of their trusted ruling coalition, in a bid to buy off (Van De Walle, 2007) or divide the opposition (Arriola, DeVaro and Meng, 2021). However, while the ruler may have been tempted or forced to co-opt part of the opposition by granting them key cabinet positions in the past, the failed coup radically changes his/her power-sharing incentives. When weighing the potential costs and benefits of purging a minister after the failed coup, the ruler will first and foremost look for obvious signs of allegiance. Indeed, the specific context of the morning after the failed coup sees the ruler place a higher premium on loyalty compared to other individual traits (Egorov and Sonin, 2011). The temporary position of power from which the dictator benefits right after the coup further means that he/she can now afford to replace non-partisan and novice ministers with more trustworthy individuals – even if their rank does not make them an immediate threat. We thus expect the autocrat to get rid of individuals who do not display obvious enough signs of loyalty, even if they occupy insignificant and therefore nonthreatening positions. High levels of responsibility should act as an aggravating factor for ministers who are not evidently loyal, further increasing the probability of purge. Conversely, the ruler may ultimately choose to retain individuals who occupy major and/or strategic posts, but only if they exhibit obvious signs of loyalty. This leads to our final hypothesis:

Hypothesis 4: Loyalty outweighs responsibility in determining the likelihood of being purged.

Research Design and Data

To examine these hypotheses, we rely on the widely used coup data compiled by Powell and Thyne (2011, 252), who define coups d'état as "illegal and overt attempts by the military or other elites within the state apparatus to unseat the sitting executive," and failed coups as instances when the perpetrators did not manage to "seize and hold power for at least seven days" (2011, 252).^{8, 9}

We exploit a new and comprehensive dataset, WhoGov, on ministers and cabinets worldwide (Nyrup and Bramwell, 2020). The dataset contains information on cabinet members in 177 countries in the period 1966-2016. WhoGov is based on the *Chiefs of State and Cabinet Members of Foreign Governments* directory compiled by the CIA, which originally was prepared for the use of US Government officials. Since the data has been gathered by CIA-affiliated personnel with country insight, we trust that it is accurate even for highly autocratic countries with little transparency. The directory contains a list of names and positions for each country in each year, enabling us to follow the careers of individuals over time. Additional variables, such as party affiliation, have been added to the information provided by CIA. Likewise, portfolios are classified into 42 different types that each have a certain level of prestige (see Appendix Q for an oversight). Of the 177 countries included in WhoGov, 115 were classified as autocratic at some point according to Boix, Miller and Rosato (2012). We include the global sample of autocracies in all analyses. However, other variables included in the analysis do not cover our full sample of autocracies and

⁸Since we are interested in the effect of failed coups on cabinet purges, we might worry that our measure of a failed coup also captures "false coups", e.g. coups made up ex-post by rulers to justify cabinet purges. However, Powell and Thyne (2011) has gone to great lengths to ensure that they only code cases as coups if they are "'overt' (there has been a visible movement to claim power) and 'actual' (the events are not alleged ex post facto in some kind of trial proceeding)" (2011, 251-252).

⁹We conduct robustness tests using an alternative coup variable from Bjørnskov and Rode (2020) (see Appendix B and Appendix L).

are therefore excluded from some analyses.

This new dataset allows for a detailed and extensive analysis of the argument in two parts. First, we examine Hypothesis 1 at the country level. In order to investigate whether failed coup attempts increase the risk of cabinet purges, we look at the cabinet replacement rate – that is, the share of ministers who are purged from the cabinet from one year to the next.¹⁰

Second, we utilize the fact that the dataset contains information on a total of 23,655 cabinet members in our 115 autocratic regimes over the course of the studied period to test hypotheses 2a and 2b regarding loyalty and hypotheses 3a and 3b concerning responsibility in government, as well as hypothesis 4 about the joint effect of loyalty and responsibility. We focus solely on people who are purged from the cabinet and therefore do not exist in the dataset the following year. Thus, we do not consider individuals who are shuffled to another position within the cabinet as being purged.

All models in the analysis are restricted to autocratic regimes, measured as country-years with a lagged democracy score of 0 based on the updated data of Boix, Miller and Rosato (2012). For example, Argentina is included in the estimations during the periods 1875-1973 and 1977-1983 but not 1974-1976 and 1984-2016. Lagging the democracy score by one year ensures that failed coup attempts that take place in democracies but where the attempt results in the regime shifting to autocracy in that same year are not included in the analysis. Boix, Miller and Rosato (2012) classify a country as democratic if key executive offices are filled via free and fair elections, and at least half of all men are enfranchised. This relatively minimalistic definition presents a twofold advantage: first, it does not conflate aspects of the cabinet with features of democracy itself, and second, it is precisely in the absence of free and fair elections that coups become the prime way of obtaining power (Svolik, 2012). Furthermore, it has broad coverage, temporally as well as geographically.¹¹

¹⁰The replacement rate is calculated as $1 - retention_rate_{adj_minister}$. The variable takes into account adjustments to the size of the cabinet. The results are very similar if we use the variable for core members of cabinet and all members of cabinet and the non-adjusted variable.

¹¹Nonetheless, as shown in Appendix C and Appendix M, the results do not hinge on a specific measure

Country-level analysis

The country-level analysis consists of time-series cross-sectional OLS models estimated using the following equation:

$$P_{i,t} = \varphi C_{i,t} + \beta \mathbf{X}_{i,t} + \alpha_i + \lambda_t + \varepsilon_{i,t} \quad (1)$$

for $i = 1, \dots, n$ countries and $t = 1, \dots, T$ years, where the outcome denotes the year-to-year replacement rate of cabinet ministers, $P_{i,t}$, ranging from 0 to 1. $C_{i,t}$ is the main independent variable, failed coup attempt, taking the value 0 in years without a failed coup attempt and 1 in years with a failed coup attempt, with data from the Powell and Thyne (2011) dataset. In total, there are 95 failed coup attempts in our analyses. In order to avoid examining the effects of coups that occur after cabinet purges, we conduct the following recodings: Given that the cabinet data is coded for July each year (i.e. the replacement rate from July of the previous year to July in the current year), we recode the coup variable so that only failed coup attempts occurring before 1 July are coded as 1 in a given year, whereas failed coup attempts after this date are coded as 1 in the following year. For example, if a failed coup attempt has occurred in May 2004, it is coded as 1 in 2004, but if it occurred in September 2004, it is coded as 1 in the year 2005 (the results are robust to the conventional lagged independent variable strategy as well).¹² The error term is given by $\varepsilon_{i,t}$, and all standard errors are clustered by country. The models include up to 3,715 country-year observations in 115 autocracies for the period 1967-2016.

We take several steps to address endogeneity concerns. As both the independent variable (failed coup attempt) and dependent variable (purges) are instances of instability, one could argue that any correlation between failed coups and purges are simply due to a more general process of regime type. Here, we replicate the analysis using the lagged updated Democracy and Dictatorship data (Bjørnskov and Rode, 2020; Cheibub, Gandhi and Vreeland, 2010) and the lagged Polity IV (score below 6) (Marshall, Gurr and Jaggers, 2019) as alternative identifiers of autocracies.

¹²In Appendix D, we show the effects of failed coups for each of the months in which a failed coup takes place separately.

of instability in a given regime. That is, rather than failed coup attempts *causing* cabinet purges, it could instead be some form of unobservable instability inducing both failed coup attempts and cabinet purges. Another source of endogeneity could stem from factors leading to *failed* coup attempts. Despite marked uncertainties in coup outcomes, one could still suspect that the same factors determining whether a coup succeeds or fails might affect cabinet instability as well (for a discussion, see e.g. Jones and Olken, 2009; Lachapelle, 2020; Singh, 2014). For example, coup outcomes could be determined by unobservable (or observable) intra-regime factors and power dynamics, as well as previous purges undertaken by the dictator. That is, a strong, dominant leader could be more likely to fend off coup attempts whereas weaker ones might face heightened risks of successful coup attempts. The consequence is, in short, that our treatment group – leaders experiencing failed coup attempts – might be biased. Finally, endogeneity could stem from reverse causality, as the relationship might be due to cabinet purges before a potential coup attempt leading to that very same coup attempt, rather than the other way around. To mitigate any such issues, we undertake the following strategies.

First, all models include both country fixed effects, α_i , and a full set of year dummies, λ_t . This is pivotal for identification as countries with a history of frequent coup attempts and cabinet instability (e.g. Argentina) are likely different from generally stable countries (e.g. Singapore) along a range of unobservable confounding characteristics – such as political culture and historical legacies. By including country fixed effects in the models, we control for such country-specific, time-invariant factors. Meanwhile, we include year dummies to control for common yearly shocks such as the oil crises in the 1970s and the dissolution of the Soviet Union in 1991. In order to further guard against such endogeneity issues, we also run all models with leader fixed effects instead of country fixed effects. These models control for all time-invariant factors specific to each dictator in a given country and thus rely solely on within-dictator effects for identification. That is, these models explicitly compare cabinet stability *within* the spell of a given autocrat, before and after a failed coup attempt. In this way, we minimize the risk that our treated units are inherently different from non-treated ones.

Second, we include an extensive set of relevant control variables in $X_{i,t}$, which represents a $k \times 1$ vector of all control variables (lagged one year). In the “Base models,” we include (logged) GDP/capita and (logged) population size from the Penn World Table V9.0 (Feenstra, Inklaar and Timmer, 2015), while our “Main models” additionally include dummy variables for military dictatorship, party dictatorship, and monarchy, based on the political regimes dataset from Anckar and Fredriksson (2019).¹³ As autocratic regime type has been shown to affect purges (Kroeger, 2020), accounting for each type in our models ensures that our findings are not simply an artifact of the varying dynamics inherent to different autocratic regime types.¹⁴

The “Base” and “Main” models include the most important potential confounders, without inducing risks of post-estimation biases. Still, in order to guard against more proximate potential confounders, we present separate models that add a different set of controls to the “Main models.” In our “Electoral controls” model, we account for the relationship between elections and coups (Wig and Rød, 2016) and add controls for all national elections, with data from the Nelda dataset (Hyde and Marinov, 2015) as well as a count variable denoting years since last election. The “Economic controls” model accounts for the economic impacts on coups and leader instability (Kim, 2016) by adding short-term economic fluctuations such as annual GDP/capita growth from the Penn World Table V9.0 (Feenstra, Inklaar and Timmer, 2015) and oil income from Ross’ Oil and Gas Data (Ross and Mahdavi, 2015). We also account for general instability by presenting an “Instability controls” model, which includes variables for civil war onsets with data from the UCDP/PRIO armed conflict dataset (Gleditsch et al., 2002), nonviolent campaigns with data from

¹³We choose this dataset over more conventional, widely used ones as it covers the entire period of our study, delimits autocracies using Boix, Miller and Rosato (2012), and because the regime categories are time-variant within regimes, which enables the use of leader fixed effects (see below).

¹⁴We expect to observe the effects of failed coups across all types of autocratic regimes, since post-coup purges are an autocratic survival strategy, and surviving in office is a key objective for most autocrats (Bueno de Mesquita et al., 2003). However, cabinet member characteristics might also matter for the level of post-coup cabinet purges, and these cabinet member characteristics could vary between autocratic regime types. In Appendix E, we interact the failed coup attempt variable with autocratic regime types. However, we find no statistically robust differences across types of autocracies.

the NAVCO dataset (Chenoweth and Lewis, 2013), onsets of military disputes and interstate war with data from the Correlates of War dataset (Palmer et al., 2020; Sarkees and Wayman, 2010), and strikes with data from the Cross-National Time-Series (CNTS) Data Archive (Banks and Wilson, 2015).

In addition, we present a “Purges MAs” model in which we include one-, two-, and three-year moving averages of cabinet purges leading up to a given year. This model constitutes a more fine-grained, lagged-dependent variable model that controls for previous trends and developments in cabinet purges leading up to a failed coup attempt. This directly addresses potential reverse causality as it explicitly accounts for developments in cabinets before any given year with or without a failed coup attempt. Combined with leader fixed effects, this particular model further guards against the potential issue of biased treatment samples – i.e. specific types of leaders experiencing failed coup attempts – as it both accounts for time-invariant (through the fixed effects) and time-variant (through the purging moving averages) leader-specific characteristics that could determine coup outcomes. We also present an “All controls” model – our most extensive and most inefficient model – that includes all the above-mentioned controls.

Lastly, we undertake a set of placebo tests where we substitute the main independent variable, failed coup attempt, $C_{i,t}$, with alternative instability measures, including civil war onset, nonviolent campaigns, onsets of military disputes, onsets of interstate war, and strikes (all from the same sources as above). The rationale behind these tests is to examine whether it is indeed failed coup attempts that drive our findings or whether it is instability more generally that induces cabinet purges. In the latter case, these alternative variables should exert the same effect as failed coup attempts. If they do not, it substantiates our argument that there is indeed something specific about failed coup attempts – as threats originating from within the regime – that leads to cabinet purges, which would significantly improve our confidence in the main findings.

Individual-level analysis

An increase in the replacement rate of cabinet members in the year after a failed coup means that on average and accounting for potential confounders, more ministers are purged in these years. This country-level outcome can be seen as the sum of individual-level decisions made by the autocrat regarding the fate of each minister. The purpose of the minister-level analyses is thus to investigate our arguments regarding which types of cabinet members are most likely to be purged following a coup attempt. For this purpose, we use time-series cross-sectional linear probability models given by:

$$F_{i,j,t} = \varphi C_{i,j,t} + \zeta M_{i,j,t} + \gamma(C_{i,j,t}M_{i,j,t}) + \beta \mathbf{X}_{i,j,t} + \alpha_i + \lambda_t + \varepsilon_{i,j,t}$$

for $i = 1, \dots, n$ countries, $j = 1, \dots, n$ ministers, and $t = 1, \dots, T$ years, where the outcome denotes the fate of the minister, $F_{i,j,t}$. This variable is binary, where 1 denotes that the minister is purged and removed from office in the year following a coup attempt, while 0 denotes that the person remains in office. These analyses cover the same 115 autocracies during the same 1967-2016 period, yielding a total of 23,655 cabinet ministers and 95,751 minister-years observations. We include the same control variables as the “Base” models in the country-level analysis, but we add cubic polynomials (t , t^2 , t^3) for how many years a given minister has been in office at a particular point in time to account for time dependencies (Carter and Signorino, 2010).¹⁵

To test whether specific types of ministers are particularly vulnerable after a coup attempt, we include a series of product terms, one by one, where failed coup attempts, $C_{i,t}$, are interacted with a minister's characteristics, $M_{i,t}$. While we expect ministers to be generally more likely to leave office after failed coup attempts, our argument also leads us to believe that some ministers should be particularly targeted, which is denoted by γ . Thus, γ is the difference in likelihood of being purged in years following a coup attempt relative to years without a coup attempt, *for this specific type of minister*.

¹⁵The cubic polynomials are not included when we include experience as our main explanatory variable.

We include four types of minister characteristics to test hypotheses 2a, 2b, 3a, and 3b. In our measurement of loyalty, we include a measure of experience, which counts the number of years a person has been in cabinet at the year of the coup attempt. In addition, we include a measure of partisan alignment, where a cabinet member either can be from the leader's party, from another party than the leader, or unaffiliated with a party. WhoGov includes a measure of party affiliation that has been coded on a person-by-person basis. In our measurement of responsibility, we include a measure for strategic responsibility by looking at specific types of ministers defined by their respective portfolios. Moreover, we use a measure of importance, where all cabinet members are assigned to one of five ordered tiers of importance reflecting their nominal – i.e. title – and substantive – i.e. realm of competence – role (excluding the leader; for further information, see Appendix Q). Lastly, we test hypothesis 4 by categorizing all ministers into four groups: 1) low responsibility and weak signs of loyalty, 2) high responsibility and weak signs of loyalty, 3) low responsibility and strong signs of loyalty, and 4) high responsibility and strong signs of loyalty. A minister is coded as showing strong signs of loyalty if he/she is of the same party as the leader *and* has been working as minister for as long or longer than the median experience of ministers under this leader in the given year. A minister is coded as highly responsible if he/she is a top minister, deputy Prime Minister, Vice-President, Prime Minister or President (when the latter are not the leader him/herself).¹⁶

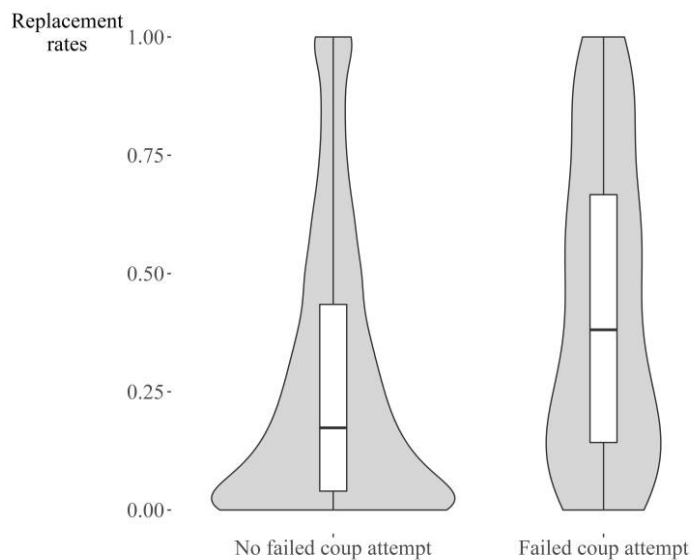
Country-level results

As preamble to the main results, Figure 1 presents the distribution of replacement rates in years with and without a failed coup attempt. In “calm” years without a failed coup attempt, the median replacement rate is 17.4%, meaning that the vast majority of the cabinet members stay. Figure 1

¹⁶We exclude government members in the category "junior ministers or other low-ranking post" when testing the hypotheses related to experience. These positions are not included consistently for all years in all countries, making the measure of experience inconsistent. However, it makes little difference for the results whether these are included or not.

further shows that the distribution of replacement rates (the grey area) in non-coup attempt years is very wide at the bottom. In other words, many cabinets have very low replacement rates in non-coup years. By contrast, in years following a failed coup attempt, the median replacement rate more than doubles, reaching 38.1%. Thus, almost two in five ministers are purged after a failed coup attempt. In addition, the distribution of replacement rates is more evenly spread out, indicating that cabinets see a much greater variability of replacement rates in years following an unsuccessful coup.

Figure 1: Distribution of replacement rates in years with and without a coup attempt.



There are 3,993 years without coup attempts and 101 years with coup attempts.

To examine Hypothesis 1 more systematically, Figure 2 presents the main results of the regression analyses described above.¹⁷ The figure plots the estimated coefficients from the regression analysis, the change in the cabinet replacement rate in years with a failed coup attempt relative to years without a coup attempt. In the left panel of Figure 2, we find robust evidence in favor of our first hypothesis, namely that failed coup attempts increase the likelihood of cabinet purges.

The “Base” model with country fixed effects shows that the yearly replacement rate in

¹⁷The regression tables containing the full results of the models in Figure 2 can be found in Appendix A

autocracies increases by 10 percentage points following a failed coup attempt. The results are highly robust regardless of the model specification. This includes controlling for autocratic regime type (“Main models”),¹⁸ controlling for the occurrence of elections and number of years since the last election (“Electoral controls”), as well as adding additional economic controls (GDP growth and oil income) in the estimation (“Economic controls”). Furthermore, the results are robust to controlling for other events that indicate political instability, including civil war onsets, nonviolent campaigns, military disputes, interstate war, and strikes (“Instability controls”), and they are robust to adding a one-, two-, and three-year moving average of cabinet replacement rate in the years before the failed coup attempt to the estimation (“Purges MAs”) – in other words, previous trends in cabinet instability do not drive the results. Finally, the results also hold up when we include all these controls in the same model (“All controls”).

We also see a similar substantial and significant effect across all the different models when using leader fixed effects instead of country fixed effects. As discussed previously, leader fixed effects estimation is quite restrictive and demanding in our analysis since they only exploit variation within individual autocrats’ tenures. These models greatly increase our confidence in the causal effect of failed coups because unmeasured variables that may cause some dictators to have constantly higher (respectively lower) levels of failed coups attempts and cabinet replacement rates cannot bias the results. In all specifications presented in the left pane of Figure 2, the coefficients are significant at conventional 95% confidence levels and remain highly stable, with a substantial effect of an 8-11 percentage-point increase in the replacement rate. This attests to the robustness of the results and increases our confidence that the results are not driven by endogeneity.¹⁹

The right-hand panel in Figure 2 shows the placebo tests. These include the onsets of a number of alternative instability events respectively. As discussed earlier, we run these placebo

¹⁸In Appendix G, we control for the level of personalism of the leader (Geddes, Wright and Frantz, 2018). However, this does not change the results, indicating that in the wake of a coup, autocrats respond by purging their cabinets to eliminate potential threats, regardless of how personalist they are.

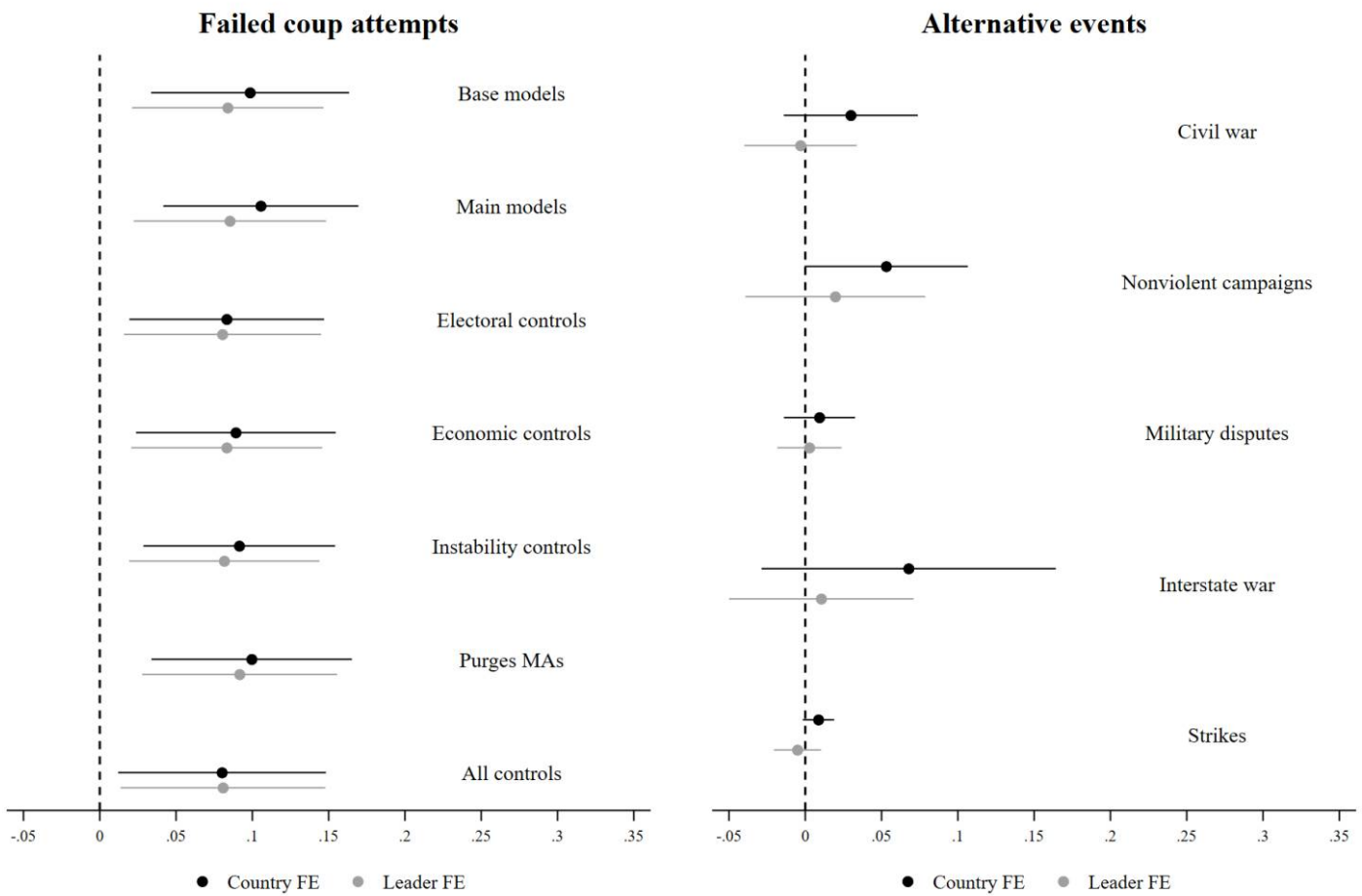
¹⁹Additionally, as shown in Appendix H, the results stay stable when cases of cabinets with replacement rates of 1 (i.e. full cabinet turnover) are removed from the analysis. Furthermore, the results are unchanged when we remove the first year of a dictator’s tenure from the analysis (see Appendix I for details).

tests to investigate whether it is indeed failed coup attempts that exert an effect on cabinet purges or whether this relationship is simply confounded by general regime instability. In the latter case, we should see other instability events exerting similar effects. The results in Figure 2 reveal that none of the alternative instability events have significant effects on cabinet replacement rates once leader fixed effects are taken into account. That is, neither civil wars, nonviolent campaigns, military disputes, interstate wars, nor strikes significantly affect purges of cabinet ministers.²⁰ These results further corroborate Hypothesis 1 and underscore that the relationship between failed coups and cabinet purges is not a trivial reflection of general instability in a given country. In accordance with our theoretical argument, autocratic leaders seem to react differently to threats coming from inside the regime and threats coming from outside the regime.

As an important robustness check, we assess potential heterogeneous effects of different types of coups using the classification from the Bjørnskov and Rode (2020) dataset, which distinguishes between coups perpetrated by the military, civilians, or royal individuals, respectively (see results in Appendix J). We find a strong, positive, and statistically significant effect on the replacement rate of around 7 percentage points for coup attempts led by the military, which is the most prevalent type of coup in autocracies. Civilian coup attempts have a similar effect (around 8 percentage points' increase), but the latter fails to reach conventional levels of statistical significance (p -value = 0.145), while royal coup attempts, which are very rare, have a small and statistically insignificant effect of 2 percentage points. This suggests that the effects of failed coup attempts on cabinet purges are found for most types of coups, but that there might be some heterogeneity among civilian coup attempts – a very broad category – leading to relatively larger residuals for these types of events.

²⁰When these placebo models are estimated using country fixed effects, there seem to be some statistically significant effects (at the $p < 0.1$ level) on cabinet replacement rates of strikes and non-violent campaigns. However, these effects decrease substantially (as is the case with the other alternative events) and become statistically insignificant when estimated with leader fixed effects. This suggests that these events sometimes cause both the autocratic leader (and parts of her/his cabinet to be removed, but they do not systematically cause autocratic leaders to purge their cabinets when the leader stays in power, which is the case we are investigating.

Figure 2: Determinants of purges



OLS regression coefficients with 95 percent confidence intervals. For the full tables, see Appendix A.

Individual-level results

Having established the increased likelihood of ministerial purges in general following a failed coup attempt, we turn to the individual-level characteristics to assess *which* ministers are most likely to be targeted in purges following a failed coup attempt. The results for the individual-level analysis are presented in Figure 3 and Figure 4, while the corresponding tables are found in Appendix K. The figures plot the estimated marginal effects, meaning the change in likelihood of being removed in years with a failed coup attempt relative to years without a failed coup attempt, for each type of minister under consideration. If the estimate is 0.10, this type of minister experiences a 10 percentage-point increase in the likelihood of being purged compared to a non-failed-coup-attempt year.

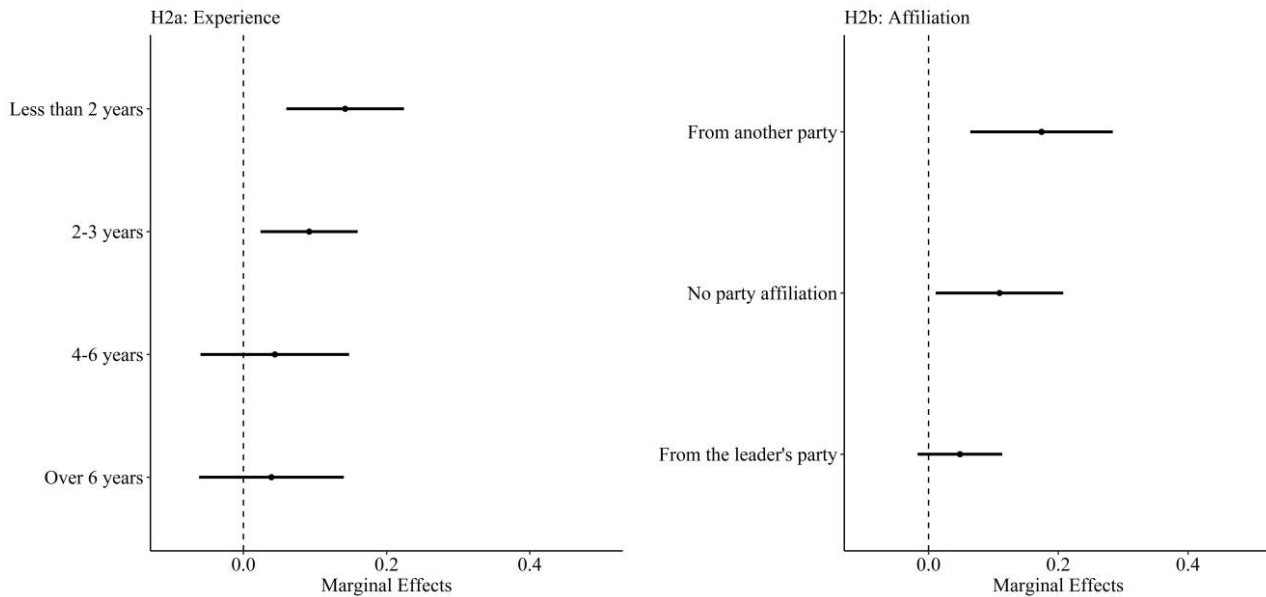
The left panel in Figure 3 presents the results for hypothesis 2a regarding the relationship between loyalty and the likelihood of being purged. Results show a gradual decline in the marginal effect of failed coups as ministers' experience increases, which corroborates our argument. The dictator specifically targets the newest members of their government, while officials with more than three years' experience only see a slight and insignificant increase in the likelihood of being purged. The right panel in Figure 3 shows results for hypothesis 2b about the relationship between affiliation and probability of purging. We find that cabinet members from parties other than that of the autocrat experience the largest increase in likelihood of being purged; an increase that is significantly different from that of ministers from the leader's party.²¹ Additionally, the results reveal that cabinet members with no party affiliation experience a significant increase in the likelihood of being purged, while cabinet members from the dictator's party do not experience a significant increase in the likelihood of being purged.²² These findings support hypotheses 2a and 2b, and

²¹ $p < 0.05$, as seen in Appendix K.

²²However, the interpretation for ministers without party affiliation is slightly more ambiguous because this category in WhoGov encompasses both ministers who are not affiliated to any party and ministers who are in government at a time when parties are outlawed by the regime. To test the robustness of these results, we run the analysis only with regimes where parties are represented in the government in Appendix O, and

indicate that dictators are less likely to purge ministers who show strong signs of loyalty – where loyalty is proxied for by governmental experience in the dictator’s service and party affiliation – following a failed coup attempt.

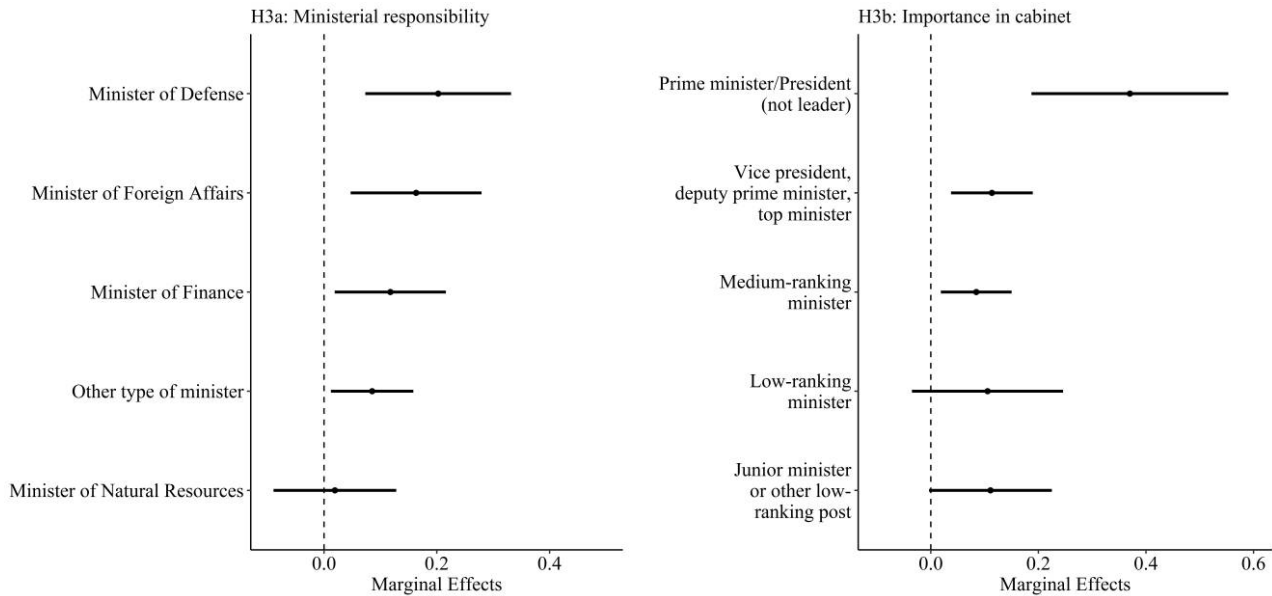
Figure 3: Experience and affiliation



Note: N = Up to 90,020 minister-years (88,094 in years without a coup attempt and 1,926 in years with a coup attempt). The models show the difference in likelihood of being fired for a given type of cabinet member in years with a coup attempt relative to years without a coup attempt. The bars indicate the 95 percent confidence intervals. The corresponding tables are found in Appendix K.

Figure 4 tests hypotheses 3a and 3b. The left panel shows the marginal effects for different ministerial portfolios in failed-coups v. non-failed-coups years. In line with hypothesis 3a, we find that the difference in purge likelihood between non-failed-coup and failed-coup-attempt years is much higher for ministers holding what we consider to be strategic portfolios. Specifically, we find that ministers “with guns” – namely ministers of defense – experience the highest increase in the likelihood of being purged (20 percentage points), followed by ministers of foreign affairs (16 percentage points). The latter can also be considered to have a strategic realm of competence in the post-coup context as it may entail access to foreign support and/or weapons, as well as strong find that the results are similar.

Figure 4: Responsibility and importance



Note: N = Up to 90,014 minister years (88,089 in years without a coup attempt and 1,925 in years with a coup attempt). The models show the difference in likelihood of being fired for the given type of minister in years with a coup attempt relative to years without a coup attempt. The bars indicate the 95 percent confidence intervals. The corresponding tables are found in Appendix K.

political clout. The increase is smaller for ministers of finance (10 percentage points) and “Other” types of ministers (7 percentage points). Finally, ministers in charge of natural resources only see a small and insignificant increase in their likelihood of being fired. A potential explanation is that these ministers are more costly to purge as they are crucial to rent distribution, which is key to avoiding mounting discontent from both the masses and other elites following the coup attempt (see e.g. Tullock, 1987).²³

Corroborating hypothesis 3b, we find that dictators are also more likely to eliminate the most powerful and high-profile members from their cabinets following a failed coup attempt, as shown in the right half of Figure 4. The increase for prime minister/president is significantly different from that experienced by every other type of minister.²⁴ Heads of government – when

²³Table K2 in Appendix K presents the associated regression tables and shows that ministers of defense are significantly more likely to be fired than ministers of natural resources and “Other” types of ministers ($p < 0.05$).

²⁴ $p < 0.05$ for low-ranking ministers and $p < 0.01$ for the remaining groups

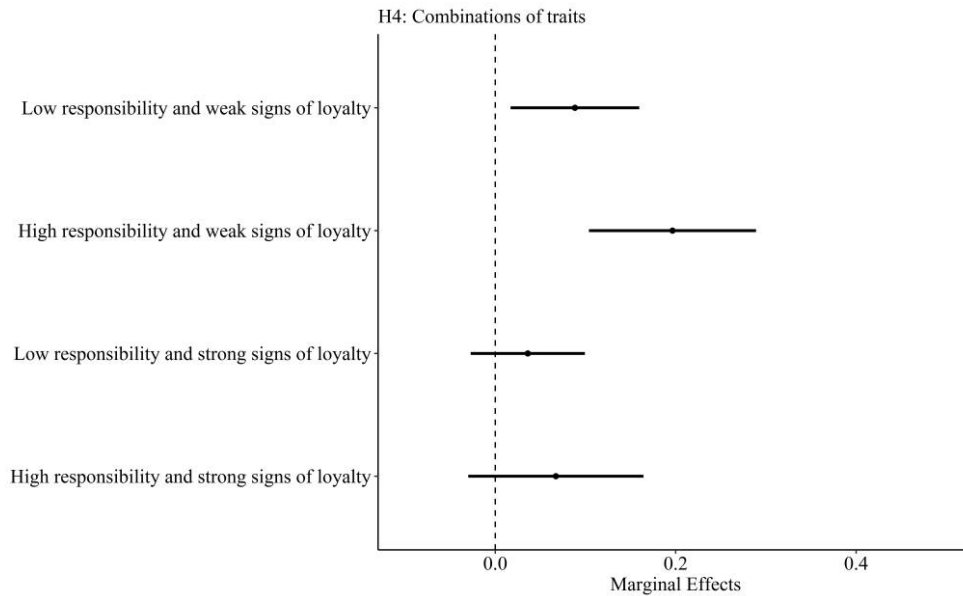
they are not dictators – thus experience a much larger increase in the likelihood of being purged following a coup than lower-ranking government members. Higher-profile cabinet members, who have more political clout and visibility, and therefore pose a potentially larger threat to the ruler, are most likely to experience the dictator's wrath in the wake of a failed coup.

Figure 5 presents the results of our test of Hypothesis 4. We find that loyalty indeed outweighs responsibility after a failed coup. Specifically, ministers who display only weak signs of loyalty are significantly more likely to be fired than those who display strong signs of loyalty to the ruler, at low and high levels of responsibility. Furthermore, ministers who are not co-partisan, are relatively inexperienced *and* occupy high-ranking positions are most likely to be fired after a failed coup attempt. In other words, responsibility acts as an aggravating factor for ministers who do not exhibit evident signs of loyalty. Conversely, we find no significant effect of the failed coup on the purge probability of ministers who display strong enough signs of loyalty, at low and high levels of responsibility. This suggests that while loyalty and responsibility jointly determine purging decisions, the former outweighs the latter in the individual-level trade-offs.

Overall, we find substantial evidence in favor of hypotheses 2a, 2b, 3a, 3b, and 4. Dictators are significantly more likely to purge high-profile and strategically important ministers following failed coup attempts, while being no more likely to remove ministers who exhibit loyalty and are politically aligned with them. However, when we combine these two traits, we find that loyalty outweighs responsibility. This indicates that autocrats use failed coup attempts to consolidate their rule by disproportionately purging untrustworthy and threatening elements within the cabinet.

To ensure the robustness of these results, we use as an alternative independent variable the measure of coup attempts from Bjørnskov and Rode (2020) in Appendix L and find similar results. In Appendix M, we also present results using two alternative autocracy classifications: Polity IV (Marshall, Gurr and Jaggers, 2019) with a cut-off score below 6 (scaled from -10 to 10) and the classification in Bjørnskov and Rode (2020), which extends the Democracy and Dictatorship data from Cheibub, Gandhi and Vreeland (2010). This leaves the results substantially unchanged. Finally, we remove the first year of office for all leaders, so we only compare years with no new

Figure 5: Who is purged? Combination of importance and loyalty



Note: N = Up to 80,657 minister-years (79,029 in years without a coup attempt and 1,628 in years with a coup attempt). Medium-ranking cabinet members and lower (in Figure 4) are classified as low responsibility, while the groups above are classified as high responsibility. Cabinet members with experience lower than the median in the cabinet for the given year or cabinet members from another party than the leader's are coded as showing weak signs of loyalty. The remainder are coded as showing strong signs of loyalty. The models show the difference in likelihood of being fired for the given type of minister in years with a coup attempt relative to years without a coup attempt. The bars indicate the 95 percent confidence intervals. The corresponding tables are found in Appendix K.

leaders in Appendix N. Results are overall unchanged, and we therefore ensure that the findings are not driven by new leaders entering office. We also test whether leaders react differently to civilian and military coups in Appendix P. The results are fairly similar across coup types, but some statistically insignificant differences. For example, we see that members of the leader's own party are more likely to be punished following a civilian coup, possibly indicating that these may have been involved in the coup. In sum, none of the robustness tests substantially challenges the main conclusions.

Conclusion

Although it is commonly assumed that dictators will purge elites if they try to unseat them, this assumption has never been tested in a global analysis, and we have very little knowledge about whom dictators target in such purges. Focusing on the highest levels of the regime, the cabinet

ministers, in an analysis of over 23,000 cabinet members in 115 autocracies from 1967 to 2016, we find that failed coup attempts lead to a substantial increase in cabinet instability in the immediate aftermath. Looking at the fate of individual ministers, we show that high-ranking cabinet members and ministers of defense, who are presumably the greatest potential threat to the dictator during times of instability, are very likely to be the target of purges following failed coups. Conversely, ministers with higher levels of perceived loyalty, such as the dictator's co-partisans and ministers with greater experience at his/her service, are comparatively less likely to be removed in purges following a failed coup. Finally, we present evidence that while loyalty and responsibility jointly determine purging decisions, the former outweighs the latter in individual-level trade-offs.

These findings greatly enhance our understanding of elite–dictator relations in autocracies, including elite purges, and show how dictators rely on purges not only of military personnel to enhance their chance of political survival (Sudduth, 2017*b*), but also of key civilian figures such as cabinet ministers. To quote Niccolò Machiavelli (2008): “The first method for estimating the intelligence of a ruler is to look at the men he has around him”. Our findings suggest that autocrats are painfully aware of this reality and (re)act accordingly – especially in times when those people the autocrat should be relying on the most have violated this trust.

The results provide several avenues for future research on purges specifically and autocratic power-sharing more broadly. Future studies may investigate whether the importance of loyalty in purges of cabinet ministers can be generalized to other civilian elite groups in autocratic regimes, such as economic and bureaucratic elites. Another line of future research is the question of hiring, which is the other side of the coin of our research question. In Appendix R, we present a preliminary analysis, the results of which suggest that firing and hiring do not necessarily follow the same patterns. A more thorough investigation of hiring following failed coups would provide further insights into how power-sharing mechanisms change in the wake of a challenge to an autocrat's rule. Finally, our findings may inspire new research on the relationship between purges and leader survival. While current research shows that more intense purges can increase dictators' tenure (Easton and Siverson, 2018), it remains an open question whether a dictator's focus on in-

dividual ministers' displayed loyalty and level of responsibility when making purging decisions ultimately affects his/her chances of survival in office.

This article has shown that coup attempts have important implications at the very core of dictator-elite relations, as they influence which elites are retained in the governing circle and which are ousted. Collectively, the findings indicate that failed coup attempts are critical junctures. Coups need not succeed to have far-reaching implications for power-sharing in autocracies, as dictators respond to this challenge by restructuring the government in a way that consolidates their power. Thus, while coup attempts may overthrow the autocrat and bring a new leader to power, they can also strengthen the autocrat if they fail.

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References

- Anckar, Carsten and Cecilia Fredriksson. 2019. "Classifying political regimes 1800–2016: a typology and a new dataset." *European Political Science* 18(1):84–96.
- Arriola, Leonardo R, Jed DeVaro and Anne Meng. 2021. "Democratic subversion: Elite cooptation and opposition fragmentation." *American Political Science Review* pp. 1–15.
- Banks, Arthur and Kenneth A Wilson. 2015. *Cross-national time-series data archive*. URL: <https://www.cntsdata.com/>.
- Belkin, Aaron and Evan Schofer. 2003. "Toward a Structural Understanding of Coup Risk." *Journal of Conflict Resolution* 47(5):594–620.

- Besley, Timothy and Masayuki Kudamatsu. 2008. Making autocracy work. In *Institutions and economic performance*. Cambridge, Massachusetts: Harvard university press pp. 452–510.
- Biddle, Stephen and Robert Zirkle. 1996. “Technology, civil-military relations, and warfare in the developing world.” *Journal of Strategic Studies* 19(2):171–212.
- Bizzarro, Fernando, John Gerring, Carl Henrik Knutsen, Allen Hicken, Michael Bernhard, Svend-Erik Skaaning, Michael Coppedge and Staffan I Lindberg. 2018. “Party strength and economic growth.” *World Politics* 70(2):275–320.
- Bjørnskov, Christian and Martin Rode. 2020. “Regime types and regime change: A new dataset on democracy, coups, and political institutions.” *The Review of International Organizations* 15:531–551.
- Boix, Carles, Michael Miller and Sebastian Rosato. 2012. “A Complete Data Set of Political Regimes, 1800–2007.” *Comparative Political Studies* 46(12):1523–1554.
- Boutton, Andrew. 2019. “Coup-Proofing in the Shadow of Intervention: Alliances, Moral Hazard, and Violence in Authoritarian Regimes.” *International Studies Quarterly* 63(1):43–57.
- Braithwaite, Jessica Maves and Jun Koga Sudduth. 2016. “Military purges and the recurrence of civil conflict.” *Research & Politics* 3(1).
- Bueno de Mesquita, Bruce, Alastair Smith, Randolph M. Siverson and James D. Morrow. 2003. *The Logic of Political Survival*. Cambridge, Mass.: MIT Press.
- Carter, D. B. and C. S. Signorino. 2010. “Back to the Future: Modeling Time Dependence in Binary Data.” *Political Analysis* 18(3):271–292.
- Cheibub, José Antonio, Jennifer Gandhi and James Raymond Vreeland. 2010. “Democracy and dictatorship revisited.” *Public choice* 143(1-2):67–101.
- Chenoweth, Erica and Orion A Lewis. 2013. “Unpacking nonviolent campaigns: Introducing the NAVCO 2.0 dataset.” *Journal of Peace Research* 50(3):415–423.

- Dikötter, Frank. 2020. *Dictators: The Cult of Personality in the Twentieth Century*. Bloomsbury Publishing Plc.
- Easton, Malcolm R and Randolph M Siverson. 2018. "Leader survival and purges after a failed coup d'état." *Journal of Peace Research* 55(5):596–608.
- Egorov, Georgy and Konstantin Sonin. 2011. "Dictators and their viziers: endogenizing the loyalty-competence trade-off." *Journal of the European Economic Association* 9(5):903–930.
- Ellis, Cali Mortenson, Michael C Horowitz and Allan C Stam. 2015. "Introducing the LEAD data set." *International Interactions* 41(4):718–741.
- Fails, Matthew D. 2020. "Oil income and the personalization of autocratic politics." *Political Science Research and Methods* 8(4):772–779.
- Feenstra, Robert C, Robert Inklaar and Marcel P Timmer. 2015. "The Next Generation of the Penn World Table." *American Economic Review* 105(10):3150–3182.
- Flores, Alejandro Quiroz and Alastair Smith. 2011. "Leader Survival and Cabinet Change." *Economics & Politics* 23(3):345–366.
- Francois, Patrick, Ilija Rainer and Francesco Trebbi. 2014. *The Dictator's Inner Circle*. Technical Report w20216 National Bureau of Economic Research Cambridge, MA: . URL: <https://papers.ssrn.com/sol3/papers.cfm?abstractid=2450916>.
- Geddes, Barbara, Joseph Wright and Erica Frantz. 2018. *How Dictatorships Work: Power, Personalization, and Collapse*. Cambridge University Press.
- Gehlbach, Scott and Philip Keefer. 2011. "Investment without democracy: Ruling-party institutionalization and credible commitment in autocracies." *Journal of Comparative Economics* 39(2):123–139.

- Gleditsch, Nils Petter, Peter Wallensteen, Mikael Eriksson, Margareta Sollenberg and Håvard Strand. 2002. "Armed conflict 1946-2001: A new dataset." *Journal of peace research* 39(5):615–637.
- Goemans, Henk E, Kristian Skrede Gleditsch and Giacomo Chiozza. 2009. "Introducing Archigos: A dataset of political leaders." *Journal of Peace research* 46(2):269–283.
- Gueorguiev, Dimitar D. and Paul J. Schuler. 2016. "Keeping your head down: public profiles and promotion under autocracy." *Journal of East Asian Studies* 16(1):87.
- Hyde, Susan and Nikolav Marinov. 2015. "NELDA 4.0: National Elections across Democracy and Autocracy dataset codebook for version 4." *Accessed on September 2:2016*.
- Ishiyama, John, Marijke Breuning and Michael Widmeier. 2018. "Organizing to rule: structure, agent, and explaining presidential management styles in Africa." *Democratization* 25(3):524–544.
- Jones, Benjamin F and Benjamin A Olken. 2009. "Hit or miss? The effect of assassinations on institutions and war." *American Economic Journal: Macroeconomics* 1(2):55–87.
- Karsh, Efraim and Inari Rautsi. 2002. *Saddam Hussein: A political biography*. Grove Press.
- Kim, Nam Kyu. 2016. "Revisiting economic shocks and coups." *Journal of Conflict Resolution* 60(1):3–31.
- Kroeger, Alex M. 2020. "Dominant Party Rule, Elections, and Cabinet Instability in African Autocracies." *British Journal of Political Science* 50(1):79–101. Publisher: Cambridge University Press.
- Lachapelle, Jean. 2020. "No Easy Way Out: The Effect of Military Coups on State Repression." *Journal of Politics* .

Lee, Don S. and Paul Schuler. 2020. "Testing the "China Model" of Meritocratic Promotions: Do Democracies Reward Less Competent Ministers Than Autocracies?" *Comparative Political Studies* 53(3-4):531–566.

Machiavelli, Niccolo. 2008. *The Prince*. Hackett Publishing.

Magaloni, Beatriz. 2006. *Voting for Autocracy: Hegemonic Party Survival and its Demise in Mexico*. 1 edition ed. Cambridge: Cambridge University Press.

Marshall, Monty G, Ted Robert Gurr and Keith Jagers. 2019. "Polity IV project: Political regime characteristics and transitions, 1800-2018." *Center for Systemic Peace* .

Meng, Anne. 2019. "Accessing the state: Executive constraints and credible commitment in dictatorship." *Journal of Theoretical Politics* 31(4):568–599.

Miller, Michael K. 2020. "The autocratic ruling parties dataset: Origins, durability, and death." *Journal of Conflict Resolution* 64(4):756–782.

Nyrup, Jacob and Stuart Bramwell. 2020. "Who governs? A new global dataset on members of cabinets." *American Political Science Review* 114(4):1366–1374.

Palmer, Glenn, Vito D'Orazio, Michael R Kenwick and Roseanne W McManus. 2020. "Updating the militarized interstate dispute data: A response to Gibler, Miller, and Little." *International Studies Quarterly* 64(2):469–475.

Powell, Jonathan M. and Clayton L. Thyne. 2011. "Global instances of coups from 1950 to 2010: A new dataset." *Journal of Peace Research* 48(2):249–259.

Quinlivan, James T. 1999. "Coups-Proofing: Its Practice and Consequences in the Middle East." *International Security* 24(2):131–165.

Reuter, Ora John and David Szakonyi. 2019. "Elite Defection under Autocracy: Evidence from Russia." *American Political Science Review* 113(2):552–568.

- Reuter, Ora John and Graeme B. Robertson. 2012. "Subnational Appointments in Authoritarian Regimes: Evidence from Russian Gubernatorial Appointments." *The Journal of Politics* 74(4):1023–1037.
- Roessler, Philip. 2011. "The Enemy Within: Personal Rule, Coups, and Civil War in Africa." *World Politics* 63(2):300–346.
- Ross, Michael and Paasha Mahdavi. 2015. "Oil and Gas Data, 1932-2014."
- Sarkees, Meredith Reid and Frank Whelon Wayman. 2010. *Resort to war: a data guide to interstate, extra-state, intra-state, and non-state wars, 1816-2007*. CQ Press.
- Singh, Naunihal. 2014. *Seizing power: the strategic logic of military coups*. Baltimore, Maryland: Johns Hopkins University Press.
- Sudduth, Jun Koga. 2017a. "Coups risk, coup-proofing and leader survival:." *Journal of Peace Research* 54(1):3–15.
- Sudduth, Jun Koga. 2017b. "Strategic Logic of Elite Purges in Dictatorships." *Comparative Political Studies* 50(13):1768–1801.
- Svolik, Milan W. 2012. *The Politics of Authoritarian Rule*. Cambridge: Cambridge University Press.
- Tullock, Gordon. 1987. *Autocracy*. Springer Netherlands.
- Van De Walle, Nicolas. 2007. Meet the new boss, same as the old boss? The evolution of political clientelism in Africa. In *Patrons, Clients and Policies: Patterns of Democratic Accountability and Political Competition*, ed. Herbert Kitschelt and Steven I. Wilkinson. Cambridge: Cambridge University Press pp. 50–67.
- Wig, Tore and Espen Geelmuyden Rød. 2016. "Cues to coup plotters: Elections as coup triggers in dictatorships." *Journal of Conflict Resolution* 60(5):787–812.

Wintrobe, Ronald. 1998. *The political economy of dictatorship*. Cambridge: Cambridge University Press.

Woldense, Josef. 2018. "The ruler's game of musical chairs: Shuffling during the reign of Ethiopia's last emperor." *Social Networks* 52:154–166.

Zakharov, Alexei V. 2016. "The Loyalty-Competence Trade-Off in Dictatorships and Outside Options for Subordinates." *The Journal of Politics* 78(2):457–466.

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Online Appendix for "The Morning After: Cabinet Instability and the Purg- ing of Ministers after Failed Coup Attempts in Autocracies"

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A Tables for Figure 2

Table A1: Failed coup attempts. Country fixed effects: Country-level results

	Base Model	Main Model	Electoral Controls	Economic Controls	Instability Controls	Purges MAs	All Controls
Failed coup attempt	0.10 (0.03)*	0.11 (0.03)*	0.08 (0.03)*	0.09 (0.03)*	0.09 (0.03)*	0.10 (0.03)*	0.08 (0.03)*
Log of GDP per capita	-0.04 (0.02)	-0.03 (0.02)	-0.03 (0.02)	-0.04 (0.02)	-0.04 (0.02)	-0.03 (0.02)	-0.04 (0.03)
Log of Population	-0.11 (0.07)	-0.12 (0.06)	-0.07 (0.10)	-0.12 (0.08)	-0.15 (0.09)	-0.13 (0.06)*	-0.19 (0.14)
Monarchy		0.03 (0.02)	0.10 (0.04)*	0.05 (0.03)	0.03 (0.02)	0.05 (0.02)*	0.06 (0.03)*
Military regime		-0.03 (0.03)	0.01 (0.03)	-0.03 (0.03)	-0.03 (0.04)	-0.03 (0.03)	0.02 (0.03)
Party regime		-0.06 (0.03)*	-0.03 (0.04)	-0.06 (0.03)	-0.04 (0.04)	-0.06 (0.03)	-0.01 (0.04)
Election			0.09 (0.02)*				0.09 (0.02)*
Years since last election			-0.00 (0.00)				-0.00 (0.00)
GDP growth				-0.00 (0.00)*			-0.00 (0.00)*
Log of oil value/population				-0.00 (0.00)			0.00 (0.00)
Civil war onset					0.07 (0.03)*		0.07 (0.03)*
Nonviolent campaign					0.15 (0.03)*		0.15 (0.04)*
Military dispute					-0.00 (0.01)		0.00 (0.01)
Interstate war					-0.02 (0.06)		-0.07 (0.07)
Strike					0.12 (0.08)		0.14 (0.08)
Country fixed effects	✓	✓	✓	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓	✓	✓	✓
1, 2 & 3 year moving average cabinet replacement						✓	✓
Leader fixed effects							
<i>Observations</i>	3,715	3,676	3,016	3,448	3,052	3,585	2,539
<i>No. countries</i>	115	114	105	109	114	114	103
<i>WithinR²</i>	0.04	0.05	0.07	0.06	0.07	0.05	0.10

* p<0.05. Dependent variable is cabinet replacement rate.

All independent variables except failed coup attempt are lagged one year. Country-clustered standard errors in parentheses.

Table A2: Failed coup attempts. Leader fixed effects: Country-level results

	Base Model	Main Model	Electoral Controls	Economic Controls	Instability Controls	Purges MAs	All Controls
Failed coup attempt	0.08 (0.03)*	0.09 (0.03)*	0.08 (0.03)*	0.08 (0.03)*	0.08 (0.03)*	0.09 (0.03)*	0.08 (0.03)*
Log of GDP per capita	-0.04 (0.02)	-0.04 (0.02)	-0.02 (0.02)	-0.04 (0.02)	-0.01 (0.02)	-0.05 (0.02)*	-0.01 (0.03)
Log of Population	-0.17 (0.07)*	-0.18 (0.07)*	-0.13 (0.11)	-0.17 (0.09)*	-0.12 (0.08)	-0.23 (0.09)*	-0.18 (0.15)
Military regime		0.04 (0.13)	0.01 (0.14)	0.10 (0.16)	0.04 (0.13)	0.02 (0.15)	0.08 (0.20)
Party regime		-0.04 (0.02)	-0.09 (0.02)*	-0.04 (0.02)	-0.02 (0.04)	-0.02 (0.03)	-0.03 (0.06)
Election			0.06 (0.02)*				0.06 (0.02)*
Years since last election			-0.00 (0.00)				-0.00 (0.00)
GDP growth				-0.00 (0.00)			-0.00 (0.00)
Log of oil value/population				0.00 (0.00)			0.00 (0.00)
Civil war onset					0.04 (0.02)*		0.04 (0.02)
Nonviolent campaign					0.04 (0.04)		0.02 (0.05)
Military dispute					0.01 (0.01)		0.01 (0.01)
Interstate war					-0.04 (0.05)		-0.05 (0.06)
Strike					0.05 (0.08)		0.08 (0.08)
Country fixed effects							
Year fixed effects	✓	✓	✓	✓	✓	✓	✓
1, 2 & 3 year moving average cabinet replacement						✓	✓
Leader fixed effects	✓	✓	✓	✓	✓	✓	✓
<i>Observations</i>	3332	3307	2703	3098	2757	3227	2284
<i>No.countries</i>	115	114	105	109	114	114	103
<i>WithinR²</i>	0.05	0.05	0.07	0.05	0.05	0.06	0.09

* p<0.05. Dependent variable is cabinet replacement rate. Monarchy dummy is excluded due to collinearity. All independent variables except failed coup attempt are lagged one year. Country-clustered standard errors in parentheses.

Table A3: Alternative events. Country and leader fixed effects: Country-level results

	1	2	3	4	5	6	7	8	9	10
Alternative event: Civil war	0.03 (0.02)					-0.00 (0.02)				
Alternative event: Nonviolent campaigns		0.05 (0.03)					0.02 (0.03)			
Alternative event: Military disputes			0.01 (0.01)					0.00 (0.01)		
Alternative event: Interstate war				0.07 (0.05)					0.01 (0.03)	
Alternative event: Strikes					0.01 (0.01)					-0.01 (0.01)
Log of GDP per capita	-0.03 (0.02)	-0.05 (0.03)	-0.05 (0.02)*	-0.05 (0.02)*	-0.03 (0.02)	-0.04 (0.02)*	-0.02 (0.02)	-0.04 (0.02)	-0.04 (0.02)	-0.03 (0.02)
Log of Population	-0.13 (0.07)	-0.20 (0.10)	-0.19 (0.09)*	-0.19 (0.09)*	-0.12 (0.07)	-0.19 (0.07)*	-0.16 (0.09)	-0.19 (0.08)*	-0.18 (0.08)*	-0.17 (0.07)*
Monarchy	0.03 (0.02)	0.02 (0.03)	0.06 (0.02)*	0.06 (0.02)*	0.03 (0.02)					
Military regime	-0.03 (0.03)	-0.02 (0.04)	-0.04 (0.03)	-0.02 (0.03)	-0.03 (0.02)	0.04 (0.13)	0.11 (0.18)	0.04 (0.13)	0.04 (0.13)	0.04 (0.13)
Party regime	-0.07 (0.03)*	-0.04 (0.04)	-0.04 (0.03)	-0.04 (0.03)	-0.06 (0.03)	-0.04 (0.02)	-0.02 (0.05)	-0.02 (0.04)	-0.02 (0.04)	-0.04 (0.02)
Country fixed effects	✓	✓	✓	✓	✓					
Year fixed effects	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Leader fixed effects						✓	✓	✓	✓	✓
<i>Observations</i>	3,676	3,042	3,297	3,297	3,641	3,307	2,738	2,967	2,967	3,282
<i>No. countries</i>	114	114	114	114	114	114	114	114	114	114
<i>WithinR²</i>	0.04	0.05	0.05	0.05	0.04	0.04	0.05	0.05	0.05	0.04

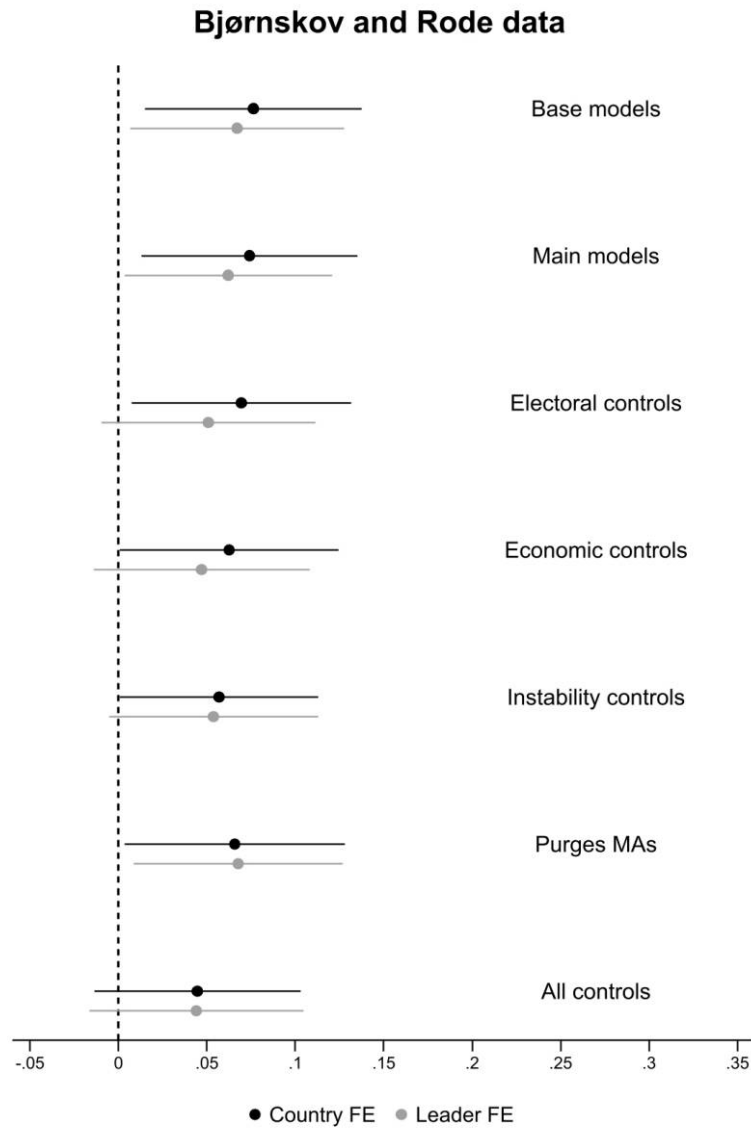
* p<0.05. Dependent variable is cabinet replacement rate.

All independent variables except alternative events are lagged one year. Country-clustered standard errors in parentheses.

B Alternative measure of failed coup

Below, we show the country-level results with the alternative measure of failed coup from the Bjørnskov and Rode (2020) dataset.

Figure B1: Alternative measure of failed coup: Country-level results

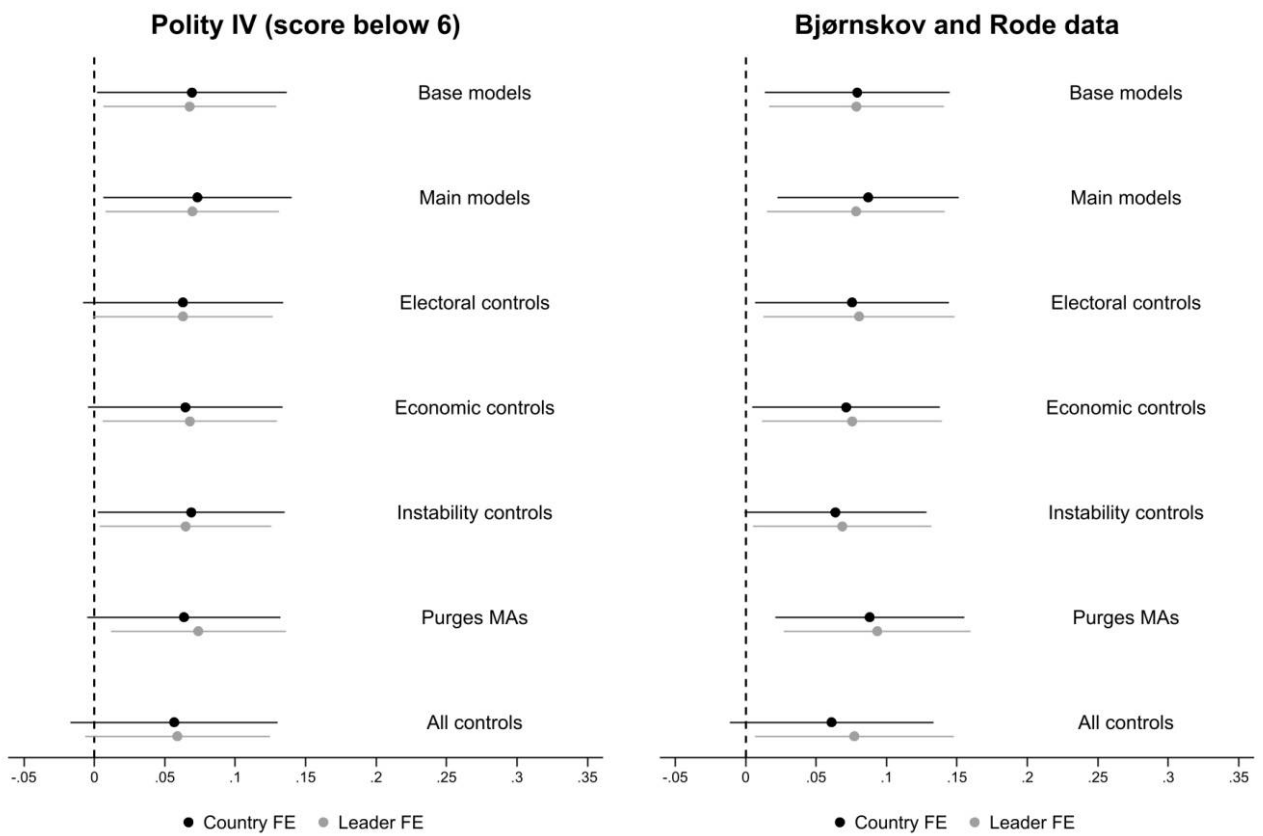


Lines represent 95 percent confidence intervals.

C Alternative autocracy classifications

Below we present results using two alternative autocracy classifications. In the left hand panel, we classify autocracies as countries with a polity2 score below 6 in the Polity IV data (Marshall, Gurr and Jagers 2019). In the right hand pane, we classify autocracies as all countries that are not listed as either Parliamentary democracy, Presidential democracy, Mixed democratic, or Presidential, in the data from Bjørnskov and Rode (2020), which is an extension of the Democracy and Dictatorship data from Cheibub, Gandhi and Vreeland (2010).

Figure C1: Failed coup attempts. Alternative autocracy classifications: Country-level results



Lines represent 95 percent confidence intervals.

D Failed coups by coup month

In the table below, we show the effects of failed coups on cabinet replacement rates depending on the month the failed coup takes place. The effect of failed coups on cabinet replacement rates is largest in the months furthest from the cut-off date, which is 31 June, while the relationship disappears in the months immediately before the cut-off (April, May, and June). It should be noted that there are around 10 coup attempts for each month, and the results are, therefore, more susceptible to outliers.

These patterns alleviate concerns about reverse causality, whereby a coup would happen as a response to a purge. If such was the case, we would expect the effect to be larger for months closer to the cut-off date, since the purge would precede the coup and ignite the coup attempt (remember that we only have cabinet data once a year). However, these results also raise a question of when the purge takes place or is registered. The “lacking” effect for April-June may simply be because it takes a little while before the dictator purges the government or because the official list of government members is not yet updated when the cabinet data is collected. This may cause us to underestimate the real effect.

Table D1: Failed coups by coup month: Country-level results

	1
Failed coup attempt July	0.20 (0.12)
Failed coup attempt August	0.26 (0.08)*
Failed coup attempt September	0.29 (0.13)*
Failed coup attempt October	0.21 (0.10)*
Failed coup attempt November	0.08 (0.13)
Failed coup attempt December	0.09 (0.13)
Failed coup attempt January	0.32 (0.10)*
Failed coup attempt February	0.01 (0.10)
Failed coup attempt March	0.16 (0.07)*
Failed coup attempt April	-0.12 (0.07)
Failed coup attempt May	0.03 (0.08)
Failed coup attempt June	-0.07 (0.09)
Log of GDP per capita	-0.03 (0.02)
Log of Population	-0.12 (0.07)
Monarchy	0.03 (0.02)
Military regime	-0.03 (0.03)
Party regime	-0.06 (0.03)
Country fixed effects	✓
Year fixed effects	✓
<i>Observations</i>	3,676
<i>No. countries</i>	114
<i>WithinR²</i>	0.05

Dependent variable is cabinet replacement rate.

All independent variables except failed coup attempt are lagged one year.

Country-clustered standard errors in parentheses.* $p < 0.05$.

E Interaction with autocratic regime types

In the table below, we interact the "failed coup attempt" dummy with a dummy for three types of autocratic regimes (monarchy, military regimes and party regimes) to explore potential heterogeneous effects across types of autocracies.²⁵ However, none of the regime type-failed coup attempt interactions are statistically significant, while the failed coup attempt dummy retains its size effect which is statistically significant at the 90% level. The coefficient for the interaction between monarchy and failed coup attempt is positive, while the coefficient for interaction between military regimes and failed coup attempt is negative which is also the case for the coefficient for the interaction between party regime and failed coup attempt. This could suggest that the effect of failed coup attempts on cabinet replacement rates is strongest in monarchies and weakest in military and party regimes. However, as mentioned, none of these interactions are statistically significant.

²⁵Using, as in the main text, the Anckar and Fredriksson (2019) data. However, these autocratic regime type dummies are not lagged in this case.

Table E1: Interaction with autocratic regime types: Country-level results

	1
Failed coup attempt	0.13 (0.07)
Log of GDP per capita	-0.03 (0.02)
Log of Population	-0.12 (0.06)
Monarchy	-0.08 (0.03)*
Military regime	-0.07 (0.03)*
Party regime	-0.11 (0.03)*
Failed coup attempt * Monarchy	0.11 (0.15)
Failed coup attempt * Military regime	-0.05 (0.08)
Failed coup attempt * Party regime	-0.03 (0.12)
Country fixed effects	✓
Year fixed effects	✓
<i>Observations</i>	3,677
<i>N.countries</i>	115
<i>WithinR²</i>	0.05

Dependent variable is cabinet replacement rate.

All independent variables except failed coup attempt and regimes types are lagged one year.

Country-clustered standard errors in parentheses.

* $p < 0.05$

F Country-specific and leader-specific time trends

Table F1: Country-specific and leader-specific time trends: Country-level results

	1	2
Failed coup attempt	0.07 (0.03)*	0.09 (0.03)*
Log of GDP per capita	-0.01 (0.04)	-0.04 (0.02)
Log of Population	-0.20 (0.14)	-0.18 (0.08)
Monarchy	0.07 (0.07)	-1.52 (3.37)
Military regime	-0.01 (0.04)	0.04 (0.13)
Party regime	-0.12 (0.04)*	-0.05 (0.03)
Country fixed effects	✓	
Year fixed effects	✓	✓
Country-specific time trends	✓	
Leader-specific time trends		✓
<i>Observations</i>	3,676	3,307
<i>No.countries</i>	114	114
<i>WithinR²</i>	0.11	0.34

* p<0.05. Dependent variable is cabinet replacement rate.

R-squared in column 2 is overall not within.

All independent variables except failed coup attempt are lagged one year.

Country-clustered standard errors in parentheses.

G Controlling for level of personalism

In the table below, we control for the level of personalism using the latent personalism index from Geddes, Wright and Frantz (2018).

Table G1: Controlling for level of personalism: Country-level results

	1
Failed coup attempt	0.11 (0.04)*
Log of GDP per capita	-0.04 (0.03)
Log of Population	-0.17 (0.11)
Monarchy	0.05 (0.03)
Military regime	-0.02 (0.04)
Party regime	-0.05 (0.04)
Personalism (Geddes, Wright and Frantz 2018)	-0.08 (0.04)
Country fixed effects	✓
Year fixed effects	✓
<i>Observations</i>	2,826
<i>No.countries</i>	100
<i>WithinR²</i>	0.06

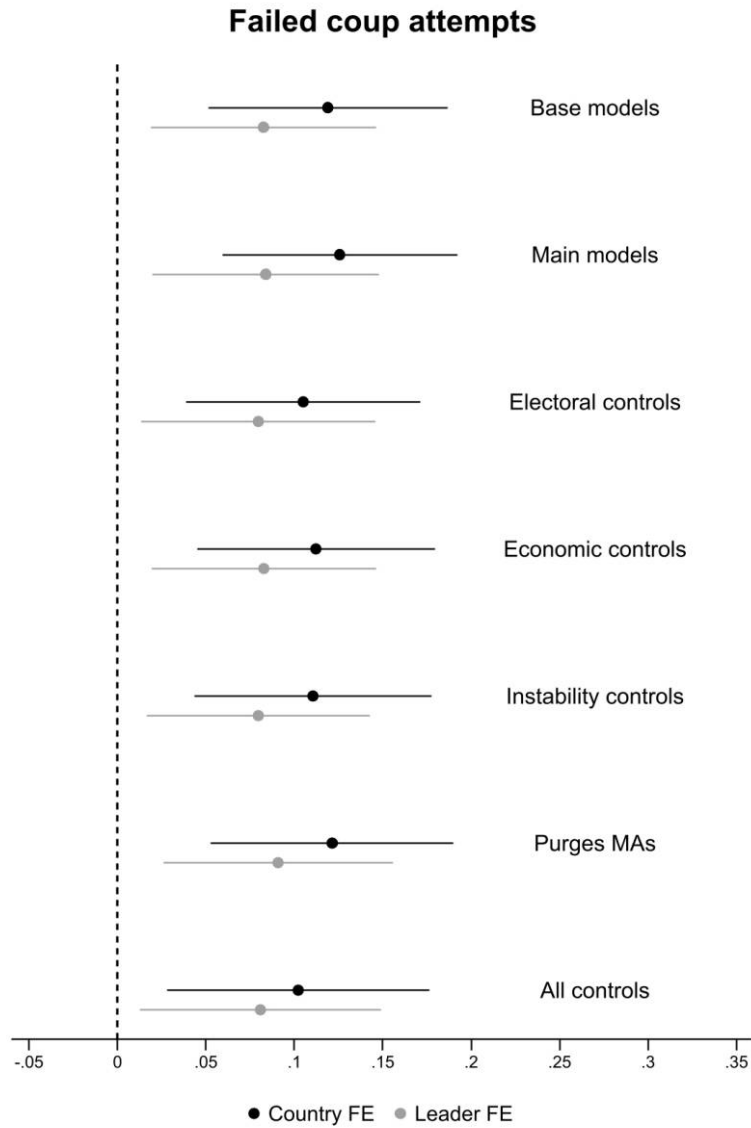
* p<0.05. Dependent variable is cabinet replacement rate.

All independent variables except failed coup attempt are lagged one year.

Country-clustered standard errors in parentheses.

H Dropping cases of full cabinet turnover

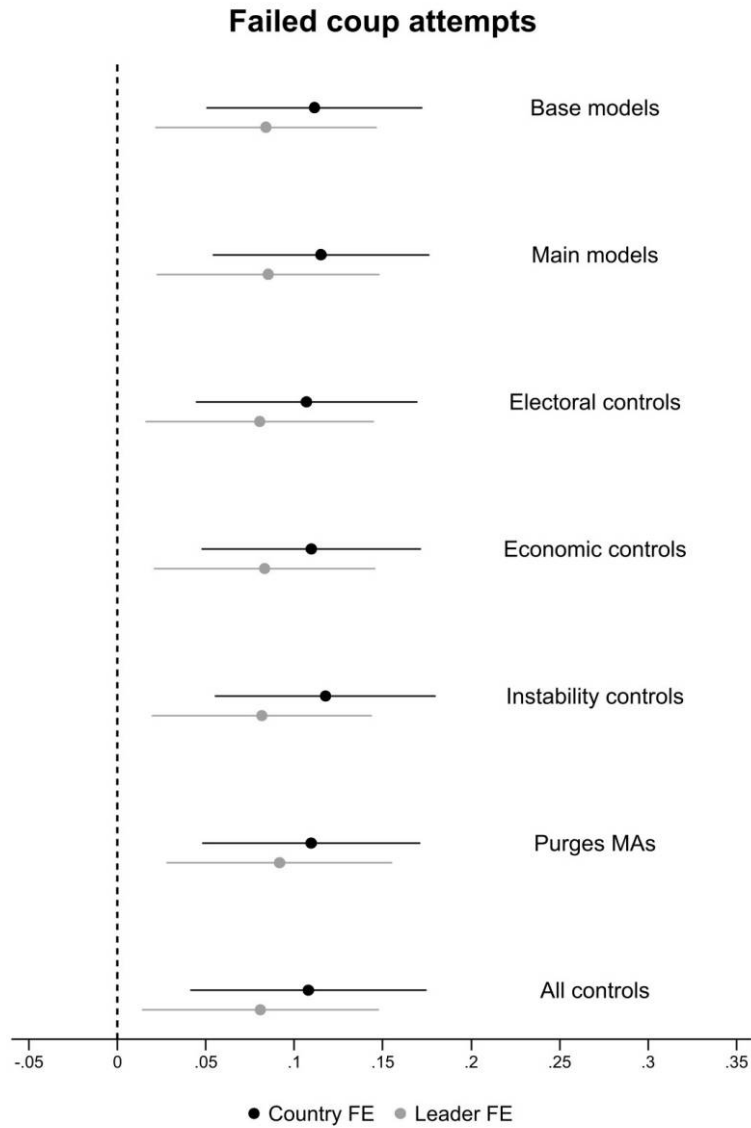
Figure H1: Dropping cases of full cabinet turnover: Country-level results



Lines represent 95 percent confidence intervals.

I Dropping first year of dictator tenure

Figure I1: Dropping first year of dictator tenure: Country-level results



Lines represent 95 percent confidence intervals.

J Different coup types

In the table below, we distinguish between the effects of different types of failed coups, using the classifications in the Bjørnskov and Rode (2020) dataset. We find a strong, positive, and statistically significant effect on the replacement rate of around 7 percentage points for coup attempts led by the military, which is the most prevalent type of coup in autocracies. Civilian coup attempts have a similar effect (around 8-percentage-point increase), but fails to reach conventional levels of statistical significance (p-value = 0.145), while royal coup attempts, which are very rare, have a small and statistically insignificant effect of 2 percent. This suggests that the effects of failed coup attempts on cabinet purges are found for most types of coups but that there might be some heterogeneity among civilian coup attempts – a very broad category – leading to relatively larger residuals for these types of events.

Table J1: Types of coup attempts: Country-level results

	1
Military coup attempt (Bjørnskov and Rode)	0.07 (0.04)*
Civilian coup attempt (Bjørnskov and Rode)	0.08 (0.05)
Royal coup attempt (Bjørnskov and Rode)	0.02 (0.03)
Log of GDP per capita	-0.04 (0.02)
Log of Population	-0.12 (0.07)
Monarchy	0.03 (0.02)
Military regime	-0.03 (0.03)
Party regime	-0.06 (0.03)
Country fixed effects	✓
Year fixed effects	✓
<i>Observations</i>	3,626
<i>No.countries</i>	113
<i>WithinR²</i>	0.05

* $p < 0.05$. Dependent variable is cabinet replacement rate.

Reference category with regards to failed coups attempt is no failed coup attempt.

All independent variables except failed coup attempts are lagged one year.

Country-clustered standard errors in parentheses.

K Tables for Figure 3, 4, & 5 (individual-level results)

Table K1: Table for Figure 3: Individual-level results

	H2a: Experience	H2b: Affiliation
2-3 years of experience (Ref: <2 y)	0.00 (0.01)	
4-6 years of experience (Ref: <2 y)	0.01 (0.01)	
Over 6 years of experience (Ref: <2 y)	-0.01 (0.01)	
No party affiliation (Ref: Other party)		0.03 (0.01)*
From the leader's party (Ref: Other party)		-0.01 (0.01)
Failed coup attempt	0.14 (0.04)*	0.17 (0.06)*
FCA*2-3 years of experience (Ref: <2 y)	-0.05 (0.04)	
FCA*4-6 years of experience (Ref: <2 y)	-0.10 (0.06)	
FCA*Over 6 years of experience (Ref: <2 y)	-0.10 (0.05)*	
FCA*No party affiliation (Ref: Other party)		-0.06 (0.07)
FCA*From the leader's party (Ref: Other party)		-0.13 (0.06)*
Log of GDP per capita	-0.02 (0.02)	-0.02 (0.02)
Log of Population	-0.14 (0.06)*	-0.14 (0.06)*
Experience		0.00 (0.00)
Experience ²		-0.00 (0.00)
Experience ³		0.00 (0.00)
Country fixed effects	✓	✓
Year fixed effects	✓	✓
Observations	90020	86057
No. countries	115	115
Within R ²	0.13	0.13

* $p < 0.05$. Dependent variable: Purged next year. All models include country and year fixed effects. Country-clustered standard errors in parentheses. FCA = Failed coup attempt

Table K2: Table for Figure 4: Individual-level results

	H3a: Responsibility	H3b: Importance
Minister of Foreign Affairs (Ref: D)	−0.01 (0.01)	
Minister of Finance (Ref: D)	0.03 (0.01)*	
Other type of minister (Ref: D)	0.05 (0.01)*	
Minister of Natural Resources (Ref: D)	0.04 (0.01)*	
VP, DP, top minister (Ref: PMP)		−0.02 (0.01)
Medium-ranking minister (Ref: PMP)		0.01 (0.01)
Low-ranking minister (Ref: PMP)		−0.01 (0.01)
Junior minister (Ref: PMP)		0.03 (0.01)
Failed coup attempt	0.20 (0.07)*	0.37 (0.09)*
FCA: Minister of Foreign Affairs (Ref: D)	−0.04 (0.07)	
FCA*Minister of Finance (Ref: D)	−0.08 (0.07)	
FCA*Other type of minister (Ref: D)	−0.12 (0.06)*	
FCA*Minister of Natural Resources (Ref: D)	−0.18 (0.08)*	
FCA*VP, DP, top minister (Ref: PMP)		−0.26 (0.09)*
FCA*Medium-ranking minister (Ref: PMP)		−0.29 (0.09)*
FCA*Low-ranking minister (Ref: PMP)		−0.26 (0.09)*
FCA*Junior minister (Ref: PMP)		−0.26 (0.12)*
Log of GDP per capita	−0.03 (0.02)	−0.03 (0.02)
Log of Population	−0.15 (0.06)*	−0.14 (0.06)*
Experience	0.00 (0.00)	−0.00 (0.00)
Experience ²	−0.00 (0.00)	−0.00 (0.00)
Experience ³	0.00 (0.00)	0.00 (0.00)
Country fixed effects	✓	✓
Year fixed effects	✓	✓
Observations	76530	90014
No. countries	115	115
Within R ²	0.13	0.13

* $p < 0.05$. Dependent variable: Purged next year. All models include country and year fixed effects. Country-clustered standard errors in parentheses. FCA = Failed coup attempt, D = Defense, PMP = Prime minister or President.

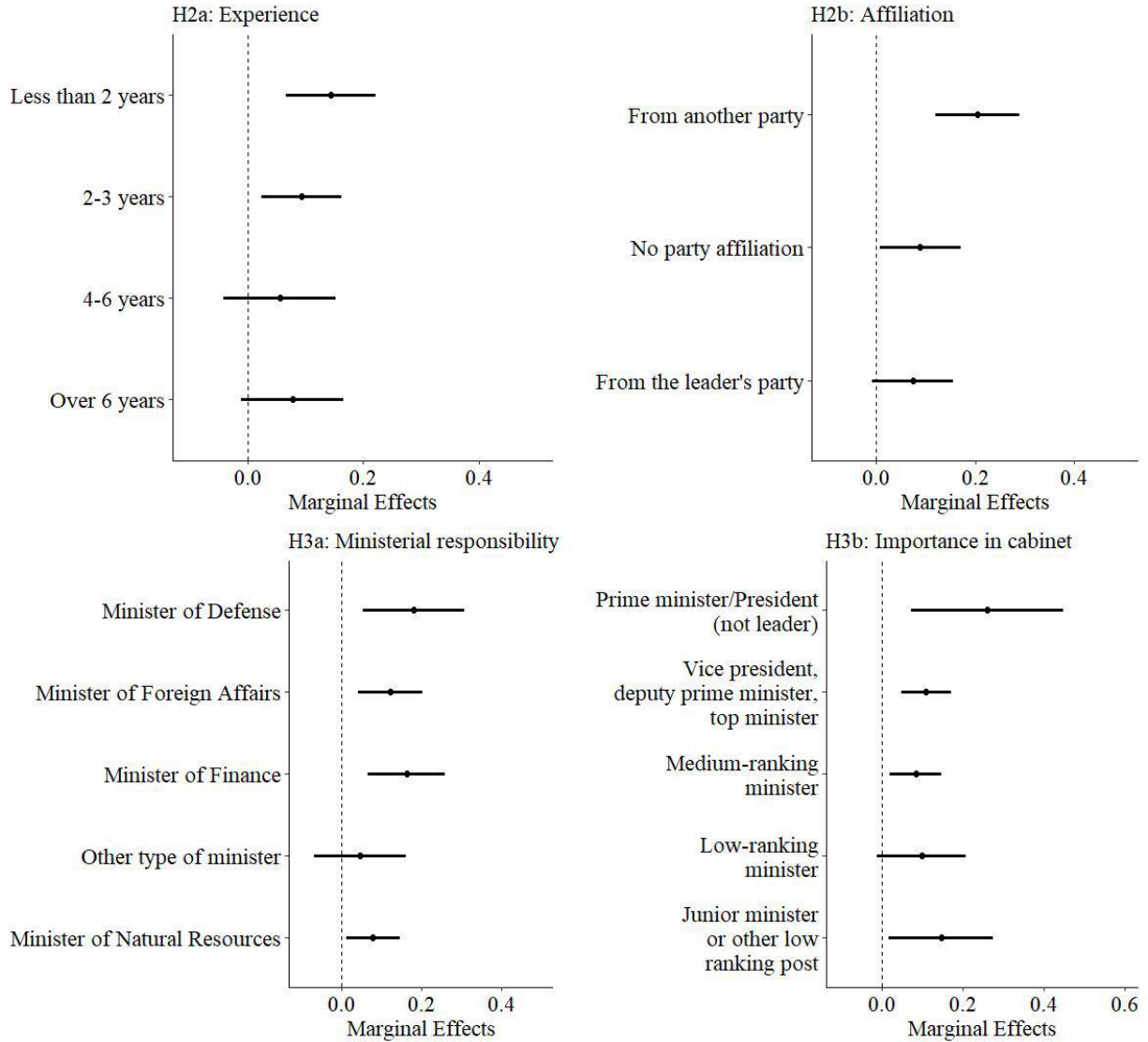
Table K3: Table for Figure 5

	Combination of traits
Low responsibility and weak signs of loyalty (Ref: HW)	0.03 (0.01)*
Low responsibility and strong signs of loyalty (Ref: HW)	0.02 (0.01)*
High responsibility and strong signs of loyalty (Ref: HW)	-0.02 (0.01)*
Failed coup attempt	0.20 (0.05)*
FCA*High responsibility and weak signs of loyalty (Ref: HW)	-0.11 (0.04)*
FCA*Low responsibility and strong signs of loyalty (Ref: HW)	-0.16 (0.05)*
FCA*High responsibility and strong signs of loyalty (Ref: HW)	-0.13 (0.06)*
Log of Population	-0.15 (0.06)*
Log of GDP per capita	-0.03 (0.02)
Country fixed effects	✓
Year fixed effects	✓
Observations	80657
No. countries	115
Within R ²	0.13

* $p < 0.05$. Dependent variable: Purged next year. All models include country and year fixed effects. Country-clustered standard errors in parentheses. FCA = Failed coup attempt, LW = High responsibility and weak signs of loyalty.

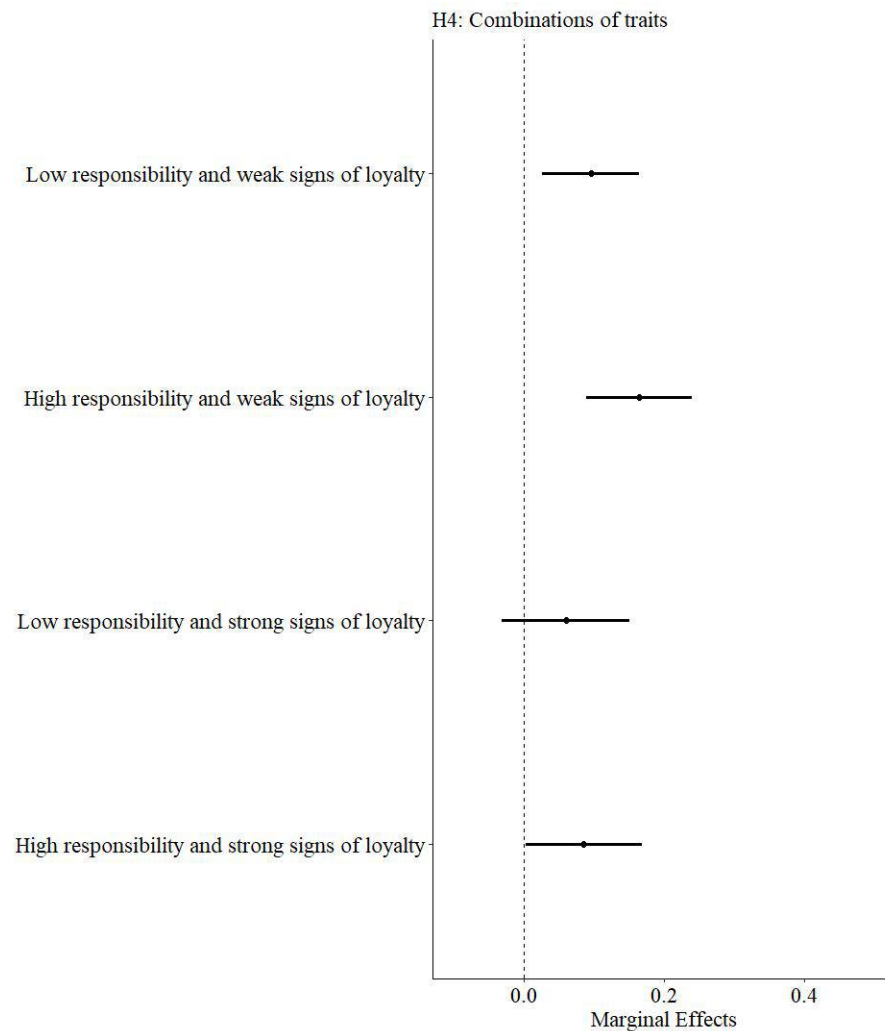
L Alternative measure of failed coup (individual-level results)

Figure L1: Alternative measure of failed coup (Bjørnskov and Rode data): Individual-level results



Note: N = 90,308 minister-years (87,605 in years without a coup attempt and 2,0703 in years with a coup attempt). The thick bars indicate the 95 percent confidence intervals.

Figure L2: Alternative measure of failed coup (Bjørnskov and Rode data). Combination of importance and loyalty: Individual-level results

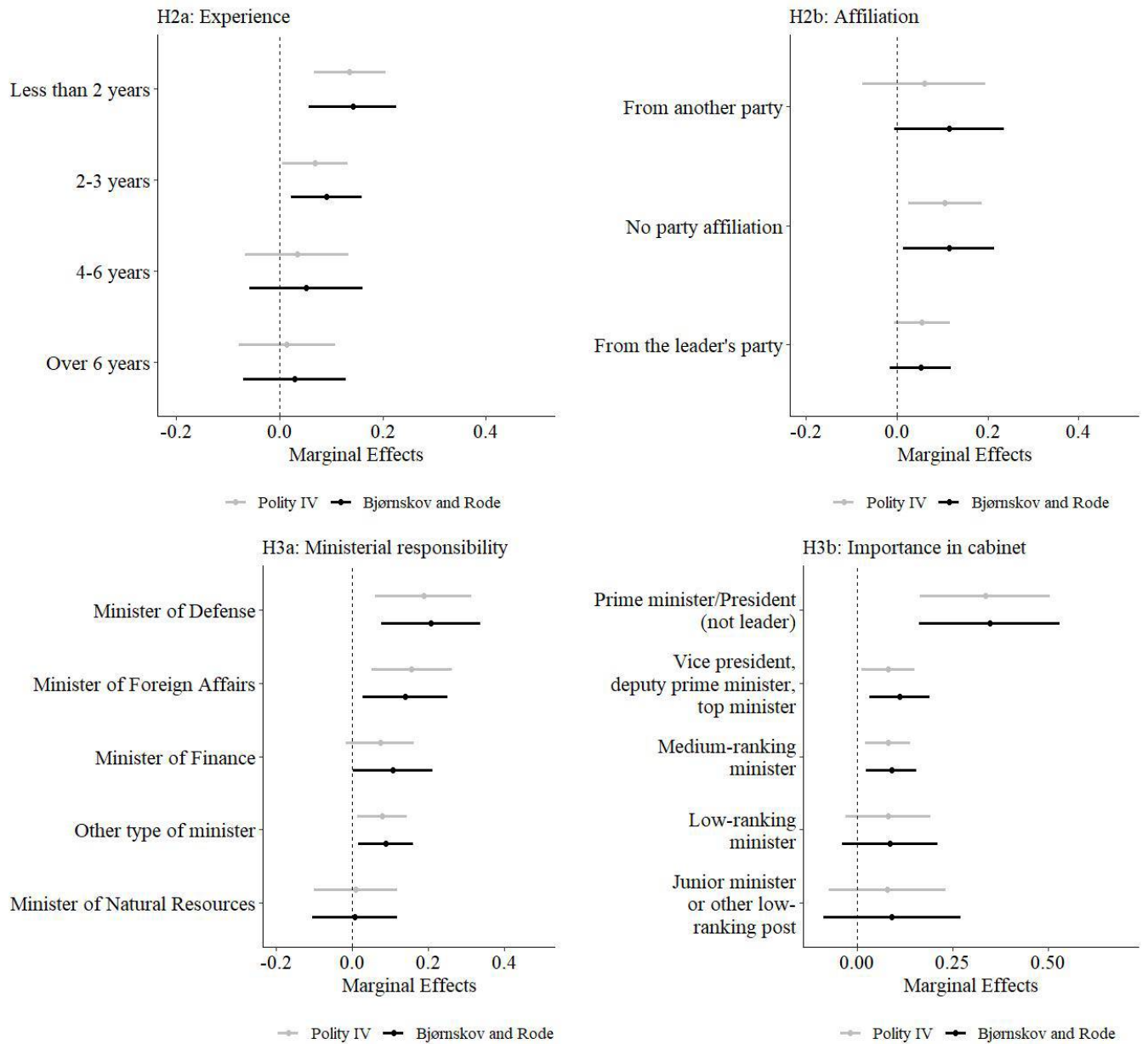


Note: N = Up to 80,519 minister-years (78,158 in years without a coup attempt and 2,361 in years with a coup attempt). Medium-ranking cabinet members and lower (in Figure 4) are classified as low responsibility, while the groups above are classified as high responsibility. Cabinet members with experience lower than the median in the cabinet for the given year or cabinet members from another party than the leader's are coded as having weak signs of loyalty. The remainder are coded as having strong signs of loyalty. The models show the difference in likelihood of being fired for the given type of minister in years with a coup attempt relative to years without a coup attempt. The bars indicate the 95 percent confidence intervals.

M Alternative autocracy classifications (individual-level results)

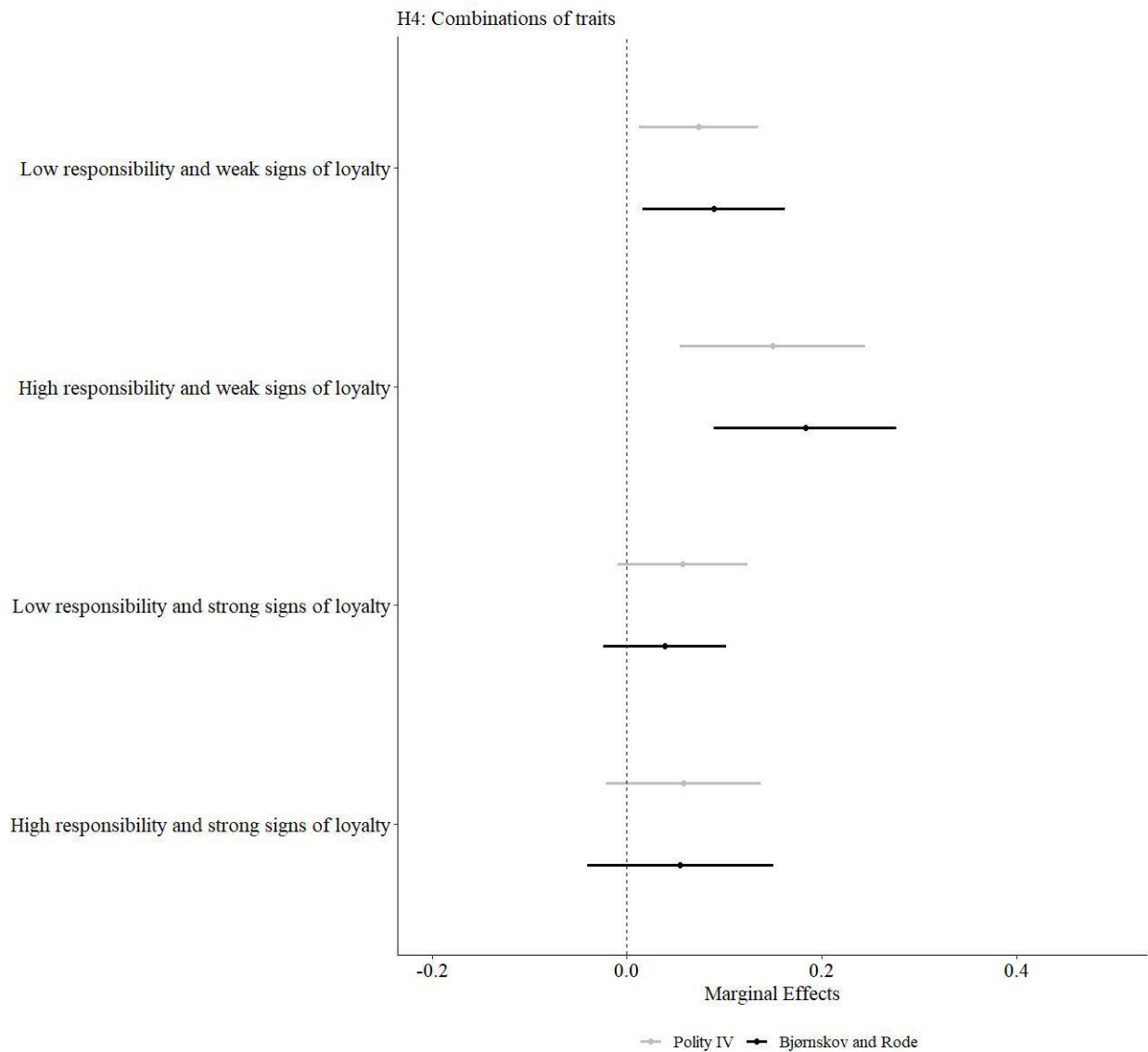
Similar to the country-level analyses in Appendix C, our two alternative autocracy classifications for the individual-level are Polity IV with a cut-off score below 6 (Marshall, Gurr and Jaggers 2019), and the extended Democracy and Dictatorship data (Bjørnskov and Rode 2020; Cheibub, Gandhi and Vreeland 2010).

Figure M1: Alternative autocracy classifications: Individual-level results



Note: N = Up to 109,303 minister-years (106,928 in years without a coup attempt and 2,375 in years with a coup attempt). Cut-off is a score below 6 for Polity IV. N = Up to 100,242 minister-years when using the extended Democracy and Dictatorship data (98,226 in years without a coup attempt and 2,016 in years with a coup attempt). The thick bars indicate the 95 percent confidence intervals.

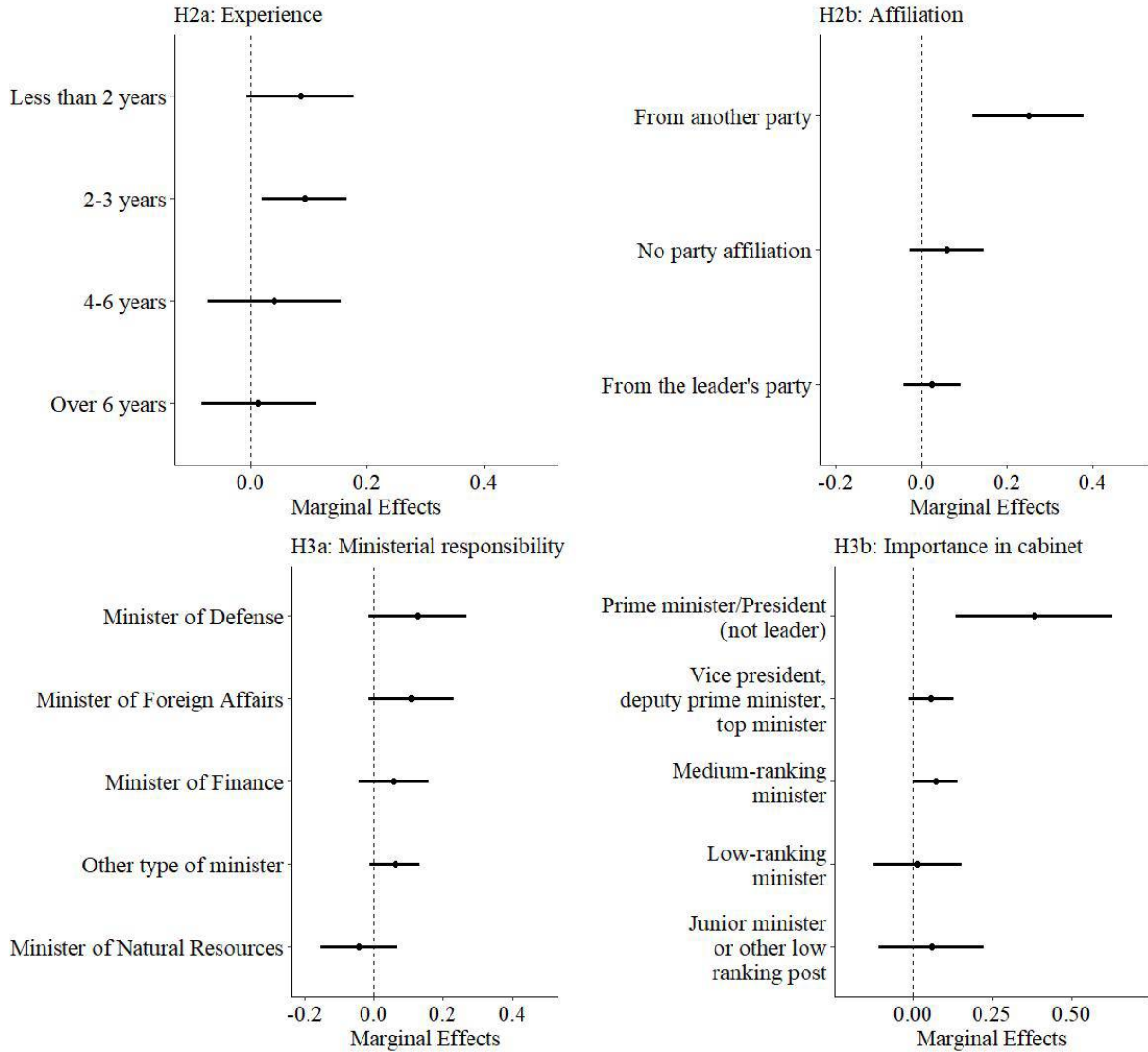
Figure M2: Alternative autocracy classifications. Combination of importance and loyalty: Individual-level results



Note: N = Up to 96,136 minister-years (94,146 in years without a coup attempt and 1,990 in years with a coup attempt) when using Polity IV. N = Up to 90,030 minister-years (88,299 in years without a coup attempt and 1,731 in years with a coup attempt) when using the extended Democracy and Dictatorship data. Medium-ranking cabinet members and lower (in Figure 4) are classified as low responsibility, while the groups above are classified as high responsibility. Cabinet members with experience lower than the median in the cabinet for the given year or cabinet members from another party than the leader's are coded as having weak signs of loyalty. The remainder are coded as having strong signs of loyalty. The models show the difference in likelihood of being fired for the given type of minister in years with a coup attempt relative to years without a coup attempt. The bars indicate the 95 percent confidence intervals.

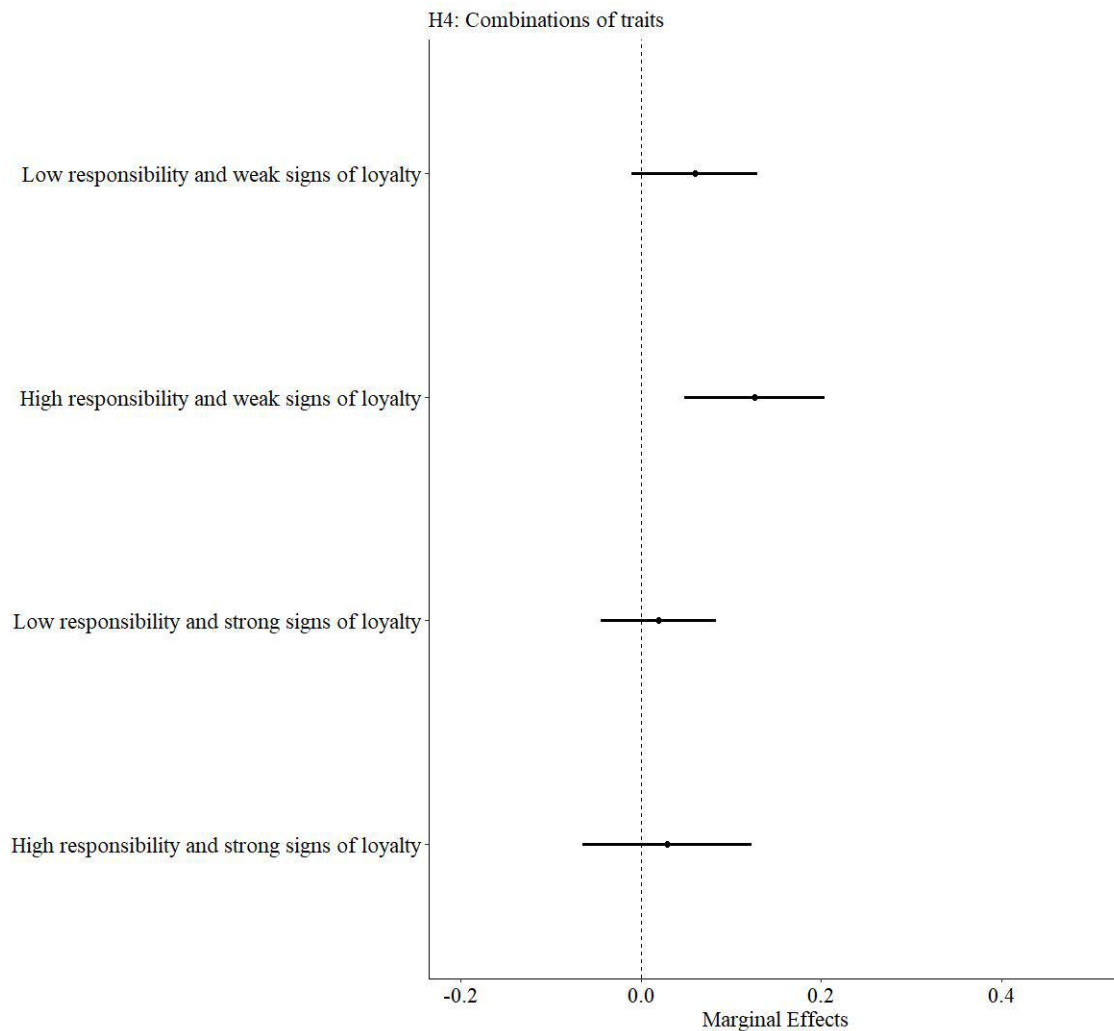
N Dropping first year of dictator tenure (individual-level results)

Figure N1: Dropping first year of dictator tenure: Individual-level results



Note: Up to N = 81,61 minister-years (80,295 in years without a coup attempt and 1,215 in years with a coup attempt). The thick bars indicate the 95 percent confidence interval.

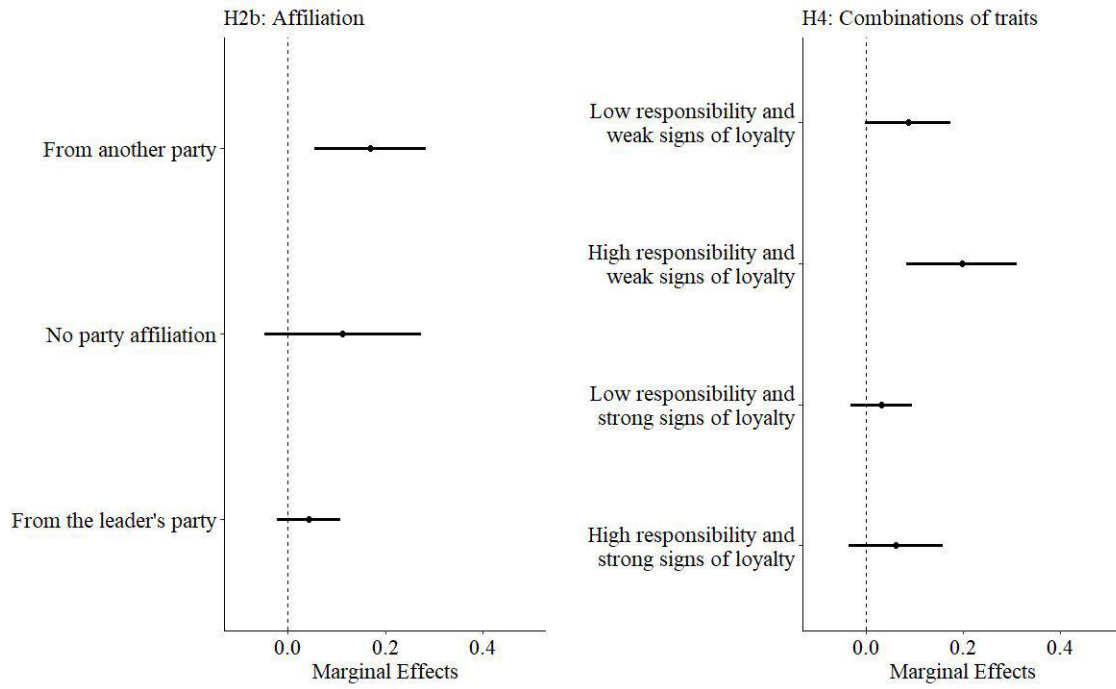
Figure N2: Dropping first year of dictator tenure. Combination of importance and loyalty: Individual-level results



Note: N = Up to 73,436 minister-years (72,221 in years without a coup attempt and 1,215 in years with a coup attempt). Medium-ranking cabinet members and lower (in Figure 4) are classified as low responsibility, while the groups above are classified as high responsibility. Cabinet members with experience lower than the median in the cabinet for the given year or cabinet members from another party than the leader's are coded as having weak signs of loyalty. The remainder are coded as having strong signs of loyalty. The models show the difference in likelihood of being fired for the given type of minister in years with a coup attempt relative to years without a coup attempt. The bars indicate the 95 percent confidence intervals.

O Only years with parties in the cabinet (individual-level results)

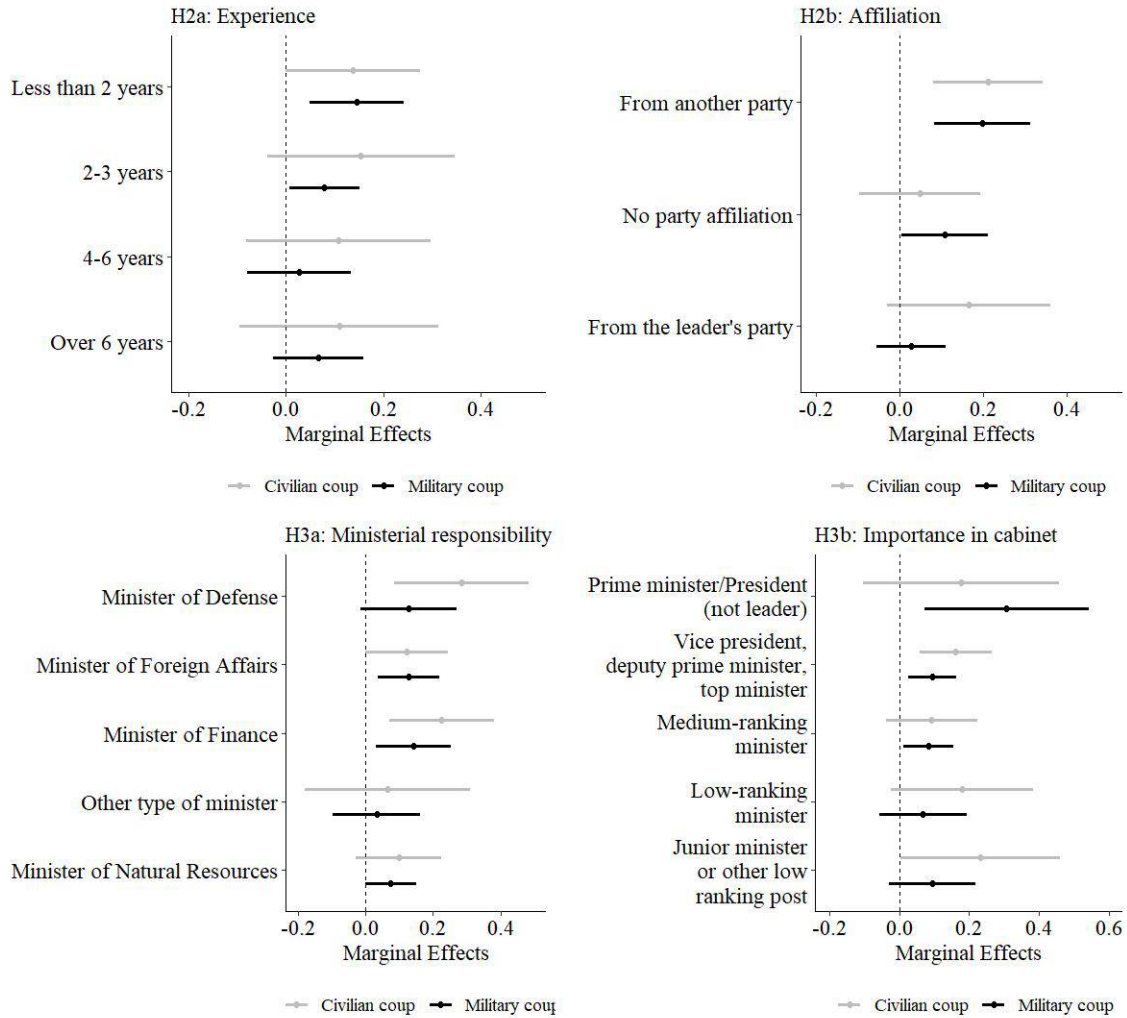
Figure O1: Only years with parties in the cabinet: Individual-level results



Note: Up to N = 70,100 minister-years (68,653 in years without a coup attempt and 1,447 in years with a coup attempt). The thick bars indicate the 95 percent confidence interval.

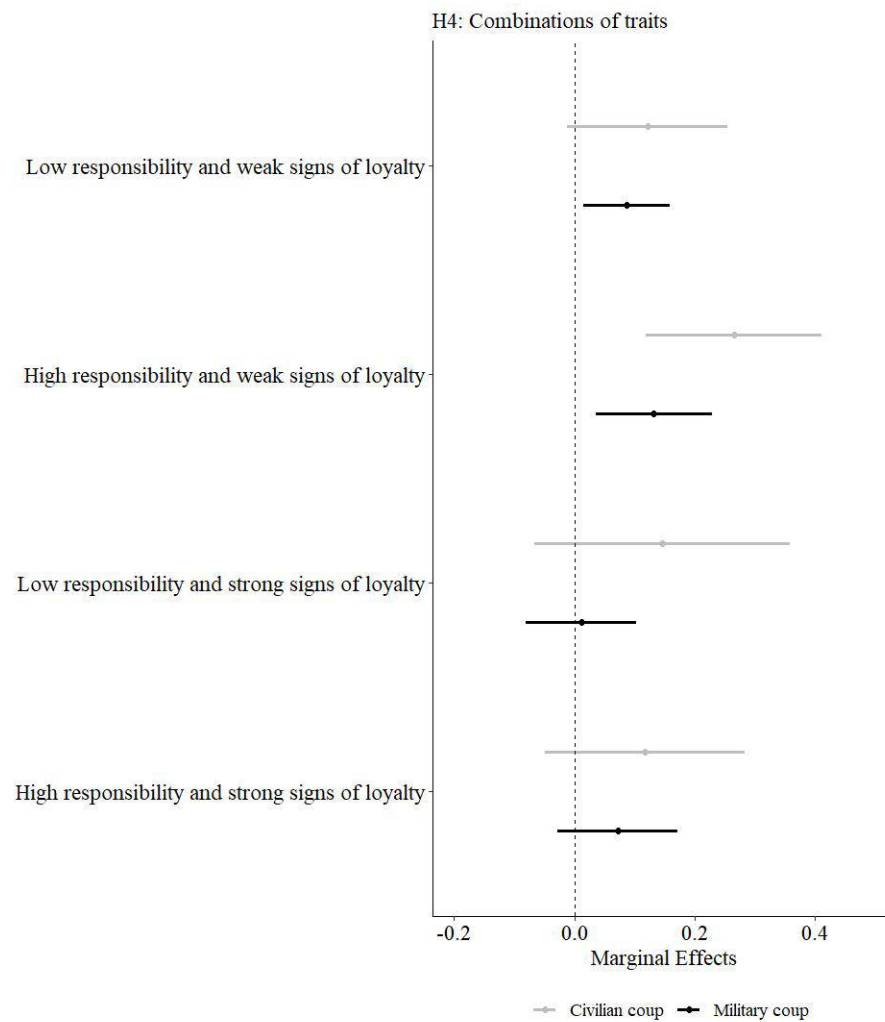
P Different coup types (individual-level results)

Figure P1: Different coup types using Bjørnskov and Rode: Individual-level results



Note: Up to N = 90,253 minister-years (87,605 in years without a coup attempt and 820 in years with a civilian coup attempt, 1,828 in a year with a military coup attempt). The thick bars indicate the 95 percent confidence interval.

Figure P2: Different types of coup using Bjørnskov and Rode. Combination of importance and loyalty: Individual-level results



Note: N = Up to 80,469 minister-years (78,158 in years without a coup attempt and 746 in years with a civilian coup attempt, 1,565 in a year with a military coup attempt). Medium-ranking cabinet members and lower (in Figure 4) are classified as low responsibility, while the groups above are classified as high responsibility. Cabinet members with experience lower than the median in the cabinet for the given year or cabinet members from another party than the leader's are coded as having weak signs of loyalty. The remainder are coded as having strong signs of loyalty. The models show the difference in likelihood of being fired for the given type of minister in years with a coup attempt relative to years without a coup attempt. The bars indicate the 95 percent confidence intervals.

Q Classification of portfolios and importance index (individual-level results)

Table Q1: List of Portfolios: Individual-level results

Portfolio	Prestige	Portfolio	Prestige
Defense, Military & National Security ¹	High	Foreign Relations ¹	High
Government, Interior & Home Affairs	High	Finance, Budget & Treasury ¹	High
Agriculture, Food, Fisheries & Livestock	Medium	Audit, Oversight & Internal Affairs	Medium
Civil Service	Medium	Communications & Information	Medium
Construction & Public Works	Medium	Correctional Services & Police	Medium
Culture & Heritage	Medium	Education, Training & Skills	Medium
Energy	Medium	Enterprises, Companies & Business	Medium
Environment	Medium	Executive & Legislative Relations	Medium
Foreign Economic Relations	Medium	General Economic Affairs	Medium
Health & Social Welfare	Medium	Housing	Medium
Industry & Commerce	Medium	Justice & Legal Affairs	Medium
Labor, Employment & Social Security	Medium	Local Government	Medium
Natural Resources	Medium	Planning & Development	Medium
Political Reform	Medium	Properties & Buildings	Medium
Religion	Medium	Regional	Medium
Tax, Revenue & Fiscal Policy	Medium	Transport	Medium
Ageing & Elderly	Low	Children & Family	Low
Immigration & Emigration	Low	Minorities	Low
Science, Technology & Research	Low	Sports	Low
Tourism	Low	Veterans	Low
Without Portfolio	Low	Women	Low
Youth	Low		
Other	Low		

¹There can be several ministers in charge of, for example, defense. We only include the highest ranked minister as high prestige, while the rest are downgraded to medium prestige.

Leader (1)

Leader

Prime minister/President (not leader) (2)

President, chief of state, prime minister, who is not the leader

Vice-president, deputy prime minister, and top minister (3)

Vice-president, deputy prime minister, deputy chief of state

Full ranking minister of high prestige portfolio

Medium-ranking minister (4)

Full ranking minister of medium prestige portfolio

Attorney general, chief justice, or legal official

Governor (Military)

Member, royal family

Member, ruling group

Low-ranking minister(5)

Full-ranking minister of low prestige portfolio

Director of government agency

Government spokesperson

Governor (Regional)

Junior minister or other low-ranking post (6)

Junior minister (independent of prestige)

Advisor

Ambassador to the United States

Assistant advisor

Chief of staff

Deputy director of government agency

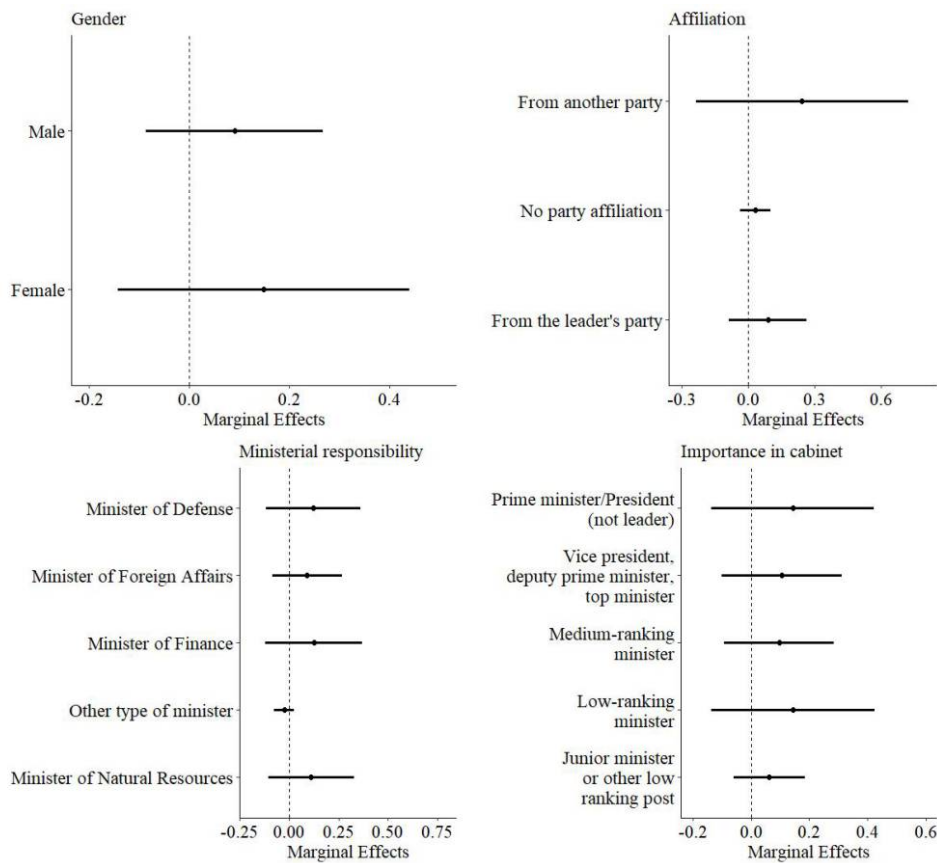
Governor (Central Bank)

Representative to the United Nations

R Who is hired? (individual-level results)

One may ask: Who is hired to replace those ministers who are purged? In the figure below, we present a preliminary analysis of this question. Interestingly, the results show that new cabinet members do not mirror those who were purged. We find, for instance, that ministers in charge of security and defense are not more likely to be new cabinet members. This can be explained by the dictator filling these posts with people who were already in the cabinet – and whom he therefore trusts to a greater extent. Furthermore, we find that new members are slightly more likely to be female and from another party than that of the leader's, which may be the result of new co-optation dynamics.

Figure R1: Who is hired? Individual-level results



Note: Up to 95,634 minister-years (93,426 in years without a coup attempt in the previous year and 2,208 in years with a coup attempt in the previous year). The models show the difference in likelihood of being hired (experience = 1) for the given type of minister in the years following a coup attempt relative to years where there is no coup attempt in the previous years. The bars indicate the 95 percent confidence interval.

References for the appendix

- Anckar, Carsten and Cecilia Fredriksson. 2019. "Classifying political regimes 1800–2016: a typology and a new dataset." *European Political Science* 18(1):84–96.
- Bjørnskov, Christian and Martin Rode. 2020. "Regime types and regime change: A new dataset on democracy, coups, and political institutions." *The Review of International Organizations* 15:531–551.
- Cheibub, José Antonio, Jennifer Gandhi and James Raymond Vreeland. 2010. "Democracy and dictatorship revisited." *Public choice* 143(1-2):67–101.
- Geddes, Barbara, Joseph Wright and Erica Frantz. 2018. *How Dictatorships Work: Power, Personalization, and Collapse*. Cambridge University Press.
- Marshall, Monty G, Ted Robert Gurr and Keith Jagers. 2019. "Polity IV project: Political regime characteristics and transitions, 1800-2018." *Center for Systemic Peace* .