The Military and Autocratic Regime Crises: Soldiers in Coups and Mass Mobilization

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To Rosalie and Fabian

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Preface

This dissertation consists of a summary report as well as of the following five articles:

Paper 1
Eschenauer-Engler, Tanja, and Bastian Herre. 2023. “Coup leaders: a new comprehensive dataset, 1950–2020.” *European Political Science*, https://doi.org/10.1057/s41304-023-00438-5.

Paper 2
Eschenauer-Engler, Tanja. 2023. “Types of anti-regime mobilization and the varieties of military coups in autocracies.” *unpublished manuscript.*

Paper 3
Eschenauer-Engler, Tanja. 2023. “Armed forces and airwaves: media control and military coups in autocracies.” *Contemporary Politics* 29 (4): 446–465.

Paper 4
Eschenauer-Engler, Tanja. 2023. “Soldiers and protest: a set-theory perspective on military repression of anti-regime mass mobilization in autocracies.” *International Interactions* 49 (5): 785–812.

Paper 5
Croissant, Aurel, Tanja Eschenauer, and Jil Kamerling. 2017. “Militaries‘ roles in political regimes: introducing the PMR data set.” *European Political Science* 16 (3): 400–414.

In the summary report, I present an overview of the dissertation by discussing its general research interests, developing paper-specific research questions based on a comprehensive literature review, and elaborating on the papers’ individual findings and the overall contributions of this dissertation. Then, I present the five papers.

Four papers are published. The versions presented here are identical to the versions published in the respective journal – only the style of citations and headings has been changed for the purpose of consistency with all parts of this dissertation.

I. Summary report

1. Introduction

The fear of being deposed plaques all non-democratic leaders. Autocrats[1] may be toppled through horizontal crises, which have their origins in the autocratic ruling elite and usually manifest as unconstitutional attempts by regime insiders to depose the incumbent in a coup d'état. Yet, they may also fall prey to vertical crises that hail from the masses and typically take the form of large-scale popular mobilization that attacks the regime from below (Gerschewski and Stefes 2018, 6–7; Svolik 2012).[2]

In both types of autocratic regime crises, soldiers play a crucial role: Coups are almost always led by military officers (Chin, Carter, and Wright 2021; Eschenauer-Engler and Herre 2023) and have been the most frequent reason for autocrats to lose their office after 1945 (Kendall-Taylor and Frantz 2014; Svolik 2012). And even though military coups are not as prevalent as they were during the 1960s and 1970s, the latest putsches in Zimbabwe (2017), Myanmar (2021), or Sudan (2021) have shown that coups remain a major threat for political incumbents.

Mass mobilization, by contrast, has long been a rather neglectable threat for autocratic leaders, with only very few of them falling prey to this particular challenge (Kendall-Taylor and Frantz 2014). Following the end of the Cold War, however, mass mobilization has rapidly developed into a major challenge to non-democratic incumbents (Kendall-Taylor and Frantz 2014). Especially peaceful anti-regime mass protests, such as the Color Revolutions in Post-Soviet Eurasia or the Arab Spring, have considerably gained in significance. When such a revolutionary uprising throws a regime in serious jeopardy, the military's behavior is decisive for its political survival (Barany 2016; Pion-Berlin, Esparza, and Grisham 2014). Only if the military is willing to deploy its arsenal of weapons and manpower to fend off the mass unrest, the incumbent regime can be saved its from downfall (e.g. Croissant, Kuehn, and Eschenauer 2018a, b; Pion-Berlin, Esparza, and Grisham 2014).

[1] The terms autocracy, dictatorship, and non-democratic regime are used interchangeably throughout the dissertation. An autocracy definition is presented in the section on core concepts.

[2] I only refer to the domestic level and do not consider international challenges to autocratic leaders, such as a defeat in an international conflict.

Taken together, the military is central in both types of crises. On the one hand, military officers are the actors that become a lethal threat to the political survival of autocratic leaders when they try to seize power in a coup. On the other hand, soldiers are the regime's last hope in the eye of a massive popular uprising that can only be contained with military force. Sometimes, vertical and horizontal crises even occur simultaneously when a major upheaval prompts soldiers to grab political power (Croissant, Kuehn, Eschenauer 2018a, 174). Across the realm of autocracies, however, the military's behavior varies starkly with regard to coups and mass mobilization:

Regarding coups, some armed forces in autocracies stage no or very few coups, while others repeatedly intervene into the political process. And while we see that around half of all military coup plotters fail, the other half succeeds (Eschenauer-Engler and Herre 2023; Powell and Thyne 2011). Regarding mass mobilization, too, the military's role shows a comparable diversity. On China's Tiananmen Square in 1989, in Iran following the death of Jina Mahsa Amina in 2022, as well as in Syria during the 2011 Arab Spring, armed forced cracked down on anti-regime protests. Military reactions were markedly different in 1989 East Germany, 2011 Tunisia, or 2019 Algeria where militaries defected from the regime and switched sides to the opposition. And in some cases, such as in 2013 Egypt or 2019 Sudan, anti-regime mass mobilization encouraged soldiers to take over power in a coup d'état.

What explains these varying roles of armed forces in the two types of autocratic regime crises? Why do soldiers in some autocracies turn against the incumbent regime in a military coup, while elsewhere they remain loyal? And why do the responses of armed forces to massive anti-regime protests differ so starkly, with some militaries cracking down on protests and others defecting to the opposition or staging a coup? Questions like these have motivated a vast body of literature investigating the causes and dynamics of military coups, on the one hand, and the determinants of military reaction to anti-regime mass protests, on the other. Yet even though this research has greatly enlarged our knowledge on the military's role in coups and anti-incumbent mass protests, I argue in this dissertation that a deeper and comprehensive understanding of the armed forces in autocratic regime crises has been hampered by several conceptual, methodological, and empirical shortcomings.[3]

[3] Cf. the literature review in section 2 for a detailed discussion on the limitations of current research.

The most important of these shortcomings is how the military is portrayed and conceptualized in the majority of works on coups and mass mobilization in autocracies. For the most part, and especially in quantitative analyses, the military has been treated as a unitary actor (e.g. Bove and Rivera 2015; Koehler 2017; Olar 2019; Tófalvi 2013). Hence, the research focus lies on why *the* military decides to stage a coup against an autocratic regime and why *the* armed forces crack down on protests, shift loyalty to the opposition, or take over political power in the eye of a mass uprising. Yet this perspective on military behavior in autocratic regime crises is conceptually over-simplified.

Take the 1969 coups in Libya and Brazil as an example. Both coups occurred in the same year, both were led by military officers, both of them were successful, and both were staged in autocratic regimes. Despite these similarities, these coups are strikingly different in terms of their perpetrators and their leaders' background in the armed forces, their motivations, resources, and capabilities to stage a takeover. The Libyan coup was led by the barely known army captain Muammar al-Gaddafi and fellow low-ranking officers with the aim of abolishing the Libyan monarchy. The Brazilian coup, by contrast, was launched by the three high-ranking military chiefs of staff to topple ailing President Artur da Costa e Silva, but not to abolish the underlying military regime altogether. Despite the striking differences in the military background of the coup leaders and their political aims, the majority of quantitative works on coups would treat these two coups as the same empirical phenomenon as the most commonly used data sources do not provide information to disaggregate coup types (Powell and Thyne 2011).

An innovative, yet still very small branch of quantitative civil-military relations literature has recently shown that such variations in the military rank and political aims of military officers are crucial to understand military behavior in crises (e.g. Albrecht and Eibl 2018; Chin, Carter, and Wright 2021; De Bruin 2019, 2020). Officers from different military ranks and with different political interests have been found to possess remarkably different interests, motives, and capabilities to mount a coup which translates into variations in their coup activity (Albrecht, Koehler, and Schulz 2021; Chin, Carter, and Wright 2021; Kim and Sudduth 2021; Singh 2014). Coups by high-ranking senior officers, for instance, are not only less violent (De Buin 2019) and more likely to succeed (Singh 2014) than coups by lower-ranked officers, but they are also prevented by different coup-proofing measures (Albrecht and Eibl 2018) and are seldom followed by democratic regime change (Albrecht, Koehler, and Schulz

2021). Coups also differ in terms of the perpetrators' political aims. While some coup plotters want to overthrow the entire regime and replace the contemporary regime elite (regime-change coups), others only want to oust the incumbent, but do not intend to change the underlying regime (leader-reshuffling coups) (Aksoy, Carter, and Wright 2015; Chin, Carter, and Wright 2021). These different types of coups are also related to different coup triggers. While the risk of leader-reshuffling coups is increased by terrorist attacks (Aksoy, Carter, and Wright 2015) and decreased by the existence of nominal democratic institutions (Kim and Sudduth 2021), poverty only raises the risk of regime-change coups, but not reshuffling coups (Chin, Carter, and Wright 2021).

This need for disaggregation does not only concern coup research but also the study of military reactions to mass mobilization, which often is not conceptually clear in whether it seeks to explain the military's behavior as a whole or whether it focuses on the military leadership's decision to suppress protests or defect from the regime. This is important as different parts of the military organization may have different preferences how to react to an uprising, and in some cases different parts of the military chose different options how to response to revolutionary mass unrest, such as in Libya, Syria, or Yemen during the Arab Spring (Droz-Vincent 2014; Lutterbeck 2013). Yet except for a few studies (e.g. Bou Nassif 2015a, 2021; Lee 2009), many existing works on military behavior are not conceptually clear whether their theoretical arguments focus on the military leadership (as the location where the decision to repress or to defect from the regime is made) or the entire military.

As a consequence, the preferences and varying behavior of different groups within the armed forces have not been taken adequately into account. This has far-reaching consequences not only for coup research and the study of mass mobilization but also for our understanding of autocratic regime crises more generally. By lumping together different types of coups and failing to distinguish between different military groups in the eye of mass mobilization, research has concealed the different underlying reasons and dynamics why different groups of soldiers behave differently with regard to regime crises.

This insight is the point of departure of this dissertation, which aims at contributing to a better understanding of autocratic regime crises by studying the behavior of different intra-military groups during mass mobilization and in coups. I build upon existing research on the topic, yet develop and refine theoretical arguments and empirical analyses by differentiating military actors based on their

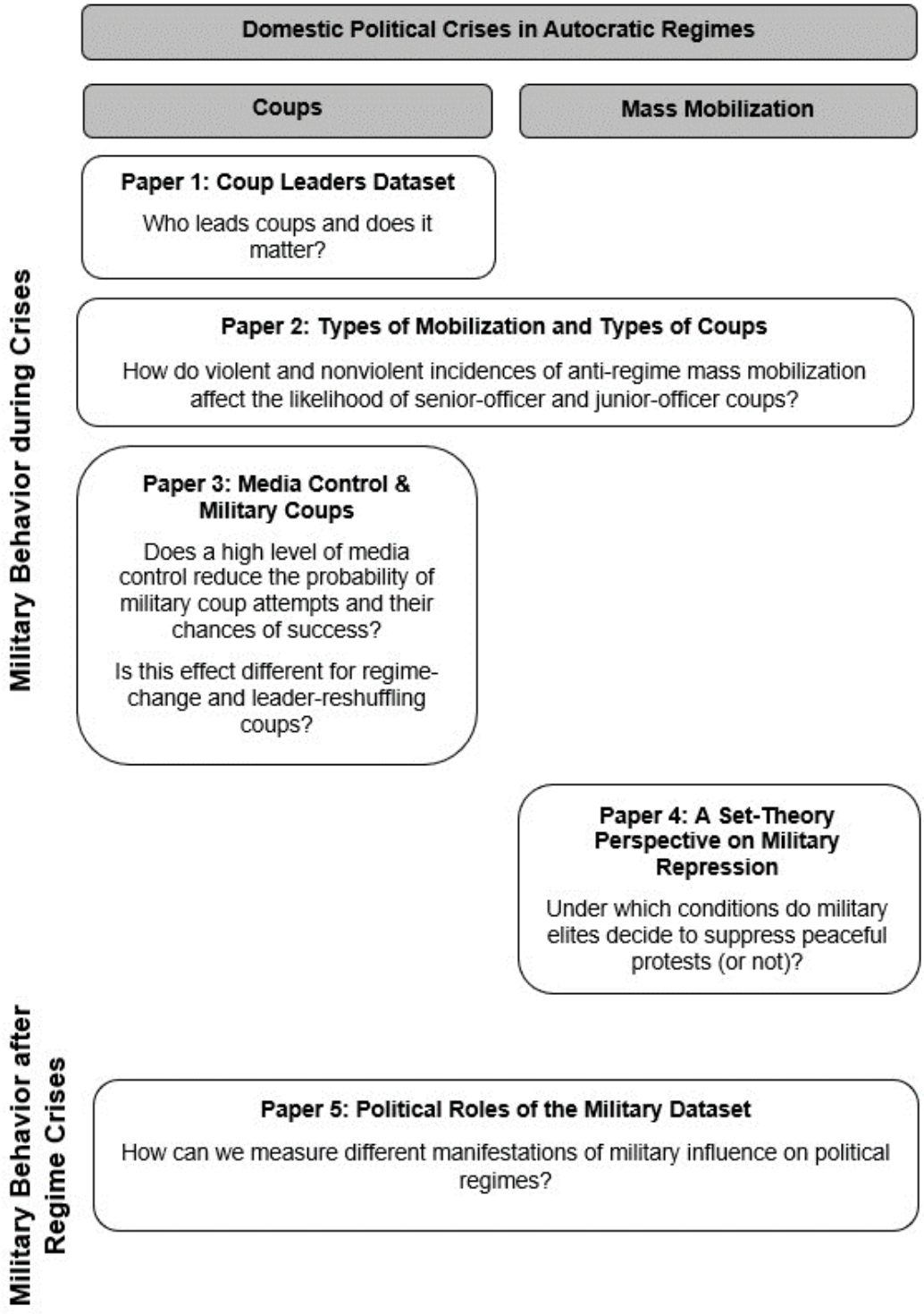
ranks and political aims. To this end, I pose the following overarching research questions: *Does the behavior of different groups of military officers differ with regard to autocratic regime crises? And how can the varying behavior of military officers from different strata in military coups and massive anti-regime mobilization in autocracies be explained?*

The five papers building the doctoral thesis cover two consecutive episode of autocratic regime crises: the military behavior during regime crises and the military's role after regime crises. The first four papers of the dissertation deal with the behavior of different groups of soldiers in coups and mass mobilization in autocracies. The fifth paper serves as a concluding chapter and should be read as an outlook how the military's role in mass mobilization and coup-plotting shapes the armed forces' position in a polity for the years to come. How the papers cover and relate to the two types of autocratic regimes crises is depicted in Figure 1.

In Paper 1, published in *European Political Science* (Eschenauer-Engler and Herre 2023), Bastian Herre and I introduce a novel dataset on the civilian and military background of all leaders of the 474 coups from 1950 to 2020. We ask: *How can we refine existing data on coups in order to provide valid data on the military or civilian background of the coup leaders as well as the coup leaders' military rank? Do the chances of an autocracy to democratize after a coup depend on the military rank of the coup leaders?*

Paper 2, an unpublished manuscript (Eschenauer-Engler 2023a), uses the data presented in the previous paper and distinguishes between two types of coups based on the military rank of the coup plotters: senior-officer coups and junior-officer coups. It asks: *Do nonviolent and violent incidences of mass mobilization have a differing effect on the likelihood of senior-officer and junior-officer coups?* It shows that nonviolent anti-regime mobilization encourages coup attempts by both senior and junior officers, but has a stronger effect on coups by junior officers. Violent mobilization only spurs coups by the military's top brass and is not consistently linked to coups by junior officers.

Figure 1: Overview of the dissertation



Paper 3, published in *Contemporary Politics* (Eschenauer-Engler 2023b), investigates the relationship between an autocracy's extent of control over the media and the risk of military coup attempts as well as their chances of success. It asks: *Does a highly regulated media environment decrease the likelihood of military coup*

attempts and their chances of success? Is this effect of media control on coup attempts and success driven by the type of coup (regime-change or leader-reshuffling coup)? I show that autocracies exerting tight control over the media face a lower likelihood of both coup attempts and coup success. By disaggregating coups into regime-change and leader-reshuffling coups, the empirical analysis uncovers that the restraining effect of tight media control on coups particularly applies to regime-change coups. Such coups that are typically mounted by lower-ranking officers from outside the regime elite are less likely to turn out successful in regimes that extensively control their media.

Paper 4, published in *International Interactions* (Eschenauer-Engler 2023c), studies military leaderships' reactions to massive peaceful protests in autocracies from a set-theoretic perspective and in a regionally and temporally diverse sample. It asks: *Under which causally complex and equifinal conditions do military leaderships decide to suppress nonviolent anti-regime mass mobilization in autocracies and under which conditions do they abstain from using violence against peaceful protesters?* Using a crisp-set QCA, I show that the military elites' behavior amid massive revolutionary uprising result from a complex interplay of relevant factors and that different combination of these factors are at work in different socio-political environments.

Paper 5, published in *European Political Science* (Croissant, Eschenauer, and Kamerling 2017) does not try to explain the military's varying behavior in autocratic regime crisis like the four previous papers, but should be read as an outlook how the military's role in such crises influences the armed forces' future position in a polity. It asks: *How can we measure different manifestations of military influence on political regimes?* The chapter presents a novel dataset introducing two indices that capture two dimensions of military influence: the military ruler and the military supporter index. The military's role in coup-plotting, on the one hand, and the military's role in quenching popular dissent, on the other, are constitutive parts of the two indices and thus show how plotting a coup and quenching dissent translates into an influential role of the military in a regime.

In the remainder of this summary report, I review the existing literature on military coups and military reactions to mass mobilization in autocracies (section 2), introduce core concepts used in the dissertation and outline the overarching theoretical propositions linking the papers (section 3) as well as briefly summarize

the five papers (section 4). The summary report concludes with the dissertation's contribution to research on the military's role in autocratic regime crises (section 5).

2. Literature review

This section proceeds in three steps. First, it discusses the current state of research on military coups and outlines its conceptual, theoretical, and empirical gaps. Second, the section gives on overview of studies addressing the varying behavior of armed forces in the eye of mass mobilization and identifies their shortcomings. Third, I spell out how the thesis contributes to addressing these gaps.

2.1 Coups

Contemporary research on coups is a methodologically rich field with a focus on quantitative methods and a decidedly comparative outlook. Over the last two decades, the availability of comprehensive datasets on coups (e.g. Marshall and Marshall 2022; Powell and Thyne 2011) has enabled scholars to systematically study the factors prompting coups as well as the impact of so called 'coup-proofing measures' that regimes may take to shield themselves from military intervention. Factors as diverse as socio-economic inequality (e.g. Houle 2016), the regime's competitiveness and legitimacy (e.g. Belkin and Schofer 2003; Lehoucq and Pérez-Liñán 2014), as well as domestic instability (e.g. Bell and Sudduth 2018; Casper and Tyson 2014; Johnson and Thyne 2018) have been found to spur coups. Other factors were identified to render regimes less coup-prone, such as a better funding of the military (Powell 2012) or dividing the coercive apparatus into rivalling forces (De Bruin 2018; Pilster and Böhmelt 2015).

Among these various quantitative works, a subsection of coup research has emerged that explicitly focuses on coup activity in non-democratic regimes (e.g. Florea 2018; Wig and Rød 2016; Wintrobe 2012). The variations of coup activity in autocratic regimes have been linked, among others, to differences in their institutional set-up (Bove and Rivera 2015; Olar 2019; Woo and Conrad 2019), the existence of formalized succession rules (Frantz and Stein 2017), as well as differing coup-proofing measures (e.g. Matthews 2022; Song 2022). While all of this literature has considerably forged ahead our knowledge of coup activity, particularly in

dictatorships, several shortcomings have impeded an even deeper understanding of the military's role in autocratic regime crises:

Treatment of the military as an unity actor and lacking differentiation of coup types
As already outlined in the introduction, coup research for the most part fails to adequately disaggregate coups, even though coups have been found to vary considerably in terms of their leaders' military rank (Bjørnskov and Rode 2020; De Bruin 2018, 2020; Singh 2014), their relationship to the political elite (Albrecht, Koehler, and Schulz 2021), as well as their political aims (Chin, Carter, and Wright 2021). By disaggregating coups along these dimensions, scholars have demonstrated that the noticeable variations in coup leadership and coup leaders' political aims are crucial to understand why coups occur and how they end. Among the different disaggregation criteria, the military rank of the coup leaders has been identified to be particularly important for understanding coup dynamics: Singh (2014), for instance, shows that high-, mid-, and low-ranking officers have quite different motivations, capabilities, and resources to stage a successful takeover. Taking the same line, Albrecht and Eibl (2018) demonstrate that regimes need different coup-proofing measures to deter coups from different military strata. The rank of the coup leaders is also important for coup outcomes as seizures by high-ranking officers have not only been uncovered to be substantially more successful (Singh 2014), but also considerably less likely to turn violent than coups perpetrated by lower-ranked soldiers (De Bruin 2019, 2020).

Besides to the military rank, coups also differ regarding the political aims of the coup leaders and their relationship to the political elite: While some plotters aim for the replacement of the entire elite and a fundamental change of the regime (regime-change coups), other perpetrators topple the regime leader but do neither intend to substitute the ruling elite nor change the entire regime (leader-reshuffling coups) (Chin, Carter, and Wright 2021, 1041). Like the military background of the coup plotters, these variations considerably affect coup activity in non-democratic regimes (Aksoy, Carter, and Wright 2015; Chin, Carter, and Wright 2021; Geddes, Wright, and Frantz 2018). While previous research on coups, for instance, has shown that nominally democratic institutions like parties and legislatures help autocrats to reduce the risk of coups (Bove and Rivera 2015; Magaloni 2008; Woo and Conrad 2019), Kim and Sudduth (2021) demonstrate that this effect only applies to leader-reshuffling coups, yet not to regime-change coups. This example shows that the use of

disaggregated coup data would not only enable researchers to develop and probe more precise causal mechanism on coup-plotting, but also help to refine our existing findings on coups in autocratic regimes.

Taken together, this novel strand of coup research underlines that we cannot extend our knowledge and understanding of autocratic regime crises if we do not investigate the varying causes of different types of coups. A major obstacle to refining and enhancing our knowledge on different coup types, however, is the fact that novel datasets allowing a disaggregation of coup types still exhibit some conceptual shortcomings, coding issues, or scope limitations (see Eschenauer-Engler and Herre 2023).

Lacking attention to coup outcomes

Contemporary research is severely biased towards the onset of coups (coup attempts) and largely neglects the determinants of coup outcomes, that is whether a coup succeeds or fails. One reason for this void is that contemporary research on coups in autocracies overwhelmingly applies methods that cannot simultaneously assess the impact of causal factors on both the onset and the outcome of a coup. While two-stage models such as Heckman probit have been repeatedly used to estimate the determinants of both coup onset and coup outcome in coup research in general (e.g. Pilster and Böhmelt 2015; Powell 2012), their use is exceptionally rare in research on putsches in autocracies (Florea 2018; Olar 2019) and only very few researchers use alternative ways to investigate both stages of a coup (Matthews 2022). This methodological and empirical imbalance has serious consequences for our understanding of autocratic regime crises. Whereas our knowledge on the factors inducing coups is constantly increasing, we know considerably less about which factors increase their prospects of success. In order to understand the dynamics of autocratic regime crises, however, it is not only crucial to understand why crises in the form of military coups flare up, but also under which conditions autocratic incumbents succeed in fending off a coup that already under way.

Unclear impact of some basis features of autocratic rule on coup activity

The impact of some of the most basic differences between autocratic regimes and their impact on coups remains yet to be studied. Even though all autocracies share that they lack meaningful electoral contest, there nevertheless are remarkable varieties how autocratic leaders organize and structure their rule (Geddes, Wright,

and Frantz 2014, 2018). Such variations across the autocratic realm are the point of departure for many analyses that investigate which traits of autocratic rule render regimes more or less susceptible to putsches. A great deal of coup literature has studied, for instance, how differences in the institutional set-up of autocratic regime translate into a varying coup risk of different autocracies (e.g. Bove and Rivera 2015; Frantz and Stein 2017; Matthews 2022, Song 2022). Despite these important findings, there are still important traits of autocratic rule whose impact on coups is barely understood. Autocratic regimes, for instance, differ substantially with regard to the degree to which they control their information environment and the level of freedom they grant the media (Egorov, Guriev, and Sonin 2009; Stier 2015). Whether these varying degrees of media control impact the coup risk of dictatorships has not been studied yet, even though it is widely acknowledged and a conventional wisdom that controlling the media during a coup is decisive for its success (Luttwak 2016 [1968]; Singh 2014).

2.2 Mass mobilization

Mass mobilization is the second major domestic threat for autocrats. Yet while coups have traditionally been on the radar for being “the most common way dictatorships begin and end” (De Bruin 2020, 3), the military’s role in mass mobilization was a late comer on the research agenda. Only when massive anti-regime protests swept away Communist rule in many East and Southeast European countries and domestic unrest shattered several dictatorships in the Asia-Pacific region in the late 1980s and 1990s (e.g. Barany 1992; O’Donnell and Schmitter 1986; Segal and Phipps 1990), the military’s role in mass protests attracted wider scientific attention. When the 2010/2011 Arab Spring proved that the political survival of the region’s long-reigning dictators hinges on the soldiers’ willingness to shed peaceful demonstrators’ blood, the study of military behavior in autocratic mass mobilization finally matured into an own field of research within the civil-military relations discipline. Since then, a plethora of studies has explored the reasons why some militaries decide to suppress anti-regime protests (e.g. 2022 Iran, 1980 South Korea), while others deny autocrats their armed support and defect (e.g. 1989 Romania, 2011 Tunisia) or seize power in a coup (2013 Egypt, 2014 Burkina Faso).

This substantial variation in armed forces’ behavior has spurred a vast literature on military responses to peaceful mass protests: Some scholars relate the military’s

demeanor to its material perks and political privileges under the incumbent regime (e.g. Bou Nassif 2015a, 2021; Koehler 2017; Koren 2014; Nepstad 2013). Others argue that fraternization between military and society and the existence of conscription has a restraining effect on soldiers (e.g. Johnson 2022; Lutterbeck 2013; Tófalvi, 2013). Elsewhere, coup-proofing measures like counterbalancing and divide-and-rule appear to have influenced military behavior (e.g. Bou Nassif 2015a; Chin, Song, and Wright 2023; Kim 2012; Lee 2009, 2015; Lutscher 2016; Makara 2013). Some researchers suggest that the degree to which militaries are professional, meritocratic organizations decides whether they are willing to act as the regime's tool of repression (e.g. Bellin 2012; Lutterbeck 2013). Some scholars add that the armed forces' professional identity and domestic role is also important to understand the military's demeanor in the eye of mass uprisings (e.g. Pion-Berlin, Esparza, and Grisham 2014; Pion-Berlin and Trinkunas 2010). And finally, an influential line of argument posits that militaries are more inclined to crack down on protesters if they are recruited along ethnic, religious, or tribal identities (e.g. Bou Nassif 2015a; McLauchlin 2010). Despite the wealth of studies on military behavior in mass mobilization, research on the topic can be advanced by addressing the following three major gaps:

Few systematic cross-case comparisons

Research on military reactions to mass protests largely consists of qualitative small-N case studies that often are limited to a cluster of protest events in a particular geographical environment, such as the Arab Spring (e.g. Bou Nassif 2021; Burns 2018; Nepstad 2013) or the wave in East and Southeast Asian dictatorships by the late 1980s and early 1990s (e.g. Lee 2009, 2015) Qualitative analyses comparing ten cases or more in broader, more diverse samples (Barany 2016; Pion-Berlin, Esparza, and Grisham 2014) as well as large-N quantitative studies are comparatively rare (Koehler 2017; Neu 2022).

As a result, the current state of research is somewhat ambiguous: On the one hand, there are a lot of empirical studies offering various explanations for the varying military behavior in mass-based crises. These studies are particularly convincing at explaining the military's reaction to protests in individual countries or specific waves of protests such as the Arab Spring (e.g. Albrecht and Bishara 2011; Albrecht and Ohl 2016; Bou Nassif 2015b, 2021; Brooks 2013; Burns 2018; Gaub 2013; Lutterbeck 2013; Nepstad 2013), the downfall of European Communism (Barany 1992; Segal

and Phipps 1990), presidential crises in Latin America (e.g. Pion-Berlin and Trinkunas 2010), mass unrest in Asia-Pacific dictatorships (e.g. Kim 2012; Lee 2009, 2015) or Africa (e.g. Morency-Laflamme 2018). On the other hand, however, there are only few comparative analyses for a larger temporally and geographically diverse number of cases that could probe which of the many factors deemed decisive has an impact on military behavior in general beyond specific regional, cultural, and temporal background (e.g. Koehler 2017; Neu 2022; Tófalvi 2013).

Arguably, there is one exception in research on the military's role in mass mobilization with regard to sample size and methods: There is a large and vivid strand of quantitative coup literature that has shown that protests spur military coups using geographically and temporarily encompassing samples (e.g. Johnson and Thyne 2018; Yukawa et al. 2022). Nevertheless, these studies do not remedy the methodological shortcomings outlined above because they solely explain the occurrence of coups. Hence, these analyses only distinguish between cases, in which a coup occurs, and cases, in which no coups occur, without taking into account other options militaries can choose in the eye of mass protests, such as a defection to the opposition or military repression (see Croissant, Kuehn, and Eschenauer-Engler 2018a, b).[4] As a result, these large-N analyses only tell us something about coups, yet little about other manifestations of military behavior amid mass mobilization.

No application of methods to detect combinations of factors

In light of the many factors identified as crucial for military reactions to protest, it is highly plausible that factors do not exert an individual effect, but act in combination with other causes to influence militaries to act in a certain way. Qualitative analyses studying a larger set of cases have shown that militaries' responses to mass protests most likely result from a combined relevance of factors (Barany 2016; Pion-Berlin, Esparza, and Grisham 2014). These studies also show that some causes or combinations thereof may be highly relevant in specific cases, while other explanatory factors are more applicable to other cases. Set-theoretic methods like Qualitative Comparative Analysis could help to asses which combinations of which causal factors are decisive in which cases (e.g. Oana, Schneider, and Thomann 2021; Schneider and Wagemann 2012). Yet, even though QCA has been

[4] A rare exception is the study by Neu (2022) that distinguishes between military coups and military defection.

successfully used in other areas of political science such as policy research (e.g. Hinterleitner, Sager, and Thomann 2016; Hörisch, Wurster, and Siewert 2022; Zgaga, Thomann, and Goubier 2023), conflict research (e.g. Haesebrouk 2017; Ide et al. 2021; Lindemann and Wimmer 2018), or autocracy research (Maerz 2020; Schneider and Maerz 2017), it has not been applied to study military reactions to mass protests yet.

Lack of conceptual clarity regarding whose behavior is studied and explained

Research on military reactions to mass protests are often not conceptually clear to which intra-military group their arguments apply. Take the works on link between mass mobilization and coups as an example to illustrate this problem. Coup research overall agrees that mass mobilization increases the risk of coup attempts (e.g. Casper and Tyson 2014; Powell 2012; Wig and Rød 2016). In recent years, there have been increasing efforts to add more nuance to this well-established finding by analyzing which types of mass mobilization have which effect on coup activity (Gläßel, González, and Scharpf 2020; Yukawa et al. 2022). Peaceful protests, for instance, have been proven to exert a stronger effect on coups than violent protests (Johnson and Thyne 2018). Yet while mass mobilization has been disaggregated to refine our insights on the protest-coup-nexus, there are few comparable efforts to assess the dependent variable in this relationship – coups – equally precise. As a result of this shortcoming, we do not know which types of mass protests increase the risk of which types of coups. Do peaceful protests promote coups by both high-ranking and low-ranking officers or is nonviolent mobilization only linked to a specific type of coup? And which type of coup is more likely amid violent unrest? Yet theorizing and empirically testing the underlying dynamics between different types of mass mobilization and different types of coups is essential to broaden our knowledge of autocratic regime crises.

This also applies to the works that study military reaction to mass mobilization other than military coups. Works explaining why the armed forces decide to suppress protests or refuse military repression often are not conceptually clear whether their theoretical arguments apply to the military as a whole or whether the causal mechanisms focus on the military leadership as the location where the decision to repress or to defect from the regime is taken. Conceptually useful exceptions are presented by Bou Nassif (2015a, 2021) and Croissant, Kuehn, and Eschenauer

(2018a), who both are conceptually clear in that their theoretical arguments refer to the military elite.

2.3 Addressing these limitations in the thesis

Even though much ink has been spilled on the military's role in coups and mass mobilization, the literature review shows there is still ample room for refining and extending our knowledge on the military in autocratic regimes crises. Table 1 summarizes the shortcomings in pertinent literature and the way the thesis addresses them.

Table 1: Summary of shortcomings and how this dissertation addresses them

Type of autocratic regime crisis	Shortcoming regarding military behavior	Contribution of the thesis
Coups	• Treatment of the military as a unity actor and lacking differentiation of coup types	• Introducing a novel dataset on coup types & using fine-grained coup data to test slender theoretical arguments (Papers 1, 2, and 3)
	• Lacking attention to coup outcomes	• Using two-stage models to analyze the attempt and outcome of different types of coups (Paper 3)
	• Unclear impact of some basis features of autocratic rule on coup activity	• Studying the impact of autocracies' level of media control of coup activity (Paper 3)
Mass mobilization	• Few systematic cross-case comparisons in studies on the military in protests	• Use of an intra-regionally and temporally diverse datasets on military behavior in mass mobilization (Papers 2 and 4)
	• No application of methods to detect combinations of factors	• Application of a crisp-set QCA to detect the varying causal pathways leading to a repression of protests or its absence (Paper 4)
	• Lack of conceptual clarity regarding whose behavior is studied and explained	• Clear conceptual distinction between the military elite and common soldiers (Papers 2 and 4)

Regarding the shortcomings in current research on military coups, this thesis introduces and uses novel data on coup types in order to test more fine-grained causal mechanisms linking causes and various coups (Papers 1, 2, and 3).

Furthermore, in Paper 3, the thesis systematically tests the effect of a further trait of autocratic rule – the extent of media control – on both coup attempts and coup outcomes. In doing so, the thesis addresses the shortcoming that contemporary research primarily focuses coup attempts, yet neglects to study the factors that influence the chances of success.

With regard to gaps in research on armed forces behavior during protests, Papers 2 and 4 both use geographically and temporarily diverse samples to study soldiers' behavior in mass protests. They both focus on the behavior of clearly defined groups within the military, with Paper 2 distinguishing between senior- and junior-officer coups and Paper 4 focusing on the behavior of the military leadership in mass protests. Finally, Paper 4 uses a crisp-set QCA to test which factors or combinations thereof contribute to the military leadership's decision to suppress protests or refuse to do so in which cases. By applying a set-theoretic, combinatoric method, this paper contributes to systematizing the wealth of factors found influential for military behavior.

3. Concepts and theoretical propositions

3.1 Core concepts

The thesis seeks to understand the military's role in coups and mass mobilization in a very specific context: *autocracies*. As Roller (2013, 38) rightly points out, contemporary research defines autocratic rule primarily by stating what it is not: Autocracies are autocracies because they are "not democracies" (Brooker 2011, 102; see also Brooker 2009). Geddes, Wright, and Frantz (2014, 317; see also 2018), whose dataset is used to identify the sample of autocracies in the first four papers of the dissertation, define autocracies as regimes, in which the political leadership rises to power through a process that is not a direct or indirect "reasonably fair and competitive election." Hence, the key difference and the most basic demarcation criterion between democracies and autocracies is that in the former citizens can choose their political leadership freely, fairly, and competitively, while in the latter no meaningful political competition and electoral contest exists (Merkel 2010, 23–24). The terms autocracy, dictatorship, and non-democratic regime are used interchangeably throughout the dissertation and all refer to regimes lacking meaningful electoral contest.

The second core concept is the term *autocratic regime crisis*. I lean on the concept by Gerschewski and Stefes (2018, 3) who define a regime crisis as "an urgent situation requiring immediate action by the incumbents to maintain power." Such situations are "life-and-death moments" that pose a challenge to the autocrat, which is "acute, manifest, and existential" (Gerschewski and Stefes 2018, 3). This definition of crisis refers only to rapidly erupting events that threaten the very survival of the political incumbent and his regime. Thus, it excludes latent conflicts that simmer beneath the surface but never manifest as observable and regime-threatening anti-incumbent actions. Autocracy research typically makes a dichotomous classification of such regime crises: It differentiates horizontal challenges that hail from the autocratic ruling elite and are caused by regime-insides from vertical challenges that emanate from the masses and attempt to topple the regime from below (Gerschewski and Stefes 2018, 6–7; Svolik 2012).

The purpose of this dissertation is to shine a light on the military's role in the two most common forms of such existential, acute crises, these are *nonviolent anti-regime mass mobilization* and *military coups*. Both qualify as such "life-and-death moments" (Gerschewski and Stefes 2018, 3) as they target the incumbent executive, aim for a fundamental change of the status quo, and thus pose a lethal challenge to the political survival of the incumbent leader and his regime. In order to investigate the military officers' behavior in both types of crises, I define them as follows:

Anti-regime mass mobilization refers to connected events of mass-based collective action that involve thousands or more participants, target the incumbent political regime, and demand a substantial alteration of the regime's ruling principles (Chenoweth and Lewis 2013, Hellmeier and Bernhard 2023; Kim 2017; Kim and Kroeger 2019). Such anti-regime mass mobilization may include civil wars, mass-led revolts, and, very importantly, massive peaceful anti-regime mobilization like the Arab Spring, the Color Revolutions, or the anti-Communist uprisings in many European countries by the end of the 1980s (e.g. Kendall-Taylor and Frantz 2014). It may occur in nonviolent and violent forms. If participants carry weapons and are willing to actually inflict physical harm upon their opponents, mass mobilization qualifies as violent (Chenoweth and Lewis 2013, 419). It is considered nonviolent if the participants overwhelmingly refrain from hurting or killing their adversaries (Chenoweth and Lewis 2013, 418). I primarily focus on overwhelmingly peaceful mass-based anti-regime protests. Research has shown that in such incidences, the military's willingness to shoot at protesters decides on the political fate of dictatorial

incumbents (Pion-Berlin, Esparza, and Grisham 2014). Only if the military detracts support from the regime, anti-regime protests have a reasonable chance to succeed and initiate a democratic regime change (Croissant, Kuehn, and Eschenauer 2018a, b).

The second type of regime crisis are *military coups*. In order to define them, I start with by Powell and Thyne (2011, 252) who describe coups as "illegal and overt attempts by the military or other elites within the state apparatus to unseat the sitting executive." Since I am interested in the military's role in coups, I narrow down their definition and focus only on military-led coups. A putsch qualifies as a military coup if its leadership includes at least of one active military officer (Eschenauer-Engler and Herre 2023).[5] A coup attempt is considered successful "if the perpetrators seize and hold power for at least seven days" (Powell and Thyne 2011, 252).

As I aim at advancing our understanding of military coups by testing more precise and detailed theoretical arguments, I use disaggregated concepts and data on military coups: In Paper 1, Bastian Herre and I introduce novel data on the identity, civilian and military background, as well as military rank of coup leaders. This data is used in Paper 2 to differentiate two types of military coups: *Senior-officer coups* are those military coups that are led by at least one officer with the rank of general or above. A coup that is headed by mid- and low-ranking officers beneath the rank of general are labelled *junior-officer coup* (Eschenauer-Engler 2023a).

Besides their background in the armed forces' hierarchy, coup leaders also vary in other theoretically and empirically crucial aspects. Therefore, Chin, Carter, and Wright (2021) have compiled a dataset that enables a disaggregation of coups based on the varying political aims of their leaders. Chin and colleagues (2021, 1041) call coups "that seek to oust the regime leader but mostly preserve the existing regime structure" *leader-reshuffling coups*. These coups usually are mounted by regime insiders from within the ruling elite, who profit from the existing regime and the way the elite is structured, but want to get rid of the regime leader (Chin, Carter, and Wright 2021, 1041). They resemble senior-officer coups as they usually comprise high-ranking military officers (ibid.). Coups that do not strive to overthrow the regime leader, but "seek to topple the regime and change the group of elites from which leaders are chosen" (Chin, Carter, and Wright 2021, 1041; see also Aksoy, Carter, and Wright 2015; Kim and Sudduth 2021) are defined as *regime-change coups*.

[5] Since coups led by civilians are exceedingly rare, this does not entail a substantial loss of coup events (cf. Eschenauer-Engler and Herre 2023).

These are usually committed by regime outsiders who are not part of the contemporary ruling coalition and thus want to alter the principles on which the regime is built (Chin, Carter, and Wright 2021, 1041; see also Aksoy, Carter, and Wright 2015; Kim and Sudduth 2021). Regime-change coups are similar to junior-officer coups as they "tend to involve individuals who lack the rank or background to be plausible successors in the current regime" (Chin, Carter, and Wirght 2021, 1041).

As I show in Paper 2, peaceful mass mobilization may prompt senior-officer coups as well as junior-officer coups. Yet coups are not the only behavioral option military officers may take in the eye of mass protests. There are plenty historical examples where militaries decided to suppress anti-regime protests and committed a bloodshed, while elsewhere they defected from the regime and shifted loyalty to the opposition. In order to enhance our knowledge on the military's role in mass mobilization, I study all three options armed forces can take in different papers of the dissertation (Papers 2 and 4). In Paper 2, I analyze which type of anti-regime mass mobilization – violent versus nonviolent – has which effect on the risk of junior-officer and senior-coups. In Paper 4, I focus on the two options other than a military coup that soldiers can take amid mass protests, these are a *military repression* of the protests or a *military loyalty shift*. As this paper relies on data by Croissant, Kuehn, and Eschenauer (2018a, b) and Croissant, Eschenauer-Engler, and Kuehn (2023), I follow their definitions of these concepts.[6] that capture the behavior of the military leadership. The military elite reacts with repression if it orders soldiers to use "large-scale violence against the protesters to put down the mass unrest" (Croissant, Kuehn, and Eschenauer 2018a, 177). A military leadership responds with a loyalty shift if it "refuses to put down the protests, either by "staying quartered" or by joining the opposition" (Croissant, Kuehn, and Eschenauer 2018a, 177). Hence, a military leadership does not have to actively side with the opposition to shift its loyalty away from the regime. It can also refuse to take any action on behalf of the regime and thus contribute to the incumbent's downfall without officially endorsing and supporting the opposition.

[6] Cf. Eschenauer-Engler (2023c) for a detailed discussion of the concepts.

3.2 Overarching theoretical propositions

One of the linchpins of this doctoral thesis is the insight that our knowledge on the military's role in autocratic regime crises is limited because research has treated the military far too often as a unity actor. As a consequence, different intra-military groups and their varying behavior have not been taken adequately into account. I aim at remedying this fallacy by theorizing why and testing in how far military officers with different backgrounds behave differently regarding military coups and anti-regime mass mobilization.

The basic rationale behind this need for disaggregation is – what Parsons (2007) calls – *a logic of position*. A logic of position considers how the position of an actor within an organization influences to which resources and capabilities he has access to. Positional arguments then theorize how institutional structures and organizational obstacles create incentives for actors to behave in a particular way (Parsons 2007, 13). Hence, a logic of position "explain[s] what people do as a function of their position within man-made organizations and rules" (ibid., 12).

The idea to consider the varying behavior of different intra-military groups to improve our knowledge on autocratic regime crises is inspired by a novel strand of coup literature that centers on disaggregating putsches. Without explicitly calling it a logic of position, this literature agrees that in order to understand why officers plot a coup and under which conditions they are successful with their takeover, we have to look at how high they rank in the military hierarchy and how close they are to the ruling elite (Aksoy, Carter, and Wright 2015; Albrecht and Eibl 2018; Albrecht, Koehler, and Schulz 2021; Chin, Carter, and Wright 2021; Kim and Sudduth 2021; Singh 2014; Chin et al. 2022).

I take up on this emerging field of research. For the three papers that focus on military coup-plotting (Papers 1, 2, and 3), I adopt three general notions from existing work on disaggregated coup types: First, junior-officer coups as well as the overwhelming majority of regime-change coups are perpetrated by low- and mid-ranking officers that are neither integrated into the military leadership nor occupy an insider position in the regime coalition. Senior-officer coups as well as the majority of leader-reshuffling coups usually comprise high-ranking military officers who are both elite members of the military as well as regime insiders (see Aksoy, Carter, and Wright 2015; Albrecht and Eibl 2018; Albrecht, Koehler, and Schulz 2021; Chin, Carter, and Wright, 2021; Kim and Sudduth 2021).

Second, from the variations in the military rank follows that the motives and capabilities of low- and mid-ranking officers, on the one hand, and high-ranking elite officers, on the other, considerably differ from one another (Albrecht and Eibl 2018; Singh 2014). While senior officers usually are regime elites and "attempt coups d'état when their position within the elite coalition is threatened" (Albrecht an Eibl 2018, 315), coup plotters of lower military rank and from outside the regime elite do not topple the executive to safeguard privileges and spoils, but start an attack in order to improve their position (Albrecht and Eibl 2018 315; Kim and Sudduth 2021, 1599). While senior officers therefore might have less incentives to turn against the incumbent executive due to their superior position, their chances to conduct a successful takeover are high as they possess greater soft power over the military and have better access to information (Singh 2014). Low- and mid-ranking officers, by contrast, may be more inclined to oust the incumbent regime to improve their position, yet their lower rank and their lack of commanding authority results in worse chances to conduct a successful takeover (Singh 2014). In the terms of classic coup literature, high-ranking senior officers and mid- and low-ranking junior officers have a different disposition and opportunity to plot a coup (see Albrecht and Eibl 2018, 615 on different coup types; and Finer 1962 and Powell 2012 on disposition and opportunity in general). While senior officers are less disposed to mount a coup but have better opportunities to succeed, junior officers are more disposed to plot but have worse opportunities to succeed.

Third, since officers from different ranks differ in their opportunities and dispositions, factors that are deemed to influence coup activity do not necessarily exert their influence uniformly across all types of coups. Instead, their impact on coup attempts and coup success may differ depending on the background of the coup leaders. As a result, in order to understand how a factor exerts an influence on coup activity, we have to analyze how it affects the willingness and opportunities of soldiers from different military strata to plot a coup.

Accordingly, the logic of position and the three related propositions are the theoretical bonds between the first four papers of the dissertation: Papers 1, 2, and 3 focus on coup-plotting and are built on the assumption that differences in the coup activity of different kinds of plotters result from their varying military rank. Therefore, the theoretical arguments in these three papers focus on how the independent variables of interest change the disposition and opportunity of lower-ranked soldiers and the military elite in favor or against a military coup. Papers 2 and 3, in particular,

show that factors influencing coup activity on the aggregate, such as degree of media control or the type of mass mobilization, do not exert their influence on coup activity uniformly. Instead, their impact on coups is conditioned by rank of the coup plotters in the military hierarchy. Paper 4, which studies the determinants of military repression amid massive anti-regime protests follows a logic of position, too. It focuses on the behavior of the military leadership and thus investigates the factors that influence the stance of the military's top brass towards a revolutionary uprising. The paper centers on the military leadership as this is the group of high-ranking officers that decides how to respond to the uprising and then orders subordinate soldiers to act according to its decision. Therefore, the paper clearly theorizes how each of the five causal factors deemed decisive for military behavior– material spoils, military recruitment along societal cleavages, military unity, conscription, and the operational repertoire – influence the decision-making calculus of those officers atop of the armed forces.

4. Summary of the thesis

This section summarizes each of the five papers of the dissertation regarding their research interests, arguments, methods, findings, and contributions. Table 2 provides an additional overview of some of the major characteristics of each paper, especially the data sources and methods being used to capture the variation in military behavior.

4.1 Paper 1: Coup leaders: a new comprehensive dataset, 1950–2020

Research interest and motivation

In Paper 1, Bastian Herre and I introduce the *Coup Leaders* D*ataset*, which is a novel collection of hand-coded coup data that provides information on the identity of all leaders of the 474 coups from 1950 to 2020. Though coup research increasingly takes into account the striking differences in coup leadership and a handful of recently published datasets provides information to disaggregate coup types, especially those datasets offering data on the military background of the coup leaders exhibit several limitations. These limitations motivated us to compile a novel military- and rank-centered dataset, which complements previous data on coups and addresses several of their shortcomings.

Table 2: Overview of the five papers

	Research question	Military behavior	Data source	Method
PAPER 1	• How can we refine existing data on coups in order to provide valid data on the military or civilian background of the coup leaders as well as the coup leaders' military rank?	• Dataset providing information on the civilian and military background of the coup leaders and their exact military ranks • Enables a disaggregation of coups based on the rank group of the coup leaders (high-ranking, mid-ranking, low-ranking)	Eschenauer-Engler and Herre (2023)	• Data introduction with descriptive statistics • Pooled logistic regression
PAPER 2	• Do nonviolent and violent incidences of mass mobilization have a differing effect on the likelihood of senior-officer and junior-officer coups?	• Senior-officer coups • Junior-officer coups	Eschenauer-Engler and Herre (2023)	• Pooled logistic regression
PAPER 3	• Does a highly regulated media environment decrease the likelihood of military coup attempts and their chances of success? • Is this effect of media control on coup attempts and success driven by regime-change or leader-reshuffling coups?	• Military coup attempts & success • Regime-change coup attempts & success • Leader-reshuffling coup attempts & success	Chin, Carter, and Wright (2021)	• Heckman probit regression
PAPER 4	• Under which conditions do military leaders decide to crack down on peaceful anti-regime protests in autocracies? • Under which conditions do military leaders refrain from military repression?	• Military repression (0/1)	Croissant, Eschenauer-Engler, and Kuehn (2023)	• Crisp-set QCA
PAPER 5	• How can we measure different manifestation of military influence on political regimes?	• Ruling militaries • Supporting militaries	Croissant, Eschenauer, and Kamerling 2017	• Data introduction with descriptive statistics

Dataset description

The *Coup Leaders Dataset* codes the military and civilian background of the leaders of all coups in Powell and Thyne's (2011) dataset, which is the most widely acknowledged dataset in coup research but does not contain information on coup leadership. We denote the civilian and military background of the coup leaders and, in case of military-led coups, the exact military rank. We group coup leaders into three rank groups according to the highest military rank among the coup plotters: senior officer, mid-ranking officer, and junior officer coups.

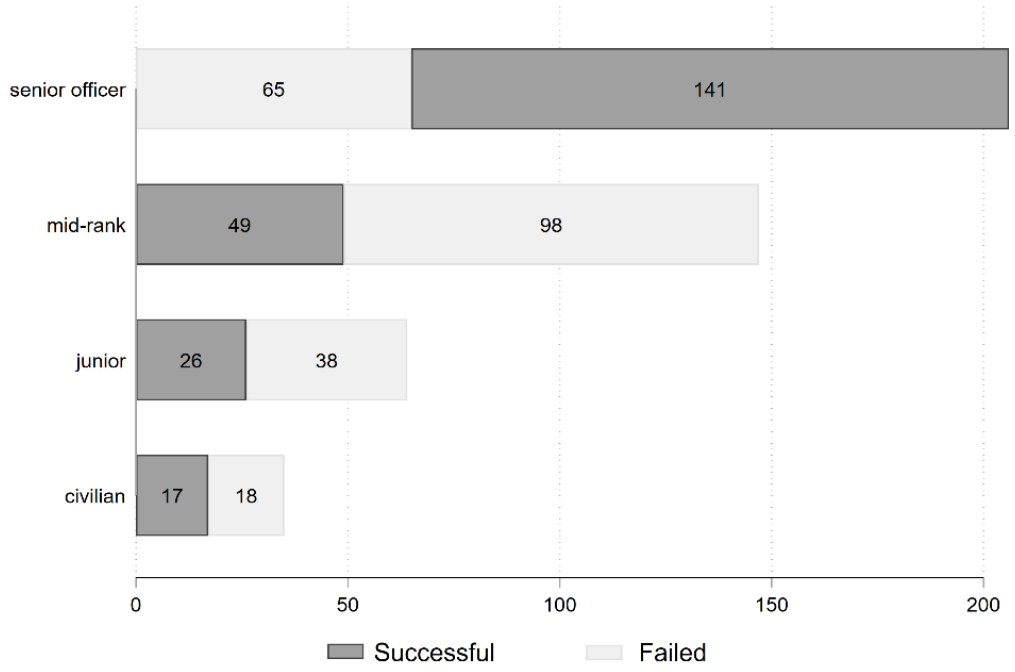
There are two defining features that distinguish the *Coup Leaders Dataset* from other datasets focusing on the military rank as the central feature along which to disaggregate coups: First, CL adheres to country-specific differences in the rank structure and organization of the armed forces to code the rank group of the coup leaders. Second, CL's coding of rank groups is based on the highest military rank among the active soldiers leading the coup, what remedies the conceptual problem of assigning coups to the highest military rank group based on the military rank of former or exiled high-ranking officer.

Empirical results

Using descriptive statistics, we illustrate variations in the frequency, temporal distribution, as well as the regime background of coups by low-ranking, mid-ranking, and high-ranking officers (see Figure 2). Finally, we demonstrate the potential and added value of our dataset for the study of coups by replicating Thyne and Powell's (2016) study on the democratizing effect of successful and failed coups with data on coup leadership.

Using pooled logistic regression analysis, we find that a democratic regime change is more likely after successful coups by high-ranking and low-ranking officers, while a successful takeover by mid-ranking officers is not associated with an improvement of democratic quality. The case is different, however, for failed coups. The results show that failed seizures by mid-ranking soldiers are responsible for the democratizing effect of failed coups, while failed coups by low- and high-ranking officers are not found to increase the prospects of democratization.

Figure 2: Frequency of different coup types



Note: Own illustration based on data from the *Coup Leaders Dataset.*

Conclusion

The dataset feature and especially its replication analysis underline the additional insights we could gain on coup activity from both revisiting existing arguments and testing novel, more fine-grained causal mechanisms using disaggregated data on coups. In doing so, refined data on coups have the potential to improve our knowledge on autocratic regime crises.

4.2 Paper 2: Types of anti-regime mobilization and the varieties of military coups in autocracies

Research interest and motivation

Paper 2 makes use of the data introduced in Paper 1 in order to probe which types of anti-regime mass mobilization – violent and nonviolent – promote which types of coups – junior-officer or senior-officer – in autocratic regimes. The finding that domestic mass mobilization promotes coups is well-established and widely acknowledged in civil-military relations research. In recent years, efforts have been made to add additional nuance to this relationship, primarily by disaggregating domestic mass unrests into different types and test their effect on the probability of

coup attempts. Hence, almost all approaches to refine insights on the relation between domestic mass mobilization and coups have referred to a refined measurement of mass mobilization, while there have been few efforts to measure coups equally precise.

Theoretical arguments

I argue that due to their different disposition and opportunity to take over power, nonviolent and violent anti-regime mass mobilization should have a varying effect on coups by junior officers and coups by senior officers.

Senior officers on average are well off under autocratic rule and therefore are less disposed to take over power. Yet, if they nevertheless stage a coup, their chances to succeed are considerably higher than those of junior officers due to their superior military rank. Being less disposed to stage a coup, but more capable to succeed, mass mobilization is expected to spur coups by senior officers if it threatens their benefits and perks. While nonviolent anti-regime mass protests may result in a regime change during which the senior officers' privileges may be abolished, prolonged anti-regime violence damages the regime's economic well-being and thus threaten the senior officers' spoils. Since both types of anti-regime mass mobilization threaten senior officers' privileges and spoils, I expect both nonviolent and violent incidences of mass mobilization to encourage high-ranking officers to mount a coup.

Due to their less privileged position, low- and mid-ranking may be more willing to plot a coup, yet their chances to succeed with a coup are little promising as they will likely face harsh intra-military resistance when trying to enforce their extra-hierarchical takeover. Hence, only types of mass mobilization that increase mid- and low-ranking officers' grim chances of success should render junior-officer coups more likely.

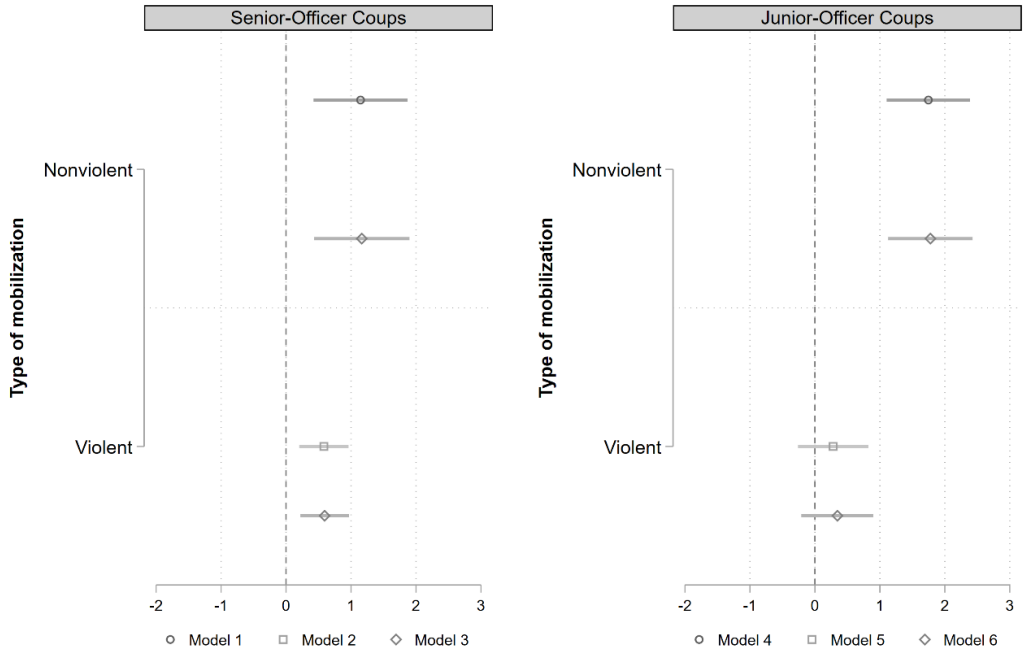
Nonviolent large-scale anti-regime mobilization is expected to have a particularly strong effect on junior-officer coups because it provides junior officers with a seldom opportunity to improve their otherwise little promising prospects to conduct a successful takeover. In the eye of mass protests, larger parts of the population might accept a military coup as a necessary evil to oust the dictator and therefore support a coup by junior officers. Violent anti-regime mobilization, by contrast, do not provide the junior officers with better prospects to succeed as this type of mass unrest does not hep mid- and low-ranking officers to raise their grim prospects of success. A coup in the midst of large-scale anti-regime violence would

have a junior-officer coup appear as an illegitimate act in support of a radical groups that inflict harm upon the population. Therefore, violent mobilization is expected to increase the risk of junior-officer coups.

Data and method

In order to test whether the effect of different types of mass mobilization varies for different types of coups, I use data from the Coup Leaders dataset introduced in paper 1 to disaggregate military coups by their leaders' military rank into senior-officer coups and junior-officer coups. As the outcome is binary, I run pooled logistic regressions (Long and Freese 2006) on all autocratic country-years from 1960 to 2006.

Figure 3: Results – types of mobilization and types of coups



Note: Coefficient plots are based on models 1 to 6 of Paper 2; underlying regression results can be found in the tables A2 and A3 of the paper's appendix; control variables are not reported.

Empirical results

As theoretically expected, nonviolent anti-regime mass protests spur coups regardless of the military background of the coup leader (see Figure 3). However, the effect is particularly strong for junior-officer coups. In contrast to peaceful anti-regime

unrest, violent mass mobilization only spurs coups by high-ranking officers, while it is not consistently associated with a higher probability of coups by mid- and low-ranking officers.

Conclusion

By using more precise and finely measured data on coups, paper 2 contributes to a better understanding of coup activity in the midst of mass unrest by showing how mass mobilization and coups are interrelated. Specifically, it demonstrates why nonviolent anti-regime mass mobilization is a particularly threatening situation for the political survival of autocratic regimes and their rulers. In contrast to violent challenges, largely peaceful anti-regime mass protests encourage military officers from quite different backgrounds to mount a coup. In particular, it encourages coups by mid- and low-ranking officers who normally are more restrained to plot a. As such, the results of Paper 2 considerably contribute to a better understanding how both types of autocratic regime crises – mass mobilization and coups – are related and unfold.

4.3 Paper 3: Armed forces and airwaves: media control and military coups in autocracies

Research interest and motivation

Paper 3 is motivated by the observation that even though nearly all coup plotters strive to seize broadcasting outlets and control public information, there is little systematic and sound knowledge on the influence of media and information on military coup-plotting. In order to shine a light on the relationship between media and coups, Paper 3 therefore asks whether the extent to which autocratic governments control the media influence the probability of military coup attempts and their chances of success. In addition, it disaggregates coups into regime-change coups and leader-reshuffling coups in order to test whether the effect of media control on coup attempts and coup success is different for different types of coups.

Theoretical arguments

I argue that the level of media control fulfils a different function during the two stages of a coup, the attempt stage and the outcome stage. Regarding the attempt stage, the extent to which media are controlled conditions the wealth of information that

coup plotters can obtain in order to estimate their chances of success and assess the strength of the regime. By increasing uncertainty and hindering coup plotters from obtaining information necessary to stage a coup, a high level of media control restrains soldiers from plotting a coup and thus decreases the risk of military coups attempts. Regarding the outcome stage (success or failure), regimes' extensive meddling in the media reduce the coup plotters' prospects of completing a successful coup as it renders controlling information more complicated for military coup plotters.

In order to refine the theoretical, I further disaggregate military coups into regime-change coups and leader reshuffling coups. The extent of media control is expected to be only relevant for regime-change coup attempts and their chances of success, yet not for leader-reshuffling coups and their success. This is because regime-change coups are typically staged by regime outsiders who do not have access to information from inside the autocratic ruling coalition. As they need to rely on public information to gauge their chances of success, a highly censored information environment should offer plotters of regime-change coups a particularly uncertain decision-making environment, which should render them more cautious to plot a coup. A tightly controlled information environment should also decrease the success of regime-change coups as their leaders are usually regime outsiders who require broad support beyond the ruling coalition to succeed. As rallying broad support is particularly difficult in a regime with tight media control, regime-change coups should be less likely to succeed when the media are extensively censored.

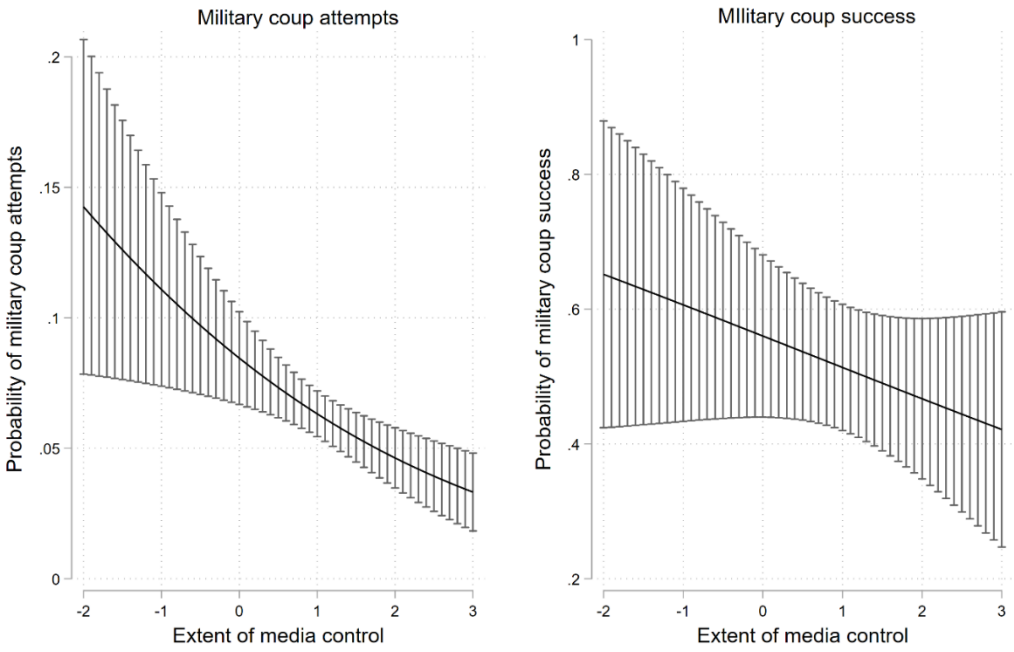
Leader-reshuffling, by contrast, usually are led by members of the ruling elite who have access to inside information from within the ruling coalition and rank high in the military hierarchy. These advantages render plotters of leader-reshuffling coups independent from the level of media control to plot a coup and succeed with their takeover.

Data and method

I run a series of Heckman probit models on all autocratic country-years from 1965 to 2010 (Van de Ven and Van Praag 1981). By using a two-stage Heckman model, this study addresses the shortcoming that contemporary research primarily focuses coup attempts, yet neglects to study the factors that influence the chances of success. Heckman probit models assess the effect of an independent variable on both stages of a coup, but correct for a selection effect between the attempt and outcome stages.This correction is necessary because both stages of a coup are not

independent from on another since the outcome of a coup (coup success) depends on a coup being attempted in the first place (see e.g. Powell 2012). Therefore, the effect of a variable of coup success cannot be evaluated without considering its effect also on the likelihood that a coup is attempted in the first place.

Figure 4: Effect of media control on coup attempts and coup success



Note: The figure is based on model 3 in table 1 of Paper 3.

Empirical results

Starting with aggregated data on military coups, I find that higher levels of media control do indeed decrease the probability of both military coup attempts and military coup success (see Figure 4). In a second step, I disaggregate military coups into regime-change and leader-reshuffling coups. While I do not find robust evidence that the effect of tight media control differs for regime-change and leader-reshuffling coups, I find that the success of regime-change does indeed depend on the level of media control. Coup plotters from outside the current ruling coalition who strive for a regime change are particularly dependent on controlling information in order to rally the necessary support to enforce a takeover. As controlling information is particularly difficult when autocrats control their media tightly, plotters of regime change coups are less likely to succeed.

Conclusion

The paper's findings show that – in addition to all the traits of autocratic regimes that have already been found relevant to understand coup activity in dictatorships – variances in the extent of media control are another important aspect to understand why soldiers in autocracies turn against the regime and under which conditions they succeed. Furthermore, like Papers 1 and 2, Paper 3 shows that disaggregating coups along theoretically and empirically useful criteria helps to advance our understanding of coups. By maintaining tight control over their media and keeping the decision-making environment uncertain, autocrats can only deter successful regime-change coups, but not leader-reshuffling coups that take root within the ruling coalition.

4.4 Paper 4: Soldiers and protest: a set-theory perspective on military repression of anti-regime mass mobilization in autocracies

Research interest and motivation

Paper 4 is the second of two papers that deal with military reactions to mass protest. While Paper 2 asks which types of mass mobilization trigger which types of coups, in this paper I analyze under which conditions military leaders decide to suppress largely nonviolent mass protests in autocracies and under which conditions they refrain from using violence against peaceful protesters. For this purpose, I analyze the determinants of military repression as well as its absence through a set-theoretic perspective from which military behavior has not been studied yet. This paper thus constitutes the first study using Qualitative Comparative Analysis (QCA) to analyze military behavior in the eye of mass protests.

Theoretical arguments

Based on an extensive review of relevant literature, I deduce five domestic factors that are deemed most important for military behavior: 1) the military elite's financial spoils under the incumbent regime, 2) whether the regime attempts to foster loyalty by placing members of a particular ethnicity, religion, or other social group in the military leadership, 3) the extent of intra-military cohesion, 4) the existence of a compulsory military survive, and 5) whether the military was previously involved in internal repression. I focus on the response of the military leadership to the mass unrest and clearly theorize how these conditions contribute to the military elite's decision to repress or refuse violence.

Data and method

The paper takes a different methodological angle than existing studies on the topic and studies the determinants of military repression. The paper employes a crisp-set QCA on a medium-N sample. A QCA strives to detect the necessary and sufficient conditions for an outcome to occur (Ragin 2000, 2008; Schneider and Wagemann 2012). Its advantage is that it is based on a complex and equifinal understanding of causality: This means that factors seldom lead to an outcome on their own, but often exert their influence on the outcome in combination with one another. A different combination of these factors may lead to the same empirical phenomenon (Oana, Schneider, and Thomann 2021, 8; Ragin 2000, chapter 4; Schneider and Wagemann 2012, 78–79). The rationale behind this methodological choice is to make sense of plethora of studies on military responses to mass protests that find different factors or combination thereof to be relevant for military behavior. Applying a crisp-set QCA on larger sample than most existing studies on the topic, I systematize which factors and combination thereof are decisive in which cases and discuss these patterns theoretically and empirically.

In order to analyze which causally complex conditions of factors lead to military repression or its absence, the paper uses a subsample of 24 incidences of large-scale nonviolent mass mobilization from the novel *Dictators' Endgames Dataset* by Croissant, Eschenauer-Engler, and Kuehn (2023), which provides information on military leaderships' reaction to such events.

Results

The QCA uncovers that military violence or is absence is usually produced by different pathways that each combine different causal factors.

*spoils*unity + spoils*preferential*conscription → military repression of protests*[7]

As depicted by the equation above, military leaders decide to quench protests if (1) they enjoy material benefits and are internally cohesive, or if (2) they have financial spoils, the military leaders hail from social minority groups, and there is a compulsory military service. While the first pathway applies to all cases of military repression in Asia (China 1989, Burma 1988, Myanmar 2007, and Thailand 1992), the second one

[7] * denotes a logical AND; + denotes a logical OR.

covers three of the five military crackdowns during the Arab Spring (Syria 2011, Libya 2011, and Yemen 2011). Conversely, as shown by the equation below, military elites refuse a military crackdown if (1) they do not enjoy far-reaching material perks or (2) they are not internally united and are not disproportionally recruited from a social minority group. The first combination covers, for instance, the East European militaries that refused to crack down on protesters (East Germany 1989, Romania 1989, Czechoslovakia 1989, and Albania 1990), while the second pathway covers the three Asian armed forces in 1990 Bangladesh, 1986 Philippines, and 1987 South Korea that defected from the regime.

~spoils + ~preferential~unity → absence of military repression of protests*

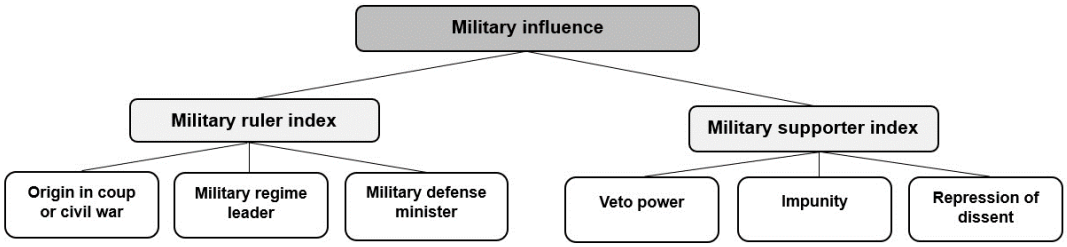
Conclusion

The results of this paper show that military reactions to popular uprisings result from a causally complex interplay of factors. Specifically, the paper uncovers that in different socio-political contexts different causal pathways explain why military leaderships decide to suppress mass protests or refuse to do so. In doing so, this paper has addressed the need for systematically assessing how previously only separately studied factors unfold combined effects on military leaderships' responses to mass protests. It also showed that different combinations of these factors explain military behavior in different clusters of countries.

4.5 Paper 5: Militaries' roles in political regimes: introducing the PMR dataset

Paper 5 should be read as a concluding chapter that rounds off the dissertation. It presents the novel *Political Roles of the Military Dataset* (PRM) introducing two indices that capture two dimensions of military influence: the *military ruler* and the *military supporter index*. The military's role in coup-plotting, on the one hand, and the military's role in quenching popular dissent, on other, are constitutive parts of the two indices (see Figure 5). As such, Paper 5 serves as an outlook demonstrating that a military's role in these two crises shapes the position a military henceforth takes in a political regime.

Figure 5: Indices and their constitutive parts in the PMR dataset



Research interest and motivation

The paper is inspired by the empirical observation that the number of both military regimes and military coups are declining over time, which could lead to the false impression that armed forces have become less interested in interfering into politics.

Dataset description

Based on previous research by Basedau and Elischer (2013), Aurel Croissant, Jil Kamerling, and I compiled two indices depicting military influence in all non-democratic countries and transformation states in the sample of the Bertelsmann Transformation Index for the years 1999 to 2012. The *military ruler index* measures the military' s influence on the executive. Such ruling militaries have a military origin in a coup or civil war. After taking over political power, ruling militaries do not hold free and fair competitive elections but dominate the executive by holding the posts of the regime leader and/or defense minister.

Yet, armed forces do not have to dominate the executive to influence politics. Therefore, we introduce the *military supporter index* to assess less direct and clandestine forms of military influence. The index captures whether the armed forces serve as a veto power in political decisions, enjoy impunity from juridical prosecution, and/or support the regime in subduing domestic political dissent.

Empirical results and conclusion

Using descriptive statistics, we show that armed forces still exert considerable influence on autocratic regimes and newly established democracies around the world, yet they increasingly choose more subtle and clandestine means than direct military rule or military coups. We show that the armed forces' role has transformed from dominating the executive as the direct ruler to a less visible but still influential

role as a cunning supporter that shields the regime from domestic dissent and receives political privileges and impunity in return.

5. Contributions

The aim of this dissertation is to enhance and refine our knowledge on autocratic regime crises by conceptualizing, theorizing, and testing the behavior of different intra-military groups in coups and massive anti-regime mobilization. For this purpose, it asked whether the behavior of different groups within the military differs with regard to autocratic regime crises and, if so, how these variations can be explained.

Which insights does the thesis offer on the behavior of different military groups in coups and mass mobilization and what are their broader implications for the study of autocratic regime crises? First, the thesis underlines that much of the existing literature on coups has to be revisited and refined. As the dataset introduced in Paper 1 has shown, civilian regime insiders and high-ranking officers from the military elite are only responsible for slightly more than half of all coups that have taken place since 1950 (Eschenauer-Engler and Herre 2023). The other more than 45 percent of coups have been led by mid- and low-ranking officers, who usually are regime-outsiders and do not enjoy the far-reaching privileges of regime elites (Eschenauer-Engler and Herre 2023; see also Albrecht and Eibl 2018; Albrecht, Koehler and Schulz 2021). This finding is not only empirically striking, but also theoretically challenging as coup research often is built on elite-centered arguments that assume that coups are carried out by disgruntled regime elites (e.g. Bove and Rivera 2015; Bueno de Mesquita and Smith 2017; Casper and Tyon 2014). With slightly less than half of all coups plotted by members of the armed forces who neither belong to military elite nor hail from within the autocratic ruling coalition, these existing elite-centered arguments have a limited explanatory power as they only apply to the share of elite-led coups. In order to address this apparent misfit between theoretical reasoning and empirical reality, I used disaggregated coup data in three of the five papers of this dissertation and theorized as well as investigated the varying causes, dynamics, and outcomes of different coup types.

Second, the insight that many coups are not perpetrated by military elites implies that the binary distinction in autocracy research between vertical crises, on the one hand, and horizontal crises, on the other, is surely useful, yet does not always do justice to the empirical reality. Papers 1, 2, and 3 show that coups plotted by

regime outsiders and lower-ranked soldiers neither are a horizontal threat from within the ruling elite nor represent a vertical threat from the masses. Instead, they constitute a challenge on its own that is located somewhere in-between these two crises and follows entirely different underlying dynamics than other types of crises: Coups by mid- and low-ranking soldiers are spurred – more than coups by higher-ranked soldiers – by massive nonviolent mobilization, while anti-regime violence does not have a positive effect in this type of coup (Paper 2). And while the success of coups by regime insiders and higher-ranked officers is not influenced by the information environment in an autocracy, a high level of media control hinder regime outsiders and lower-ranked officers from plotting a successful coup in a dictatorship (Paper 3). By looking at different types of coups and their different causes, this dissertation's findings contribute to a better understanding of the challenges autocratic leaders face as well as the inner workings of non-democratic rule.

Third, the dissertation addresses the shortcoming that we still do not know how variations in some of the most basic features of autocracies affect coup activity. Paper 3 has found differences in the extent of media control between autocracies to be responsible for their varying risk to experience a coup as well as the chances of its success. This finding has important implications for what we think we know about the varying degree of media freedom in autocracies: By limiting media freedom, non-democratic leaders do not only prevent journalists from presenting them in a bad light, but also manipulate the information environment to keep soldiers in strategic uncertainty about their chances to execute a successful coup. Hence, a high degree of media control shields autocrats not only from having a bad press, but also from challenges by rebellious soldiers. By disaggregating coups along the political aims of the coup plotters, I show that this effect is mainly driven by coup plotters that aim for a regime change. These results contribute to a better understanding how the variation in specific traits of autocratic rule render non-democratic regimes more or less coup-prone. Furthermore, I show that these variations in autocratic regime traits do not exert their effect uniformly across all types of coup plotters, but they depend on the background of the coup leader.

Fourth, the thesis enhances our understanding of autocratic regime crises by adding more nuance to how the two types of crises studied here – coups and mass mobilization – are related. Refining existing theoretical arguments on coups and mobilization and using the novel coup data introduced in Paper 1, I analyze which types of mass mobilization spur which type of coup. While violent anti-regime mass

unrest is only related to coups by senior officers, nonviolent anti-regime violence spurs coups regardless of the military rank of the coup leaders, yet has a stronger effect on junior-officer coups than on attempted seizures by the military elite. This finding provides a convincing explanation why incidences of nonviolent anti-regime mass mobilization are such a worrisome threat for non-democratic leaders and often lead to their downfall. In contrast to violent challenges, these protest events do not only motivate soldiers from a particular rank to mount a coup, but encourage soldiers from quite different military strata to attempt a seizure. In showing how different types of mass mobilization provide incentives for different groups of soldiers to plot a group, the dissertation provides an important theoretical and empirical lining for the underlying dynamics linking different manifestations of autocratic regime crises.

Fifth, the analysis underlines that autocrats need a plethora of different strategies and measures to ensure their military leadership's loyalty, especially in the eye of mass protests. As Paper 4 demonstrates, during major incidences of mass mobilization, autocrats that have invested in a complex system of overlapping means to ensure the military's loyalty have the best chances to survive a revolutionary mass uprising. Yet, there is no uniform combination of strategies that retains the military's loyalty in all cases. Instead, the QCA analysis shows that autocrats in different socio-political context successfully make use of different strategies to bind the loyalty of their military leaderships to the regime. In the Arab region, for instance, militaries combine handing out generous spoils to their military elite with an exploitation of the region's ethnic and religious divides in order to ensure military loyalty in times of crises. Despite the combinatoric logic of QCA, one factors stands out as it is included in nearly all pathways leading to military repression or its absence: The military leadership's well-being is key to explain the varying behavior of armed forces in incidences of mass mobilization. This implies that military leaderships seldomly refuse violence against peaceful protesters out of a heartfelt desire for democracy. Instead, they renounce violence if leaders fail to satisfy their material interests. This insight has important praxeological implications for when a pro-democratic uprising in an autocracy has the highest chances to succeed: If a regime fails to address the military elite's lust for material perks, the chances that it will not crack down on an uprising are far better than under a regime that meets the military leadership's material demands. One example illustrating this rational logic is the crackdown on the recent wave of demonstrations in Iran that erupted as a reaction to the death of Jina Mahsa Amini in September 2022. As the coercive apparatus and particularly the

Revolutionary Guards enjoy sweeping political and economic benefits under the theocratic regime, it has little interest to abandon the regime and thus decided to brutally crack down on the latest mass protests (Council on Foreign Relations 2023; Ostovar 2022).

Sixth and finally, the thesis contributes to future research on the fields of civil-military relations and coup research by presenting two novel data sources on the military's role in regime crises and the armed forces' role in political regimes. Paper 1 introduced the *Coup Leaders Dataset*, in which Bastian Herre and I code the background of all coups that occurred between 1950 and 2020. This openly accessible dataset enables coup researchers to study the causes, procedures, and outcomes of different types of coups with the aim of generating novel findings. As the dataset is an extension of the data by Powell and Thyne (2011), the most widely used dataset in coup research, it offers researchers the chance to replicate their analyses with our coup leadership information in order to revisit and maybe even refine our knowledge on coups. Paper 5 introduces the *Political Roles of the Military Dataset* that presents a novel way to assess the different dimensions in which armed forces exert influence on a polity. In a world where coups are increasingly seen as illegitimate and plotters have to find more sophisticated arguments to legitimize them (Yukawa, Hidaka, and Kushima 2020), soldiers choose more subtle means to influence politics. With our dataset, we enable researchers to assess these less direct forms of military influence and conduct new studies on the emergence and endurance of military meddling into politics. Both datasets thus enhance the availability of data in the field of civil-military relations research and can be used in future research to enlarge our knowledge on the role of armed forces in political regimes.

In recent years, democracy is increasingly under stress in many countries around the world and the number of autocracies is surging to critical levels: According to latest VDem data, over 70 percent of the global population lived under non-democratic rule in 2022 and only 32 countries still qualified as full-blown liberal democracies (Wiebrecht et al. 2023, 771–772). In light of this alarming global development, autocracy research is gaining both scientific and praxeological importance. With autocratization processes taking root in many countries, it is important to enhance our knowledge how non-democratic leaders organize and hedge their rule and how autocracies prevent and survive political crises. One key element in the political architecture of autocracies is the military. Especially in critical junctures such as coups and mass mobilization, soldiers determine the fate of

political regimes and their leaders. Therefore, it is crucial to understand how dictators embed officers into their rule, retain the loyalty of soldiers, and set up measures to deter and survive threats originating in the military. By analyzing the behavior of different groups of military actors in autocratic regime crises, I hope this dissertation can provide useful insights on the inner workings of non-democratic regimes and contribute to a better understanding of soldiers under autocratic rule.

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II. Paper 1

Coup leaders: a new comprehensive dataset, 1950–2020

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Abstract

All coups seek to topple the political leadership, but they differ in terms of their leaders. While soldiers spearhead a majority of coups, a small number is led by civilians. And whereas high-ranking officers are the largest group among coup leaders, mid- and low-ranking soldiers account for a substantial share of putsches. Several datasets have recently offered data on the identity and political aims of coup leaders, to study the origin and outcome of different types of coups. However, these datasets have important limitations in their scope and how they address differing organizational structures of militaries across countries and time. This article therefore introduces a novel dataset on the identity of the leaders of 474 coups from 1950 to 2020 that distinguishes between coups led by civilians and military officers, as well as between coups by junior, mid-ranking, and senior officers. We discuss how the dataset complements previous data, present patterns across time and space, and show that successful and failed coups by senior, mid-ranking, and junior officers entail different prospects for post-coup democratization. The article underlines the importance for refined empirical measures and theoretical arguments in coup research.

Key words

Coups; military ranks; armed forces; civil-military relations; coup leaders

1. Introduction

While all coups seek to topple the political leadership, they strikingly differ in terms of their leaders: in 2014 Thailand, for instance, it was the commander of the Royal Thai Army, General Prayut Chan-o-cha, who ousted the civilian government and heralded another episode of military rule. This coup, however, contrasts with events in 1969 Libya, when the barely known army captain Muammar al-Gaddafi and fellow low-ranking soldiers deposed King Idris and ended the Libyan monarchy. And finally, in 1995 Qatar, it was the civilian heir apparent Crown Prince Sheikh Hamad bin Khalifa al-Thani, who wrestled political power from his father, the Emir of Qatar.

These examples illustrate that coup leaders vary substantially: whereas soldiers led the coups in Libya and Thailand, the Qatari takeover was a civilian-led palace coup. And whereas senior officers launched the takeover in Thailand, the Libyan coup was led by junior officers.

While coup research has overlooked these differences for a long time, a growing strand of research has started to look into them and to disaggregate coups into different types based on the identity or political aims of the coup leaders. These variations have been found to systematically affect the origins and unfolding of coups. For example, different levels of personalism are linked to different coup types (Chin et al. 2022), coup-proofing strategies have varying effects depending on the identity and aims of coup leaders (Albrecht and Eibl 2018; Kim and Sudduth 2021), and poverty only spurs regime change coups, but not coups that are limited to replacing the political leader (Chin, Carter, and Wright 2021). The perpetrators' background has also been linked to the level of violence involved in a coup (de Bruin 2019), its chances of success (Singh 2014), as well as post-coup democratic development (Albrecht, Koehler, and Schulz 2021; see also Koehler and Albrecht 2021). This new strand of research therefore suggests that disaggregating coups deserves further attention if we want to improve our understanding of their causes and consequences.

Novel research disaggregating coup types has relied on several distinct datasets on the identity and political aims of coup leaders. While some of these datasets focus on the political aims of the coup leaders (Chin, Carter, and Wright 2021), others centre on the perpetrators' civilian or military backgrounds (e.g. Bjørnskov and Rode 2020; de Bruin 2019; Marshall and Marshall 2022a; Singh 2014), or differentiate coups based on the plotters' relationship to the political elite (Albrecht, Koehler, and Schulz 2021).

Each dataset provides valuable information, yet their conceptual differences are decisive when choosing appropriate data for answering specific research questions. The datasets centring on the civilian or military background, in particular, demonstrate several limitations: some are limited in their scope; others omit leaders that are consequential for the nature of the coup, or combine coups by retired generals and those by incumbent high-ranking officers; and they largely overlook cross-national variations in the organization of militaries.

This article therefore introduces the Coup Leaders Dataset (CL), which addresses several limitations of the military- and rank-centred datasets. It codes the identity of the leaders of 474 coups from 1950 to 2020 and distinguishes between coups led by civilians and military officers, and among these, between coups led by junior, mid-ranking, and senior officers. It complements previous datasets that use the civilian or military background of the coup leaders and their military rank as core criteria in two conceptually important ways: first, CL only counts coups by active soldiers as military-led coups, thus avoiding the flaw of judging coups by former or exiled high-ranking officers as senior officer coups. Second, CL considers the overall structure of the military in different countries and classifies coups by colonels and lieutenant colonels in militaries without generals as coups by the military's upper echelon. This leads to different classifications of a substantial share of coup events.

The article proceeds as follows: We first describe CL's data collection and contents and discuss how it differs from previous data on coup leaders. We then present patterns across time and space. Finally, we replicate a study on the democratizing effect of coups with our refined measures.

2. Data collection and the *CL Dataset*

The Coup Leaders Dataset identifies 474 failed and successful coups between 1 January, 1950 and 31 December 2020 and denotes (a) the leader(s) of the coup attempt, (b) whether members of the military were amongst them, (c) their exact military rank, and (d) rank group. The cases are based on the dataset by Powell and Thyne (2011; PT), and with few exceptions match theirs.[1] PT defines coups as overthrows of chief executives led by other state elites, encompassing "non-civilian members of the military and security services, or civilian members of government"

[1] The minor changes applied to PT's original sample are reported in the codebook. We did not change PT's coding of whether the coup attempt failed or succeeded for any case.

(250–251). As PT does not identify the coups' leaders, it cannot be used to disaggregate coups into different types.

We define coup leaders as the individuals that head the irregular, unconstitutional attempt to overthrow the political leadership by leading and actively taking actions against the incumbent executive. These leadership actions include acts like appearing on national television or radio to announce the ouster of the sitting executive and claim authority over political institutions, ordering the arrest of the incumbent and other key political figures, or leading troops to seize strategically or symbolically important locations. Our coding refers to the actual attempt phase of the coup and not to the planning phase, in which plotters draft plans for a possible takeover in the future. Taken together, coup leadership is marked by publicly visible manifestations of a leading role in active, subversive actions against the political leadership in the attempt phase of a coup. Based on this definition, CL identifies the leaders of the coup attempt as precisely as possible, almost always by name. In a few instances or when we could not solve disagreement between sources, we were only able to identify the leaders more broadly, such as that unspecified senior officers led the coup attempt. We identified the leaders with the datasets and case descriptions by Geddes et al. (2014), Roessler (2011), historical and political dictionaries, pertinent monographs, as well as numerous other sources, especially the historical archives of news outlets, such as the BBC, New York Times, and the Washington Post.

Based on the leader information, we code three variables capturing the military's involvement in the coup. First, we distinguish between military coups, in which at least one of the leaders of the coup attempt is an active member of the military, and civilian coups, in which none of the leaders are active soldiers. Second, we record the highest rank amongst the soldiers leading the coup. And third, we identify the rank group of the coup leader(s), distinguishing between the groups of junior officers, mid-ranking officers, and senior officers. Junior officers entail sergeant, sergeant major, master sergeant, senior sergeant corporal, officer cadet, officer trainee, warrant officer, second lieutenants, first lieutenants, army captains, ensigns, junior lieutenant, flight lieutenant, lieutenant, midshipman, officer candidate, unspecified non-commissioned officer, and unspecified junior officer; mid-ranking officers comprise major, lieutenant commander, commander, navy captain, and unspecified mid-ranking officer, as well as brigadier, lieutenant colonel and colonel in militaries with a higher rank; senior officers include major general, lieutenant general,

general, air force general, army general, brigadier general, chief marshal, field marshal, commodore, rear admiral, vice admiral, admiral, unspecified high-ranking or senior officer.

Because coups are highly conspirational and opaque events, many of which have occurred in non-Western countries already decades ago, we worked to reduce any possible bias from limited reporting in three ways:

First, we based our coup cases on those identified by PT because it does not only rest on a conceptually useful definition of coups, but is also widely recognized as a valid, reliable, and frequently used source in quantitative research. We still revisited every single coup in PT and made minor changes (see codebook).

Second, another possible source of bias is the dataset's reliance on predominantly English-speaking literature, while the majority of coups has historically occurred in non-Western countries. We addressed resulting imbalances by identifying several sources per coup and working to eliminate any discrepancies between sources. We relied on both academic research and historical newspaper articles. Many of these newspaper articles were written by regional and local correspondents, who were able to give informed and close-up accounts of the events, and had access to the public statements of coup leaders in local radio and television broadcasts.

Third, by relying exclusively on openly accessible sources, we cannot identify, of course, in how far the publicly known coup leaders receive clandestine assistance from other officers. The impossibility of coding this tacit or hidden support, however, does not void the quality of our data. This is because we propose a definition of coup leaders that is conceptually clear in that we focus on actual and publicly observable manifestations of disobedience in the attempt phase of the coup. Hence, not all officers that partake in a coup or are involved in its planning are considered coup leaders, but only those that lead actual actions against the political leadership on the day of the coup. Such public actions and statements by coup leaders are, as pertinent literature shows, among the most important factors for the outcome of coup attempts. Singh (2014) argues that coup plotters have to credibly portray the ouster of the government as a "fait accompli" (22) in public to secure the necessary backing of those soldiers not involved in the conspiracy. Coups comprising of high-ranking leaders have better prospects to succeed than coups by lower-ranking officers because a senior officer's claim of coup success is more credible and attracts broader intra-military support than a coup from outside the upper echelons (Singh 2014).

Hence, by coding the rank of coup leaders that have the highest public profile, we capture a dimension that has been found to be decisive for the outcome of coups.

How is CL distinct from existing datasets that disaggregate coups? With its primary focus on the military background and rank of coup leaders, CL differs from the COLPUS dataset (Chin, Carter, and Wright 2021) and the Coup Agency and Mechanisms (CAM) dataset (Albrecht, Koehler, and Schulz 2021), which both use a political criterion to disaggregate coups. COLPUS focuses on the "coup plotters' positions relative to the incumbent regime and how coups affect the regime structure" (Chin, Carter, and Wright 2021, 1041). Based on the coup plotters' (possible) consequences for the ruling elite, COLPUS distinguishes leader reshuffling coups "that seek to oust the regime leader but mostly preserve the existing regime structure" (1041) from regime change coups, which aim to replace the ruling elite at large and usher in a new regime (1041). Though the identity of the coup leader(s) is important to evaluate the coup's impact on the composition of the regime elite, COLPUS' main aim, nevertheless, is to disaggregate coups based on their effects on political regimes and not to explain coup activity by plotters from different civilian or military backgrounds.

Similar conceptual differences also exist between the CL and CAM datasets (Albrecht, Koehler, and Schulz 2021), which does not follow a purely rank-based logic (1055) and instead "systematically codes the coup plotters' relationship to the existing political regime" (1054). CAM's dichotomous distinction of combat and elite officer coups does not only rest on the plotters' military rank, but also considers their links to the political leadership (1053–1054). Accordingly, "[e]lite officer coups are staged by military officers who are simultaneously part of the political elite, whereas combat officer coups are executed by members of the military who remain excluded from political power" (1055). So while in general, elite officer coups are staged by the military's top tier and combat officer coups originate from below, CAM's political criterion leaves the possibility that "combat officer coups may feature higher-ranking officers […] as long as they are not political insiders" (1055). This means that a putsch by a general is not considered an elite officer coup if he does not simultaneously occupy an elite political position. These conceptual differences entail that CL and CAM classify dozens of cases differently. CL codes 51 of CAM's combat officer coups as coups by senior officers and rates 22 incidences as mid-ranking or junior coups that CAM classifies as elite officer coups. Due to CAM's political dimension, it is more useful than CL to test arguments linking political traits of the plotters to variations in

their coup activity. CL's emphasis on military hierarchy, in turn, makes it particularly useful to analyse the opportunity structures, under which soldiers from different ranks plot a coup.

Finally, the strand of coup data that comes closest to ours are the datasets denoting the identity and the military rank of the coup leader(s), including Marshall and Marshall (2022a), Bjørnskov and Rode (2020), Singh (2014), and de Bruin (2019). There are three major aspects, in which CL differs from these existing rank-centred datasets:

First, a defining feature of CL is that it assigns coups by lieutenant colonels and colonels in militaries without a higher rank to the rank group of high-ranking officers. Besides smaller, often country-specific differences, the major difference between militaries around the globe is that some do or have not had any generals. Consequently, datasets that code the formal and not the functional rank group, treat coups by mid-ranking colonels in countries with generals as the same as coups by colonels in countries without generals. For instance, while the six coups between 1978 and 2005 in Mauritania were all staged by colonels and lieutenant colonels, categorizing them as attempts by mid-ranking officers would ignore that colonel had been the highest military rank for active soldiers for many years (Pazzanitta 2008, 77). CL takes into account these differences in the cross-national organization of militaries that are largely overlooked in other datasets: In militaries with generals, colonels and lieutenant colonels are mid-ranking officers and coups led by them should be classified accordingly. In militaries without generals, colonels and lieutenant colonels are the military's upper echelon, often exemplified by a colonel serving as the Joint Chief of Staff or Army Chief of Staff. We therefore classify them as senior officer coups. We did so by checking all coup attempts in countries, which had not experienced a previous coup by an unequivocally senior officer, for whether the leaders were in the military's top rank group. Our codebook discusses each of the 93 candidate cases, of which 25 (27%) indeed are cases of coup attempts led by colonels who are senior officers, thereby constituting about 5% of all coups included in the dataset.

Second, CL reports the identity of the coup leader as precisely as possible and only considers coups as military-led if they are led by at least one active soldier. This feature distinguishes CL from the dataset of Marshall and Marshall (2022a), whose information on coup leaders is sometimes incomplete, military ranks are included even though officers have retired, or additional coup leaders are not listed, whose

background, however, is consequential for the nature of the coup. Marshall and Marshall (2022a), for instance, identify President Kasavubu as the sole leader of the 1960 coup in the Democratic Republic of the Congo, suggesting the coup was civilian in nature. This, however, would undermine the crucial role of then-Chief of Staff Colonel Joseph Mobutu. Moreover, the individuals listed as coup leaders at times are not the actual perpetrators, as 'in successful cases where the coup leader is not clearly identified, the new executive leader is reported as the coup leader' (Marshall and Marshall 2022b, 2). Alphonse Alley, for example, who is identified as leader of the 1967 coup in Benin, became president in the aftermath of a coup led by Major Maurice Kouandété and Captain Mathieu Kérékou (Houngnikpo and Decalo 2013, 48–49).

Third, CL is more comprehensive in its scope than these other rank-centred datasets. Like CL, de Bruin (2019), for instance, bases her sample on PT, yet her collection excludes the rank for about 18% (88 out of 478) of these coups, primarily because her analysis only covers the first coup in years during which several occurred. This omits such prominent cases as the Chilean coup in September 1973 that brought General Augusto Pinochet to power, because it followed a failed attempt in June of the same year. Singh's (2014) dataset, too, does not code to which rank group 118 (25%) of its cases belong, because the coup leaders could not be identified, or the coup was staged by officers from mixed levels (65–66).

Taken together, despite obvious overlaps, datasets touching on coup leaders differ with regard to underlying concepts and the way they classify coups. In the next section, we introduce our dataset using descriptive statistics and compare coups and their leaders across time and space.

3. Descriptive statistics

Our data show that there is much variation in who leads coups (Fig. 1). Of the 452 coups, for which we were able to identify their leader(s), senior officers led only about half of all coups (46%). Coups by mid-ranking officers are the second-largest group, accounting for slightly more than a third of all attempts (33%). Coups by junior officers (64 attempts, 14%) and civilians (35 attempts, 8%) are relatively rare. Coups by different coup leaders also vary with regard to their likelihood of success. Senior officer coups are most likely to succeed, while only about one third (36%) of coups

by mid-ranking and junior officers succeeds. The rare coup attempts by civilians meanwhile are about as likely to succeed as to fail.

Figure 1: Number of failed and successful coups across coup leaders, 1950–2020

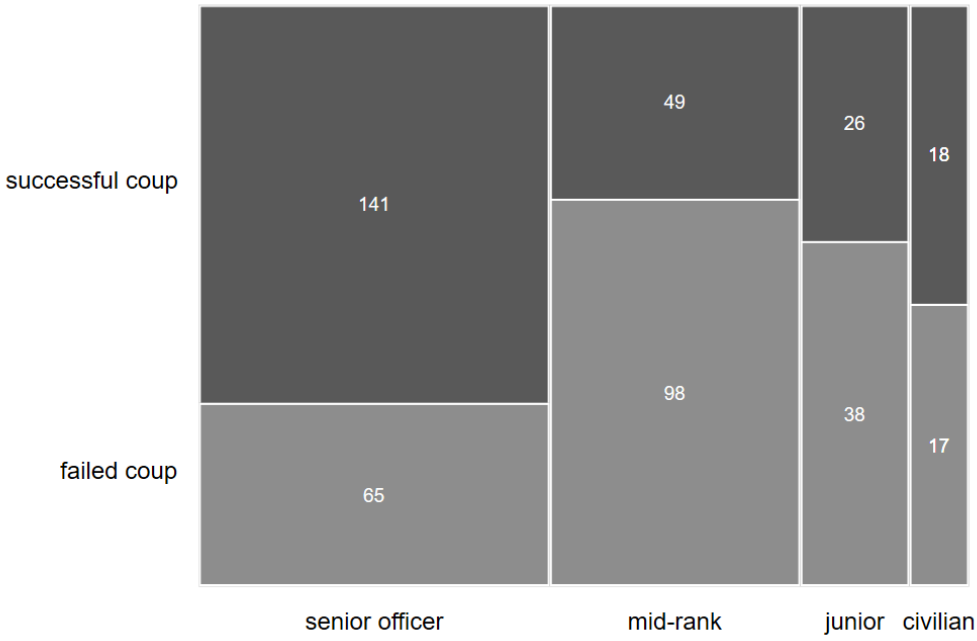
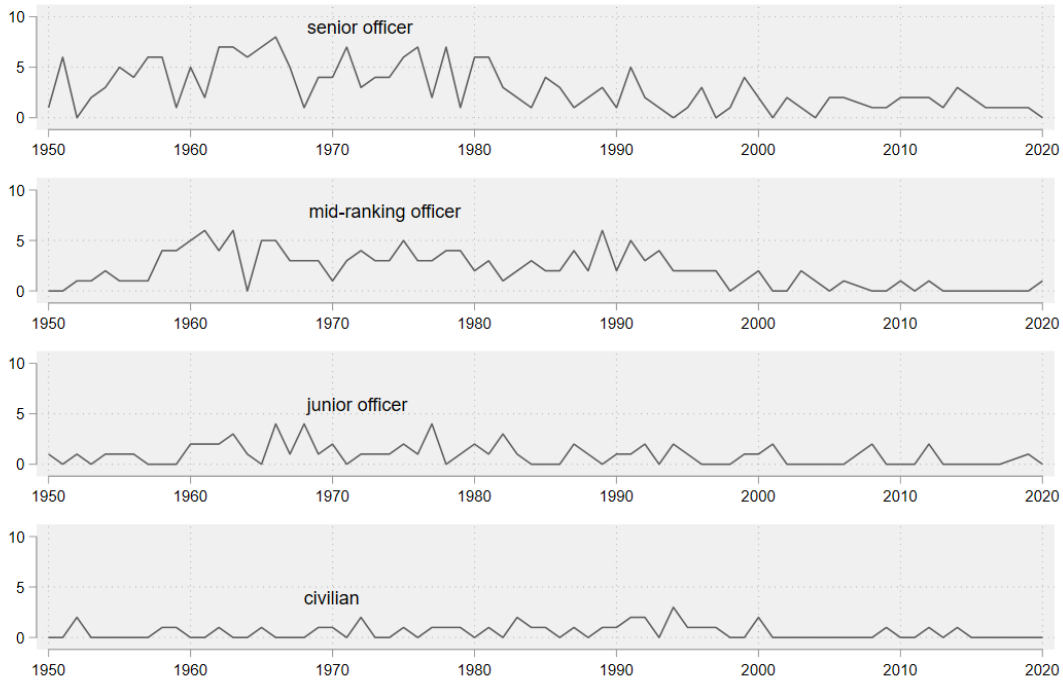
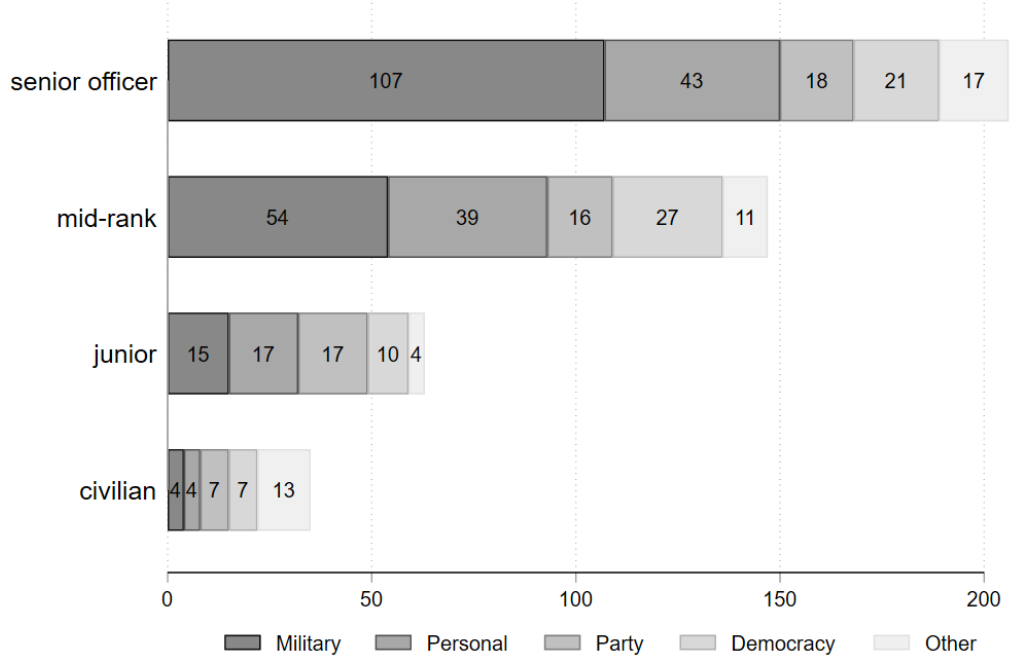


Figure 2: Number of coup attempts per year across coup leaders, 1950–2020



We also find temporal differences between coup leaders (Fig. 2). Coup attempts in general have become rarer over time. Yet while attempts by senior officers have continued at a rate of at least one a year, coups by mid-ranking officers have virtually disappeared since the late 1990s, and attempts by junior officers already since the 1980s. A plausible explanation could be that justifying a power grab outside the military's chain of command has become increasingly challenging. As Yukawa and co-authors (2022, 4) argue, "since the end of the Cold War, condemnation and punishment from the international community have become an obstacle to staging a coup attempt". Nowadays coup plotters thus have to undertake greater efforts to legitimize their seizures (Yukawa et al. 2022, 4). Lower-ranking coup plotters, especially, are regularly met by fierce resistance from higher-ranking officers, that hinders them from portraying their takeover as an act on behalf of the entire country and for the greater good.

Figure 3: Coups by different coup leaders across regime types, 1950–2020



Coups by different leaders also exhibit noticeable variations in their political context (Fig. 3). To compare the regime background of coups, we employ Bell's (2016) data, who uses the same framework as Geddes et al. (2014) to distinguish regime types and whose more comprehensive coverage allows us to use the full scope of our dataset. Previous research has found military regimes to be particularly coup-prone (Powell 2012). Our data reveal that these regimes are particularly susceptible to

falling prey to coups by senior officers. More than half of all senior coups occurred in military regimes, where high-ranking officers tried to wrestle political authority from fellow senior officers. Coups by other coup leaders were less frequently directed against military regimes: Roughly a third of the mid-ranking officer coups, and only every fourth junior coup, were staged in military dictatorships. With more than half of all junior coups directed against personalist and party dictatorships, the main target of low-ranking coup plotters is civilian autocracies.

4. Uses of the dataset

Beyond revealing differences in their outcome and their frequency across space and time, CL enables researchers to study the causes and consequences of coup types. We briefly illustrate CL's potential for analysing the legacies of coups by refining an existing study on the link between coups and democratization.

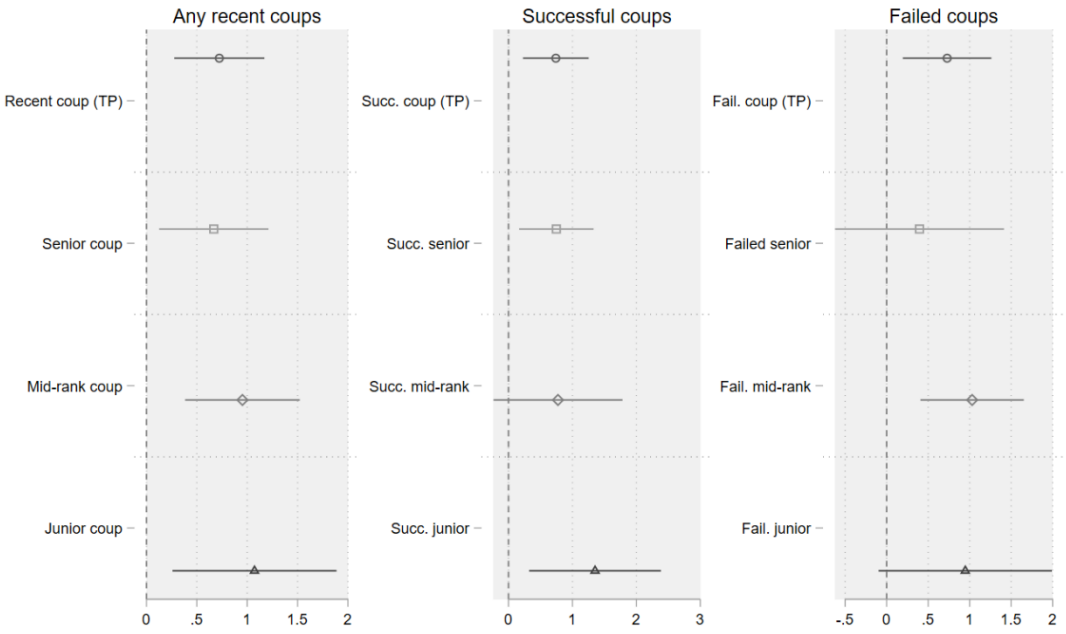
Military coup leaders and post-coup democratization

Researchers have recently grappled with the question whether coups can be 'good for democracy' (Derpanopoulos et al. 2016). Answers, however, have been mixed, with some scholars arguing that coups can indeed be conducive to democratization (e.g. Thyne and Powell 2016; Varol 2017), others being pessimistic (e.g. Derpanopoulos et al. 2016; Miller 2011), and yet others finding different effects across time (e.g. Marinov and Goemans 2014; Miller 2016). A partial explanation for the mixed empirical findings is proposed by Albrecht and co-authors (2021), who find that successful coups by combat officers are more likely followed by a democratic transition than coups by elite officers. This is, they argue, because combat officers' "preferences and grievances are more likely to align with those of society at large" (1057), while elite officers plot coups in order to readjust the power distribution in the ruling elite to their advantage (1057). Hence, the background of the coup leaders may help to understand the variations in post-coup regime trajectories.

As existing research on the varying democratic trajectories after different coup types has used data with a strong focus on the coup plotters' links to the political elite (Albrecht, Koehler, and Schulz 2021; Koehler and Albrecht 2021), we use our data to test whether focusing on military ranks can add nuance to the research on post-coup democratization.

Since our dataset is an extension of PT, we replicate Thyne's and Powell's (2016) study,[2] which finds that both successful and failed coups increase the prospects of post-coup democratization in autocratic regimes. We replace the independent variables (recent failed and successful coups) in the original analysis with our more fine-grained data and instead test the effect of recent (failed and successful) senior, mid-ranking, and junior coups on the likelihood of post-coup democratization.[3]

Figure 4: Replication Thyne and Powell (2016) with CL data, 1950–2008



Note: Figure displays coefficients for independent variables; whiskers show 90% confidence intervals; control variables and time polynomials included but not reported; regression results are reported in the online appendix.

Figure 4 shows the results of the replication analysis. The first model in each plot displays the results of the original analysis, while the three following models replicate the analysis using our data on coup leaders as independent variables. Turning to the left plot, we find that all types of coups heighten the prospects of democratization.

[2] Albrecht et al. (2021) also replicate PT in their online appendix as a robustness check for their main finding that only combat officer coups increase the likelihood of democratization. This enables us to compare whether we can identify differences in the findings arising from different underlying concepts of coup types.

[3] We follow Thyne's and Powell's approach to coding the independent variables. We also follow their approach to coding democratization: "1 in the year in which the state was coded +6 or greater on the Polity IV index" (Thyne and Powell 2016, 200).

However, once we distinguish between successful and failed coups and disaggregate coup leaders, we find that different coup leaders are indeed associated with different democratic trajectories. Looking at the results for successful coups, only coups by senior and junior officers are consistently linked to a higher likelihood of post-coup democratization, while successful coups by mid-ranking officers are not. And even when the attempt fails, democratic development differs between coup types: while failed coups by senior and junior officers are not associated with higher prospects of democratization at conventional levels of significance, unsuccessful coups by mid-ranking officers are linked to a higher likelihood of democratic transition.

These findings point to a novel pattern between coup types and regime legacies and complement previous studies on the topic by emphasizing the military traits of the coup leaders: first, we find the democratizing effect of successful coups in the original analysis to be driven by senior and junior coups. A possible explanation could be that junior officer coups have a higher risk to fail due to their leader's minor rank, which is why junior coup leaders have to forge alliances with civilians outside the military in order to succeed. The possible inclusion of opposition and anti-regime individuals may result in a democratizing effect of junior coups. Senior officers, in turn, may opt for democratization after a successful takeover for quite different reasons. Since a more legitimate government contributes to a country's material well-being "by opening an economy to foreign aid, investment, and international business transactions" (Thyne and Powell 2016, 196), senior officers may initiate a regime change to preserve or expand their material privileges. Ambitious mid-ranking officers, in turn, vie for power with their more senior counterparts. Therefore, they may stage coups not because they are dedicated to democratic rule, but to expand their power in the military and regime.

Second, we find that only failed mid-rank coups are consistently linked to democratization. This may be because – as Thyne and Powell argue – leaders seek to address the causes of failed coups by improving economic and political performance. Incumbents may perceive failed mid-ranking officer coups as particularly worrisome because the middle ranks are not only well-connected in the military hierarchy due to their middling position, but also command the combat troops and thus have the power to militarily enforce a takeover. Political liberalization, therefore, may be a strategy that incumbents apply especially after failed mid-ranking officer coups in order to generate political and economic spoils that decrease mid-ranking soldiers' incentives to attempt another coup.

All in all, the replication analysis underlines that more fine-grained data on the coup leaders and their military background enables researchers to formulate and test more refined arguments linking coups and democratization. This improves our understanding of a coup's internal dynamics, causes, and consequences.

5. Conclusion

This article introduced the Coup Leaders Dataset, which provides information on the identity of coup leaders, their military and civilian background, and rank. Using the dataset, we demonstrated striking differences between coups, especially those carried out by military officers of different ranks. We demonstrated that coup leaders vary in their overall frequency, success, as well as spatial and temporal distribution, and further highlighted the dataset's uses by studying the relationship between the identity of coup leaders and post-coup regime legacies. We found that takeovers by senior and junior officers are followed by higher levels of democracy, while only failed coups from the military's middling levels are linked to an increase in democratic quality. Our distinction of three military rank groups thereby adds to previous datasets and research, conceptually, theoretically, and empirically.

Taken together, our data highlight the importance of refined empirical measures in coup research. Scholars can use the data to revisit previous analyses of the causes and effects of coups. And they can leverage the data to test new arguments on how the coup leader's identity matters. Both avenues promise to improve our understanding on the origins and effects of coups on political systems, economies, and societies.

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7. Appendix

7.1 Replication of Thyne and Powell (2016) with the Coup Leaders Dataset

Table A1 reports the regression results underlying the left coefficient plot in figure 4 of the main text. The models underlying this plot test the link between recent coups (regardless of success or failure) and post-coup democratization. Model 1 reports the regression results from Model 3 of the original analysis by Thyne and Powell (2016), which uses the coup data by Powell and Thyne (2011). Models 2-5 in table A1 rerun this model using data on senior, mid-rank, and junior officer coups from the Coup Leaders Dataset.

Table A2 reports the regression results underlying the coefficient plot in the middle of figure 4 of the main text. The models underlying this plot test the link between recent successful coups and post-coup democratization. Model 5 reports the regression results from Model 1 of the original analysis by Thyne and Powell (2016). Models 6-8 in table A2 rerun this model using data on successful senior, mid-rank, and junior officer coups from the Coup Leaders Dataset.

Table A3 reports the regression results underlying the coefficient plot on the right of figure 4 of the main text. The models underlying this plot test the link between recent failed coups and post-coup democratization. Model 9 reports the regression results from Model 2 of the original analysis by Thyne and Powell (2016). Models 10-12 in table A3 rerun this model using data on failed senior, mid-rank, and junior officer coups from the Coup Leaders Dataset.

Table A1: Coup types and post-coup democratization

	M1	M2	M3	M4
Recent coup (T&P)	0.723***			
	(0.272)			
Recent senior officer coup		0.668**		
		(0.330)		
Recent mid-rank officer coup			0.953***	
			(0.346)	
Recent junior officer coup				1.072**
				(0.495)
Previous democracy	0.893***	0.881***	0.891***	0.884***
	(0.255)	(0.254)	(0.254)	(0.253)
Former British colony	-0.115	-0.105	-0.109	-0.115
	(0.293)	(0.292)	(0.292)	(0.292)
GDP/capita, ln	0.596**	0.534**	0.554**	0.536**
	(0.253)	(0.249)	(0.251)	(0.249)
Ch. GDP/capita	-0.205	-0.279	-0.251	-0.276
	(1.010)	(0.995)	(1.000)	(0.982)
Year of independence	-0.008***	-0.008***	-0.008***	-0.008***
	(0.002)	(0.002)	(0.002)	(0.002)
Cold War	-1.490***	-1.511***	-1.478***	-1.495***
	(0.276)	(0.276)	(0.276)	(0.275)
Constant	9.413**	9.865**	10.510**	10.241**
	(4.657)	(4.618)	(4.601)	(4.574)
Observations	4838	(4.618)	4838	4838
Adjusted R^2	0.08	0.08	0.08	0.08

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time controls (authoritarian years, authoritarian years^2 and authoritarian years^3) included not reported.

Table A2: Successful coup types and post-coup democratization

	M5	M6	M7	M8
Recent successful coup (T&P)	0.740**			
	(0.312)			
Recent succ. senior officer coup		0.748**		
		(0.354)		
Recent succ. mid-rank officer coup			0.774	
			(0.613)	
Recent succ. junior officer coup				1.353**
				(0.627)
Previous democracy	0.869***	0.877***	0.886***	0.888***
	(0.255)	(0.254)	(0.252)	(0.252)
Former British colony	-0.112	-0.105	-0.115	-0.111
	(0.292)	(0.292)	(0.291)	(0.292)
GDP/capita, ln	0.551**	0.515**	0.518**	0.515**
	(0.250)	(0.248)	(0.248)	(0.248)
Ch. GDP/capita	-0.243	-0.320	-0.301	-0.270
	(1.000)	(0.982)	(0.966)	(0.984)
Year of independence	-0.008***	-0.008***	-0.008***	-0.008***
	(0.002)	(0.002)	(0.002)	(0.002)
Cold War	-1.521***	-1.530***	-1.500***	-1.498***
	(0.278)	(0.278)	(0.276)	(0.275)
Constant	9.958**	10.104**	10.941**	10.797**
	(4.620)	(4.616)	(4.551)	(4.556)
Observations	4838	4838	4838	4838
Adjusted R^2	0.08	0.08	0.07	0.08

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time controls (authoritarian years, authoritarian years² and authoritarian years³) included not reported.

Table A3: Failed coup types and post-coup democratization

	M9	M10	M11	M12
Recent failed coup (T&P)	0.728**			
	(0.324)			
Recent failed senior officer coup		0.396		
		(0.618)		
Recent failed mid-rank officer coup			1.030***	
			(0.379)	
Recent failed junior officer coup				0.947
				(0.635)
Previous democracy	0.908***	0.897***	0.904***	0.886***
	(0.254)	(0.252)	(0.254)	(0.253)
Former British colony	-0.112	-0.104	-0.094	-0.117
	(0.292)	(0.291)	(0.292)	(0.292)
GDP/capita, ln	0.566**	0.506**	0.530**	0.517**
	(0.251)	(0.247)	(0.249)	(0.248)
Ch. GDP/capita	-0.215	-0.298	-0.264	-0.303
	(0.999)	(0.965)	(0.994)	(0.966)
Year of independence	-0.008***	-0.008***	-0.008***	-0.008***
	(0.002)	(0.002)	(0.002)	(0.002)
Cold War	-1.465***	-1.490***	-1.473***	-1.496***
	(0.274)	(0.274)	(0.276)	(0.275)
Constant	9.752**	10.537**	10.236**	10.240**
	(4.615)	(4.555)	(4.610)	(4.574)
Observations	4838	4838	4838	4838
Adjusted R^2	0.08	0.07	0.08	0.08

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time controls (authoritarian years, authoritarian years² and authoritarian years³) included not reported.

7.2 References

Powell, Jonathan M., and Clayton L. Thyne. 2011. “Global Instances of Coups from 1950 to 2010: A new dataset.” *Journal of Peace Research* 48 (3): 249–259.

Thyne, Clayton L., and Jonathan M. Powell. 2016. “Coup d’état or coup d’autocracy? How coups impact democratization, 1950–2008.” *Foreign Policy Analysis* 12 (2): 192–213.

8. Code book

8.1 Introduction

This codebook describes the dataset presented in: Eschenauer-Engler, Tanja, and Bastian Herre. 2023. “Coups and their Leaders: A New Comprehensive Dataset.” *European Political Science*.

The dataset builds upon the work by Powell and Thyne (2011), and complements it with data on the identity of coup leaders.

We define coup leaders as the individuals that head the irregular, unconstitutional attempt to overthrow the political leadership by leading and actively taking actions against the incumbent executive. These leadership actions include acts like appearing on national television or radio to announce the ouster of the sitting executive and claim authority over political institutions, ordering the arrest of the incumbent and other key political figures, or leading troops to seize strategically or symbolically important locations.

Our coding refers to the actual attempt phase of the coup and not to the planning phase, in which plotters draft plans for a possible takeover in the future.

Taken together, coup leadership is marked by publicly visible manifestations of a leading role in active, subversive actions against the political leadership in the attempt phase of a coup.

8.2 Observations

The observations match the ones in Powell and Thyne (2011), with the following exceptions:
We exclude seven observations:

- Argentina 1988/12/2: the soldier rebellion had no intent to topple the government (The New York Times 1988).
- Brazil 1964/3/30: seems to be a duplicate of the military coup led by General Humberto Castelo Branco on April 1, 1964 (The New York Times 1964).
- Ethiopia 1961/12/14: seems to be a duplicate of the military coup attempt led by General Mengistu Newaye of 1960/12/14 (Shinn and Ofcansky 2013, 106f).
- Fiji 2000/5/29: seems to be a duplicate of the coup led by George Speight and armed civilians on 2000/5/19 (BBC 2000).
- Mali 1978/2/15: seems to be a duplicate of the military coup attempt led by Lieutenant Colonels Kissima Doukara, Karim Dembele, and Tiecoro Bagayoko on 1978/2/28 (The New York Times 1978).
- Sierra Leone 1992/12/29: no independent sources confirm the sparse reports there indeed was an attempt (Aksoy, Carter, and Wright 2015a).
- Yemen People’s Republic 1986/1/13: President Mohammad alleged a coup attempt, but several sources indicate there was no attempt and he was the aggressor (Katz 1986; Los Angeles Times 1986; The New York Times 1986).

We include one observation they exclude:

- Bangladesh 1975/11/3: successful military coup led by Brigadier General Khalid Musharaf (Islam 1984).

We recode four observations:

- Bolivia 1981/5/15: correct date is May 11 (The Washington Post 1981).
- Central African Republic 1976/2/5: correct date is February 3 (Aksoy, Carter, and Wright 2015a).
- Chad 2006/4/13: correct date is March 13 (Aksoy, Carter, and Wright 2015a).
- Congo 1968/8/30: correct date is September 4 (The New York Times 1968b).

- Syria 1981/1/31: correct date is January 20 (Aksoy, Carter, and Wright 2015a).
- Yemen People's Republic 1968/8/31: the coup occurs in the Yemen Arab Republic in the North, not in South Yemen (The New York Times 1968a).

8.3 Variable list

country

Country name. The variable matches the variable *country* in the Powell and Thyne-dataset (2011).

ccode

Country codes from Gleditsch and Ward (1999). The variable matches the variable *ccode* in the Powell and Thyne-dataset (2011).

year

Year of coup attempt. The variable matches the variable *year* in the Powell and Thyne-dataset (2011).

month

Month of coup attempt. The variable matches the variable *month* in the Powell and Thyne-dataset (2011), with the exceptions mentioned above.

day

Day of coup attempt. The variable matches the variable *day* in the Powell and Thyne-dataset (2011), with the exceptions mentioned above.

coup

The variables combines the information of the variables *country*, *year*, *month*, and *day*.

success

The variable takes on the value of 1 if the coup was successful, and the value of 0 if the coup was unsuccessful. The variable matches the variable *coup* in Powell and Thyne (2011), with the exception mentioned above.

leader

The variable names the leaders of the coup.

military

The variable takes on the value of 1 if at least one leader of the coup is an active member of the military, and the value of 0 if not.

rank

The variable denotes the highest rank among the leaders of the coup.

rankgroup

The variable mostly aggregates the information in *rank*. The variable distinguishes between the rank groups of junior officer, mid-rank officer, and senior officer. Junior officers entail sergeant, sergeant major, master sergeant, senior sergeant corporal, officer cadet, officer trainee, warrant officer, second lieutenants, first lieutenants, army captains, ensigns, junior lieutenant, flight lieutenant, lieutenant, midshipman, officer candidate, unspecified non-commissioned officer, and unspecified junior officer. Mid-rank officers comprise major, lieutenant colonel, colonel, lieutenant commander, commander, navy captain, brigadier, and unspecified mid-ranking officer. Senior officers include major general, lieutenant general,

general, air force general, army general, brigadier general, chief marshal, field marshal, commodore, rear admiral, vice admiral, admiral, and unspecified high-ranking or senior officer. However, we double-checked all mid-ranking officers that were not preceded by a senior officer coup whether the leaders were indeed senior officers, such as because the military did not include generals and colonel was the highest rank. The cases checked and the justifications for their coding are listed in the section 4.

8.4 Mid-ranking officer coups reconsidered as senior-officer coups

Algeria 1964/6/30

Rank group coded: senior
Justification: The military did not include any generals at the time of the coup. “In 1984, after promoting eight colonels to become the first generals in independent Algeria, Benjedid announced the establishment of an ANP general staff” (Metz 1994).

Algeria 1965/6/19

Rank group coded: senior
Justification: The military did not include any generals at the time of the coup. “In 1984, after promoting eight colonels to become the first generals in independent Algeria, Benjedid announced the establishment of an ANP general staff” (Metz 1994).

Algeria 1967/12/14

Rank group coded: senior
Justification: The military did not include any generals at the time of the coup. “In 1984, after promoting eight colonels to become the first generals in independent Algeria, Benjedid announced the establishment of an ANP general staff” (Metz 1994).

Angola 1977/5/27

Rank group coded: mid-rank
Justification: The military included generals at the time of the coup. “The delegation included Carlos Rocha, minister of economy and planning; General João Jacob Caetano, deputy chief of staff of the armed forces and minister of justice, building, and information and Neto’s mother, Dona María Silva” (Hatzky 2015).

Azerbaijan 1994/10/4

Rank group coded: mid-rank
Justification: The military was led by a general before the time of the coup. “He announced the replacement of General Sefer Abiyev, army chief of staff, with General Nejmettin Hussein Ogly Sadykov, and relieved Major General Zabor Rizayev of his duties as commander of the border guards” (AFP 1993).

Azerbaijan 1995/3/13

Rank group coded: mid-rank
Justification: The military was led by a general before the time of the coup. “He announced the replacement of General Sefer Abiyev, army chief of staff, with General Nejmettin Hussein Ogly Sadykov, and relieved Major General Zabor Rizayev of his duties as commander of the border guards” (AFP 1993).

Bangladesh 1975/8/15

Rank group coded: mid-rank
Justification: The military included senior officers at the time of the coup. “A power struggle is going on within the Bangladesh army between the young majors who staged the coup in which

President Sheik Mujibur Rahman was killed last week, and the senior military leaders who were not involved, informed sources said yesterdap [sic]" (Boston Globe 1975).

Benin 1963/10/28

Rank group coded: senior
Justification: The military was led by a colonel at the time of the coup. "The commander of Dahomey's 800-man army seized control of the government today after workers demanded the ouster of President, Hubert Maga. (…) Col. Christophe Soglo, the armed forces chief of staff, had proclaimed his loyalty to the provisional government" (Boston Globe 1963).

Burkina Faso 1966/1/3

Rank group coded: senior
Justification: The military was led by a lieutenant colonel at the time of the coup. "The military, led by Chief of Staff Lt Col Lamizana, intervened at unions' request, rather than firing on unarmed demonstrators during a general strike (Geddes, Wright, and Frantz 2014b).

Burundi 1976/11/1

Rank group coded: senior
Justification: Though the head of government had promoted himself to general at the time of the coup, the actual military was led by a lieutenant colonel at the time. "The radio said that the Commander in Chief of the Burundi Army, Lieut. Col. Thomas Ndabemeye, had also been dismissed. (…) The armed forces, led by Lieut. Col. Jean Bagaza, the Deputy Chief of Staff, said that President Micombero was no longer to exercise power in the interests of the nation. President Micombero, who is an army lieutenant general, came to power himself in a bloodless coup in November 1966" (New York Times 1976). "Cpt. Micombero, by then self-promoted General, was arrested and put under house arrest at Ngozi in the North of the country" (International Business Publications 2012).

Burundi 1987/9/3

Rank group coded: mid-rank
Justification: The coup leader did not belong to the military leadership. "Radio Burundi said the government would be taken over by "a military committee for national redemption lead by Maj. Pierre Buyoya. (…) Buyoya, a Tutsi, sits on the 50-member central committee of the ruling party. No other information was available tonight on the major. He is not one of the country's more senior military men" (Washington Post 1987).

Cameroon 1984/4/6

Rank group coded: mid-rank
Justification: The military included a general at the time of the coup. "The leader of the loyalist troops, Gen. Pierre Semengue, said that they had proof Ahidjo led the rebels (May, 1984a)" (Aksoy, Carter, and Wright 2015b).

Central African Republic 1966/1/1

Rank group coded: senior
Justification: The military was led by a colonel at the time of the coup. "12/31/1965 Coup by Col. Bokassa, Chief of Staff and Commander of the Army, ousted the civilian government" (Geddes, Wright, and Frantz 2014b).

Central African Republic 1976/2/3

Rank group coded: mid-rank
Justification: The military included generals by the time of the coup. "Directional operational command was lodged in two trusted military cronies: Deputy Chief of Staff General Jean

Claude Mandaba (who in 1971 was entrusted with the gendarmerie as well) and General André Dieudonné Magalé, a lieutenant in 1966" (Decalo 2019).

Chile 1973/6/29

Rank group coded: mid-rank
Justification: The military was led by a general at the time of the coup. "The incident followed what the Government claimed was an attempt to assassinate General Prats, the army commander" (New York Times 1986).

Comoros 1999/4/30

Rank group coded: senior
Justification: The military was led by a colonel at the time of the coup (New York Times 1999a, 1999b).

Democratic Republic of the Congo 1960/9/14

Rank group coded: senior
Justification: Colonel Mobutu was Chief of Staff of the military, and the coup was supported by most of the senior officers (Kisangani and Bobb 2010).

Ecuador 1954/12/23

Rank group coded: mid-rank
Justification: The military included a general by the time of the coup. "Ongoing fiscal difficulties severely limited Páez's efforts, however, and in September 1937 he was overthrown by his minister of national defense, General Alberto Enríquez Gallo" (Hanratty 1989).

Ecuador 1956/8/7

Rank group coded: mid-rank
Justification: The military included a general by the time of the coup. "Ongoing fiscal difficulties severely limited Páez's efforts, however, and in September 1937 he was overthrown by his minister of national defense, General Alberto Enríquez Gallo" (Hanratty 1989).

Egypt 1952/7/23

Rank group coded: mid-rank
Justification: The leaders are described as mid-ranking. "On the night of July 22, 1952, a small group of young, mid-ranking army officers led by Gamal Abdel Nasser, Abdel Hakim Amer, and Khaled Mohey Eddin seized power in Egypt. The coup plotters used an artillery unit and a battalion of ground forces under their command to arrest Egypt's military leadership. They seized control of the military headquarters and other strategic buildings and locations in Egypt's capital Cairo. By the early hours of the following day, tanks in the streets and the element of surprise secured the success of a coup plot that later came to be narrated as the 1952 Revolution" (Albrecht and Eibl 2011, 315).

El Salvador 1960/10/26

Rank group coded: mid-rank
Justification: The military was led by a general by the time of the coup. "12/2/1931 Coup by junior officers ousted the elected civilian president and replaced him with Gen Hernández Martínez who had been vice president, Defense Min, and commander of the armed forces" (Geddes, Wright, and Frantz 2014b).

El Salvador 1961/1/25

Rank group coded: mid-rank
Justification: The military was led by a general by the time of the coup. "12/2/1931 Coup by junior officers ousted the elected civilian president and replaced him with Gen Hernández

Martínez who had been vice president, Defense Min, and commander of the armed forces" (Geddes, Wright, and Frantz 2014b).

El Salvador 1972/3/25

Rank group coded: mid-rank
Justification: The military was led by a general by the time of the coup. "12/2/1931 Coup by junior officers ousted the elected civilian president and replaced him with Gen Hernández Martínez who had been vice president, Defense Min, and commander of the armed forces" (Geddes, Wright, Frantz 2014b).

El Salvador 1979/10/15

Rank group coded: mid-rank
Justification: The military was led by a general by the time of the coup. "12/2/1931 Coup by junior officers ousted the elected civilian president and replaced him with Gen Hernández Martínez who had been vice president, Defense Min, and commander of the armed forces" (Geddes, Wright, Frantz 2014b).

Equatorial Guinea 1979/8/3

Rank group coded: senior
Justification: The military was led by a lieutenant colonel at the time of the coup. "Early reports said that army rebels had overthrown Macias in a bloodless coup led by the country's top ranking officer and minister for defense Lt. Col. Teodor Obiang Nguema Mbasogo" (Atlanta Constitution 1979).

Fiji 1987/5/14

Rank group: mid-rank
Justification: The military was led by a brigadier at the time of the coup. „It is said that the takeover was led by Lieut. Col. Sitiveni Rabuka, who ranks third in Fiji's 2,000-member army. (…) The commander of the army, Brig. Ratu Epeli Nailatikai, was on a visit to Perth, Australia" (New York Times 1987).

Ghana 1966/2/24

Rank group coded: mid-rank
Justification: The military included a general at the time of the coup. "2/24/1966 Coup led by Col Kotoka and Maj Afrifa, handed power to dismissed Maj Gen Ankrah and established the ruling group, National Liberation Council, of 4 military and 4 police officers" (Geddes, Wright, and Frantz 2014b).

Ghana 1972/1/13

Rank group coded: mid-rank
Justification: The military included generals by the time of the coup. "2/24/1966 Coup led by Col Kotoka and Maj Afrifa, handed power to dismissed Maj Gen Ankrah and established the ruling group, National Liberation Council, of 4 military and 4 police officers" (Geddes, Wright, and Frantz 2014b).

Guatemala 1954/6/29

Rank group coded: mid-rank
Justification: The military included a general by the time of the coup. "Gen. Miguel Ydigoras Fuentes, whose exact whereabouts is not known, has revealed through an open letter published last night in […] that he did not leave Guatemalan territory when he escaped arrest during the political disturbances in July" (New York Times 1950).

Guatemala 1955/1/20

Rank group coded: mid-rank
Justification: The military included a general by the time of the coup. “Gen. Miguel Ydigoras Fuentes, whose exact whereabouts is not known, has revealed through an open letter published last night in […] that he did not leave Guatemalan territory when he escaped arrest during the political disturbances in July” (New York Times 1950).

Guatemala 1957/10/24

Rank group coded: mid-rank
Justification: The military included a general by the time of the coup. “Gen. Miguel Ydigoras Fuentes, whose exact whereabouts is not known, has revealed through an open letter published last night in […] that he did not leave Guatemalan territory when he escaped arrest during the political disturbances in July” (New York Times 1950).

Guatemala 1960/11/13

Rank group coded: mid-rank
Justification: The military included a general by the time of the coup. “Gen. Miguel Ydigoras Fuentes, whose exact whereabouts is not known, has revealed through an open letter published last night in […] that he did not leave Guatemalan territory when he escaped arrest during the political disturbances in July” (New York Times 1950).

Guatemala 1962/11/25

Rank group coded: mid-rank
Justification: The military included a general by the time of the coup. “Gen. Miguel Ydigoras Fuentes, whose exact whereabouts is not known, has revealed through an open letter published last night in […] that he did not leave Guatemalan territory when he escaped arrest during the political disturbances in July” (New York Times 1950).

Guatemala 1963/3/30

Rank group coded: mid-rank
Justification: The military included a general by the time of the coup. “Gen. Miguel Ydigoras Fuentes, whose exact whereabouts is not known, has revealed through an open letter published last night in […] that he did not leave Guatemalan territory when he escaped arrest during the political disturbances in July” (New York Times 1950).

Guinea 1984/4/3

Rank group coded: mid-rank
Justification: The military included a general before the time of the coup. “Their tone is exemplified by the confession of Gen. Keita Noumandian, who was commander of all Guinean military forces until the day before his recent arrest” (New York Times 1971).

Guinea 1985/7/4

Rank group coded: mid-rank
Justification: The military included a general before the time of the coup. “Their tone is exemplified by the confession of Gen. Keita Noumandian, who was commander of all Guinean military forces until the day before his recent arrest” (New York Times 1971).

Guinea 1996/2/3

Rank group coded: mid-rank
Justification: The military included a general before the time of the coup. “Their tone is exemplified by the confession of Gen. Keita Noumandian, who was commander of all Guinean military forces until the day before his recent arrest” (New York Times 1971).

Indonesia 1965/10/1

Rank group coded: mid-rank
Justification: The military included a general at the time of the coup. “The radio, quoting Brig. Gen. Ibnu Subroto, the army information chief, said Colonel Untung had been trying to escape to Semarang, a bigger coastal town about 80 miles east of Tegal, when captured” (New York Times 1965).

Liberia 1985/4/1

Rank group coded: mid-rank
Justification: The military included a general before the time of the coup. “Former Brig. Gen. Thomas Quiwonkpa was accused of leading a failed coup in November 1983 went into exile in the United States” (Aksoy, Carter, and Wright 2015b).

Libya 1975/8/5

Rank group coded: mid-rank
Justification: Though the rank of general formally exists, it is not used and the military is led by a colonel. After his coup in 1975, Gaddafi purged ”every officer above the rank of colonel” (Gaub 2013; see also Pollack 2002, 360). ”Although three general officer grades continued to be authorised, they have not been used since the 1969 coup. Promoted to the grade of colonel (aqid) after assuming power, Qadhaafi has maintained a ceiling on the grade level of his officer corps in keeping with his desire to avoid the ostentatious public image that the generals of the monarchy had conveyed. In January 1976, the Arab Socialist Union's National Congress attempted to promote Qadhaafi to major general. The Libyan leader stated that he would accept the honour as an expression of gratitude from his compatriots but would retain the title of colonel because it had become an accepted and traditional part of his name” (Metz 1987, 269).

Libya 1993/10/23

Rank group coded: mid-rank
Justification: The military is led by a colonel at the time of the coup. Colonel Abu-Bakr Yunis Jaber is defense minister and military leader under Gaddafi (Brom and Shapir 2002, 231; Gazit 1994, 360).

Madagascar 1974/12/31

Rank group coded: mid-rank
Justification: The military included generals at the time of the coup. “A January 23 U.S. Embassy cable from Madagascar reporting on that article said that the armed forces went on alert at 11 p.m. on December 31 following an emergency meeting of General Ramantsoa and Chief of Staff General Ramarolahy” (Aksoy, Carter, and Wright 2015b).

Madagascar 2010/11/17

Rank group coded: mid-rank
Justification: The military included generals before the time of the coup. “A January 23 U.S. Embassy cable from Madagascar reporting on that article said that the armed forces went on alert at 11 p.m. on December 31 following an emergency meeting of General Ramantsoa and Chief of Staff General Ramarolahy” (Aksoy, Carter, and Wright 2015b).

Mali 1978/2/28

Rank group coded: senior
Justification: The military was led by a colonel at the time of the coup, and was led by a colonel at a later point. “President Ahmed Sekou Touré of Guinea and President Houari Boumediene of Algeria expressed support for the government of Lt. Colonel Moussa Traore on March 2,

1978." (University of Arkansas nd.) "Bamako, Mali (PANA) — Malian President Alpha Oumar Konare has appointed Col. Pangassy Sangare to be the new army chief of staff, while the man he replaced, Col. Siriman Keita, becomes the president's special envoy, with the rank of ambassador" (All Africa 1999).

Mali 1991/3/26

Rank group coded: mid-rank
Justification: The military included a general by the time of the coup. The former Defense Minister General Mamadou Coulibaly is later sentenced to death for ordering soldiers to shoot on the demonstrators (Guardian Weekly 1993).

Mali 1991/7/14

Rank group coded: mid-rank
Justification: The military included a general by the time of the coup. The former Defense Minister General Mamadou Coulibaly is later sentenced to death for ordering soldiers to shoot on the demonstrators (Guardian Weekly 1993).

Mali 2012/5/1

Rank group coded: mid-rank
Justification: The military included included generals before the time of the coup. Please see case descriptions above.

Mauritania 1978/7/10

Rank group coded: senior
Justification: The military was led by a colonel at the time of the coup. "In February 1978, in a desperate move, Daddah appointed Colonel Mustapha Ould Salek to be army commander" (Handloff 1988).

Mauritania 1980/1/4

Rank group coded: senior
Justification: The military was led by a colonel after the time of the coup, and a 2007 promotion to general was seen as extraordinary. "The rank of a colonel has traditionally been "the highest rank of any active officer (Pazzanitta 2008, 77). "There is a consensus that this promotion violated established regulations, at least in spirit, since it ignored seniority and merit, and that it was a payback for Colonel Ould Abdel Aziz's support during the presidential election process" (N'Diaye 2018).

Mauritania 1982/2/6

Rank group coded: senior
Justification: The military was led by a colonel after the time of the coup, and a 2007 promotion to general was seen as extraordinary. "The rank of a colonel has traditionally been "the highest rank of any active officer (Pazzanitta 2008, 77). "There is a consensus that this promotion violated established regulations, at least in spirit, since it ignored seniority and merit, and that it was a payback for Colonel Ould Abdel Aziz's support during the presidential election process" (N'Diaye 2018).

Mauritania 1984/12/12

Rank group coded: senior
Justification: The military was led by a colonel after the time of the coup, and a 2007 promotion to general was seen as extraordinary. "The rank of a colonel has traditionally been "the highest rank of any active officer (Pazzanitta 2008, 77). "There is a consensus that this promotion violated established regulations, at least in spirit, since it ignored seniority and merit, and that

it was a payback for Colonel Ould Abdel Aziz's support during the presidential election process" (N'Diaye 2018).

Mauritania 2003/6/8

Rank group coded: mid-rank
Justification: The military was led by a colonel after the time of the coup, and a 2007 promotion to general was seen as extraordinary. "The rank of a colonel has traditionally been "the highest rank of any active officer (Pazzanitta 2008, 77). "There is a consensus that this promotion violated established regulations, at least in spirit, since it ignored seniority and merit, and that it was a payback for Colonel Ould Abdel Aziz's support during the presidential election process" (N'Diaye 2018).

Mauritania 2005/8/3

Rank group coded: senior
Justification: The military was led by a colonel after the time of the coup, and a 2007 promotion to general was seen as extraordinary. "The rank of a colonel has traditionally been "the highest rank of any active officer (Pazzanitta 2008, 77). "There is a consensus that this promotion violated established regulations, at least in spirit, since it ignored seniority and merit, and that it was a payback for Colonel Ould Abdel Aziz's support during the presidential election process" (N'Diaye 2018).

Niger 1974/4/15

Rank group coded: senior
Justification: The military was led by a lieutenant colonel at the time of the coup. "4/15/1974 coup led by the army chief of staff Kountché ousted the civilian government and established the all-military Conseil Militaire Suprême to rule" (Geddes, Wright, and Frantz 2014b).

Niger 1976/3/15

Rank group coded: mid-rank
Justification: The military was led by a lieutenant colonel at the time of the coup. "The authorities said a small group of soldiers led by a major seized the radio station, early this morning. Shots echoed through the capital. But by midmorning, troops loyal to the head of state, Lieut. Col. Seyni Kontche, had regained the station" (New York Times 1976).

Niger 1983/10/5

Rank group coded: mid-rank
Justification: The military was had been led by a lieutenant colonel by the time of the coup. "4/15/1974 coup led by the army chief of staff Kountché ousted the civilian government and established the all-military Conseil Militaire Suprême to rule" (Geddes, Wright, and Frantz 2014 b).

Niger 1996/1/27

Rank group coded: senior
Justification: Though the regime leader held the rank of general, the military was led by a colonel at the time of coup (Idrissa 2020, 155).

Niger 1999/4/9

Rank group coded: mid-rank
Justification: The military was had been led by a lieutenant colonel by the time of the coup. "4/15/1974 coup led by the army chief of staff Kountché ousted the civilian government and established the all-military Conseil Militaire Suprême to rule" (Geddes, Wright, and Frantz 2014b).

Niger 2010/2/18

Rank group coded: mid-rank
Justification: The military included a general before the time of the coup. “Army Gen. Moumouni Boureïma threatened RFI correspondent Moussa Kaka during a reception at the French embassy in the capital, Niamey, according to news reports“ (CPJ 2007). “Local reporters say that also the home of Niger's army chief of staff General Boureima Moumouni is under siege, with all roads to his house being blocked. This could indicate that the coup is led by junior officers and not approved off by the army leadership” (Afrol News 2010).

Nigeria 1966/1/15

Rank group coded: mid-rank
Justification: The military included a general at the time of the coup. “By the time a disparate group of junior officers struck first in January 1966, the officers were still politically naive and had yet to master the art of coup planning and execution. This inexperience partly explains why Major Kaduna Nzeogwu and others who masterminded the coup, failed to take over state power. Instead, Major General Johnson Aguiyi Ironsi, commander in chief of the army, became Nigeria's first military ruler” (Metz 1991).

Nigeria 1966/7/29

Rank group coded: mid-rank
Justification: The military included a general by the time of the coup. “By the time a disparate group of junior officers struck first in January 1966, the officers were still politically naive and had yet to master the art of coup planning and execution. This inexperience partly explains why Major Kaduna Nzeogwu and others who masterminded the coup, failed to take over state power. Instead, Major General Johnson Aguiyi Ironsi, commander in chief of the army, became Nigeria's first military ruler” (Metz 1991).

Panama 1951/5/9

Rank group coded: senior
Justification: The military was led by a colonel at the time of the coup. “Col. José Remón is still the strong man of Panama, and it is understood that he will continue as commander of the National Police. He and his two chief officers, Col. Bolivar Vallarino and Maj. Saturnino Flores, have regained some of the public confidence and popularity that they had lost by their association with the Government of President Arias” (New York Times 1951a).

Panama 1968/10/12

Rank group coded: mid-rank
Justification: The military included a general at the time of the coup. “Earlier, Friday, Brig. Gen. Bolivar Vallarino, 52, commander of the guard for 17 years, had turned over his command to Col. Bolivar Urrutia, 49” (Boston Globe 1968).

Panama 1969/12/14

Rank group coded: mid-rank
Justification: The military included a general before the time of the coup. “Earlier, Friday, Brig. Gen. Bolivar Vallarino, 52, commander of the guard for 17 years, had turned over his command to Col. Bolivar Urrutia, 49” (Boston Globe 1968).

Panama 1988/3/16

Rank group coded: mid-rank
Justification: The military was led by a general at the time of the coup. “On Wednesday, March 16, 1988, Col. Leónidas Macías, the Chief of the National Police, led a failed coup attempt against Gen. Noriega” (Aksoy, Carter, and Wright 2014b).

Panama 1989/10/3

Rank group coded: mid-rank
Justification: The military was led by a general before the time of the coup. “On Wednesday, March 16, 1988, Col. Leónidas Macías, the Chief of the National Police, led a failed coup attempt against Gen. Noriega” (Aksoy, Carter, and Wright 2015b).

Philippines 1986/7/6

Rank group coded: mid-rank
Justification: The military included generals before the time of the coup (see, e.g., Lee 2009, 2015).

Philippines 1987/1/27

Rank group coded: mid-rank
Justification: The military included a general at the time of the coup. “Philippine military commanders headed off an attempt by troops still loyal to former President Ferdinand E. Marcos to take over two key Manila military bases, killing one rebel soldier and wounding 16 others during the attempted coup, the military chief of staff, Gen. Fidel V. Ramos, announced today” (Los Angeles Times 1987; see also Lee 2009, 2015).

Philippines 1987/8/27

Rank group coded: mid-rank
Justification: The military included a general before the time of the coup. “Philippine military commanders headed off an attempt by troops still loyal to former President Ferdinand E. Marcos to take over two key Manila military bases, killing one rebel soldier and wounding 16 others during the attempted coup, the military chief of staff, Gen. Fidel V. Ramos, announced today” (Los Angeles Times 1987).

Philippines 1989/12/1

Rank group coded: mid-rank
Justification: The military included a general at the time of the coup. “Philippine military commanders headed off an attempt by troops still loyal to former President Ferdinand E. Marcos to take over two key Manila military bases, killing one rebel soldier and wounding 16 others during the attempted coup, the military chief of staff, Gen. Fidel V. Ramos, announced today” (Los Angeles Times 1987).

Philippines 1990/10/4

Rank group coded: mid-rank
Justification: The military included a general at the time of the coup. “Philippine military commanders headed off an attempt by troops still loyal to former President Ferdinand E. Marcos to take over two key Manila military bases, killing one rebel soldier and wounding 16 others during the attempted coup, the military chief of staff, Gen. Fidel V. Ramos, announced today” (Los Angeles Times 1987).

Portugal 1975/11/25

Rank group coded: mid-rank
Justification: The military included a general before the time of the coup. ”Gen. Francisco da Costa Gomes, Portugal’s President and chief of staff of the armed forces, who up to now has been known as a man of compromise, showed he was in no mood for conciliation” (New York Times 1975).

Republic of Vietnam 1960/11/11

Rank group coded: mid-rank

Justification: The military was led by a general at the time of the coup. “Gen. Le Van Ty, aging commander-in-chief of Diem’s armed forces, was under arrest” (Los Angeles Times 1960).

Sao Tome and Principe 2003/7/16

Rank group coded: mid-rank
Justification: The military was led by a lieutenant colonel at the time of the coup, while the coup was led by a major. ““De Menezes appears to have taken their complaints to heart. Soon after the coup, the army Chief of Staff, Lt-Col Eugenio Paiva - who had been responsible for implementing military cutbacks in April 2003 - resigned, presumably at the presidency's behest” (HIS Global Insight 2003).

Somalia 1961/12/10

Rank group coded: mid-rank
Justification: The military was led by a general before the time of the coup. “In the first year of the union, some junior officers (Abdillahi Aden ‘Congo’, Awil Ali Duale and Abdillahi Said Abby) visited Mogadishu to meet up with the newly-appointed Military Commander, General Daud Abdulle Hersi and to make their complaints but the General did not listen to them” (Horn Diplomat 2018).

Somalia 1969/10/21

Rank group coded: mid-rank
Justification: The military included generals at the time of the coup. “10/21/1969 Coup by colonels ousted the elected government and established the Supreme Revolutionary Council of 25, including initially 4 generals, 7 lieutenant-colonels, and 7 majors to rule the country” (Geddes, Wright, and Frantz 2014b).

Somalia 1978/4/9

Rank group coded: mid-rank
Justification: The military included generals before the time of the coup. “10/21/1969 Coup by colonels ousted the elected government and established the Supreme Revolutionary Council of 25, including initially 4 generals, 7 lieutenant-colonels, and 7 majors to rule the country” (Geddes, Wright, and Frantz 2014b).

Suriname 1980/8/15

Rank group coded: senior
Justification: The military was led by a lieutentant colonel at the time of the coup. The coup leader is the military chief (see own dataset entry).

Syria 1951/11/29

Rank group coded: senior
Justification: The military was led by a colonel at the time of the coup. “President Hashem al-Atassi resigned today and Col. Adeeb Shishekly, Army Chief of Staff, took ober sole executive authority. Colonel Shishekly, who has been the power behind the scenes for the last two years, as his first act dissolved Parliament” (New York Times 1951b).

Syria 1961/9/28

Rank group coded: mid-rank
Justification: The military was led by a general at the time of the coup. “He said the rebels tried to force Vice President and Field Marshal Abdel Hakim Amer and Syrian army commander Gen. Gamal Faysal to bargain with them at army headquarters (…)” (Atlanta Constitution 1961).

Syria 1962/3/28

Rank group coded: mid-rank
Justification: The military was led by a general before the time of the coup. “He said the rebels tried to force Vice President and Field Marshal Abdel Hakim Amer and Syrian army commander Gen. Gamal Faysal to bargain with them at army headquarters (…)” (Atlanta Constitution 1961).

Syria 1963/3/8

Rank group coded: mid-rank
Justification: The military was led by a general before the time of the coup. “He said the rebels tried to force Vice President and Field Marshal Abdel Hakim Amer and Syrian army commander Gen. Gamal Faysal to bargain with them at army headquarters (…)” (Atlanta Constitution 1961).

Syria 1963/7/18

Rank group coded: mid-rank
Justification: The military was led by a general before the time of the coup. “He said the rebels tried to force Vice President and Field Marshal Abdel Hakim Amer and Syrian army commander Gen. Gamal Faysal to bargain with them at army headquarters (…)” (Atlanta Constitution 1961).

Togo 1967/1/13

Rank group coded: senior
Justification: The military was led by a lieutenant colonel at the time of the coup. “President Nicolas Grunitzky, who himself came to power in the 1963 coup, turned his office over to the army chief of staff, Lt. Col. Etienne Guassingbe Eyadema” (Atlanta Constitution 1967).

Togo 1991/10/1

Rank group coded: mid-rank
Justification: The military included a colonel before the time of the coup (see Togo 1967/1/13).

Yemen Arab Republic; N. Yemen 1955/4/2

Rank group coded: senior
Justification: The military is led by a colonel after the time of the coup. “Mohammed al-Badr became imam in 1962, and Sallal was appointed commander in chief of the army.” (dataset entry Yemen Arab Republic; N. Yemen 1962/9/27; Lentz 1994).

Yemen Arab Republic; N. Yemen 1962/9/27

Rank group coded: senior
Justification: The military is led by a colonel at the time of the coup. “Mohammed al-Badr became imam in 1962, and Sallal was appointed commander in chief of the army” (dataset entry Yemen Arab Republic; N. Yemen 1962/9/27; Lentz 1994).

Yemen Arab Republic; N. Yemen 1967/11/4

Rank group coded: mid-rank
Justification: The military included a major general shortly before the time of the coup. “The Sana radio said shortly before mid-night last night that the three-man Presidency Council had accepted the resignation of the Yemeni Premier, Mohsan al-Aini and aasked one of its members, Maj. Gen. Hassan al-Amri, the armed forces commander, to form what it described as a war cabinet” (New York Times 1967).

Yemen Arab Republic; N. Yemen 1968/8/31

Rank group coded: mid-rank

Justification: The coup attempt occurred in North Yemen, not South Yemen. “Eyewitnesses who have escaped from Sana, the capital of neighboring Yemen, report that at least 3,000 people have been killed and many more wounded during fighting in which rival units of the republican army used rockets and artillery” (New York Times 1968a). The military included a general before the time of the coup. “The Sana radio said shortly before mid-night last night that the three-man Presidency Council had accepted the resignation of the Yemeni Premier, Mohsan al-Aini and aasked one of its members, Maj. Gen. Hassan al-Amri, the armed forces commander, to form what it described as a war cabinet” (New York Times 1967).

Yemen Arab Republic; N. Yemen 1974/6/13

Rank group coded: mid-rank
Justification: The military included a general before the time of the coup. “The Sana radio said shortly before mid-night last night that the three-man Presidency Council had accepted the resignation of the Yemeni Premier, Mohsan al-Aini and asked one of its members, Maj. Gen. Hassan al-Amri, the armed forces commander, to form what it described as a war cabinet” (New York Times 1967).

Yemen Arab Republic; N. Yemen 1978/10/15

Rank group coded: mid-rank
Justification: The military included a general before the time of the coup. “The Sana radio said shortly before mid-night last night that the three-man Presidency Council had accepted the resignation of the Yemeni Premier, Mohsan al-Aini and asked one of its members, Maj. Gen. Hassan al-Amri, the armed forces commander, to form what it described as a war cabinet” (New York Times 1967).

Yemen People’s Republic; S. Yemen 1978/6/26

Rank group coded: senior
Justification: We were unable to find any evidence that the military included generals at the time of the coup, while coup leader Lieutenant-Colonel Ali Ahmad Nasser Antar as defense minister was a leading member of the military at the time of the coup (Paxton 1979).

Yemen People’s Republic; S. Yemen 1986/1/13

Rank group coded: mid-rank
Justification: The military included a general before the time of the coup. The defense minister, for instance, General Sali Muslih Qasim, was a general (Heller, Levran, and Eytan 1986).

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III. Paper 2

Types of anti-regime mobilization and the varieties of military coups in autocracies

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Status

This paper is an unpublished manuscript.

Abstract

Coup research agrees that popular mobilization spurs military coups. Yet, we know less about the specific mechanisms linking mobilization to coups. This is particularly relevant for autocracies, in which coups and mass unrest have traditionally been the two main challenges to incumbents. One reason for this gap is that the noticeable differences in the identity and military rank of coup leaders are largely overlooked. High-ranking officers from the military elite and officers from the middling and lower ranks have strikingly different motives and resources to intervene. In order to take a more nuanced look on the mobilization-coup-nexus, I disaggregate military coups into senior-officer and junior-officer coups and argue that different types of anti-regime mobilization – violent and nonviolent popular unrests – have a differing effect onto these types of coups. A quantitative analysis including all autocratic country years between 1960 and 2006 reveals that nonviolent anti-regime mobilization sparks both types of coups, yet has a particularly pronounced effect on coups by junior officers. Violent anti-regime upheavals spur senior-officer coups but have no consistent effect on junior-officer coups. These findings underline that the use of fine-grained data and arguments enhances our knowledge on the causes and mechanisms of regime crises in autocracies.

Key words

Mass mobilization; coups; non-violence; military; civil-military relations

1. Introduction

Citizens in dictatorships[11] take to the streets for all kinds of reasons, be it economic hardship, ethno-religious discrimination, or political dissatisfaction (e.g. Ash 2023; Keremoğlu, Hellmeier, and Weidmann 2022; Rød 2019). Popular mobilization therefore is nothing unusual in autocratic regimes but instead a regularly occurring event. Despite this "disturbing normality" (Schedler 2018, 56), autocratic leaders fear a specific type of popular unrest, that is, anti-regime mass mobilization that is directed against the political leadership and demands a fundamental change of the regime's ruling principles (Croissant, Kuehn, and Eschenauer 2018a, b). Autocrats fear these major incidences of popular mobilization not least because they may prompt soldiers to turn against the regime and topple the political leadership (Albrecht and Koehler 2021; Bell and Sudduth 2017; Koehler 2017). This happened, for instance, in 1991 Mali where soldiers ousted President Moussa Traoré amid a large-scale anti-regime uprising when hundreds of thousands protested for his overthrow. Egyptian President Mohamed Morsi met the same fate when millions of citizens took to the streets in 2013 to pressure his overthrow and the military finally pushed him out of office.

The fact that mass mobilization spurs coups has become a well-established finding in quantitative coup research (e.g. Casper and Tyson 2014; Gläßel, González, and Scharpf 2020; Neu 2022; Pérez-Liñán and Polga-Hecimovich 2017; Powell 2012; Wig and Rød 2016; Yukawa et al. 2022). The specific mechanisms through which popular mobilization triggers coups, however, are less clear. This can be led back to three important gaps in contemporary research on coups and popular mobilization.

First, research on popular mobilization and coups has largely overlooked the identity of the coup-plotters and their position in the military hierarchy. The coups that deposed the two leaders mentioned above, for instance, markedly differ in terms of their leaders' military rank: While high-ranking officers deposed Egypt's Morsi, Mali's Traoré fell prey to mid-ranking soldiers from outside the military's upper echelon. As novel research has shown, such differences in the identity are important to understand the dynamics of coups as plotters from different ranks have quite different interests and capabilities and thus are motivated by different causes to mount a coup (Albrecht, Koehler, and Schulz 2021; De Bruin 2019; Eschenauer-Engler and Herre

[11] The terms dictatorship, autocracy, and non-democracy are used as synonyms.

2023; Koehler and Albrecht 2021; Singh 2014). Accordingly, the effect of popular unrest on coup activity may vary depending on the military rank of the coup plotters.

Second, studies on popular mobilization and protests do not only miss to differentiate between different coup types, but also portray the multifacetedness of mobilization inadequately. Popular mobilization varies substantially with regard to its size and intensity, its aims and topics (e.g. economic, ideological, or political), as well as in the strategies used by demonstrators (e.g. violent versus nonviolent). Yet, many studies have lumped together quite different types of domestic mobilization into an aggregated measure of domestic instability (e.g. Casper and Tyson 2014; Powell 2012). Hence, knowledge on the underlying mechanisms linking domestic mobilization and coups could be substantially enhanced by theorizing and examining how particular types of domestic unrest are related to specific types of coups.

Finally, knowledge on the coup-inducing effect of popular unrest has been hampered by the highly different political context, in which the effect of domestic mobilization has been studied. While some focus on both autocratic and democratic regimes (e.g. Casper and Tyson 2014; Johnson and Thyne 2018), others are limited to non-democratic regime contexts (e.g. Koehler 2017; Koehler and Albrecht 2021). Yet, varying institutional settings pose a quite different decision-making context for potential coup plotters and may condition the effect of mobilization on coups.

This paper builds upon these three shortcomings and asks which type of popular mobilization prompts which type of coup in autocratic regimes. Because of the lethal threat that major anti-regime mass mobilization poses to autocracies and their incumbents, I focus on this particular type of domestic dissent and further disaggregate major anti-regime campaigns into violent and largely nonviolent ones. Using novel data on coup leadership (Eschenauer-Engler and Herre 2023), I investigate how nonviolent and violent anti-regime campaigns impact two types of coups in autocracies: Senior-officer coups are led by high-ranking officers, that is a brigadier general or above. Junior-officer coups are headed by a mid- and low-ranking officer, that is below the rank of brigadier general.

I argue that nonviolent upheavals promote all types of coups, yet have a particularly pronounced effect on junior-officer coups. Nonviolent anti-regime protests trigger senior-officer coups as they threaten the vested interests of high-ranking officers, who usually are close to the autocratic ruling elite and stage coups to safeguard their elite privileges. Lower-ranked officers, in turn, are regime outsiders, whose prospects to stage a successful coup are prohibitively low because of their

subordinate position in both the regime and military hierarchy. A major peaceful uprising, however, signalizes to them that the regime is weakened and their prospects to succeed are substantially higher than under normal circumstances. Therefore, nonviolent anti-regime mobilization should especially encourage junior-officer coups. Violent mass mobilization, by contrast, should only encourage coups by senior officers, but not by junior officers. On the one hand, violent anti-regime upheavals challenge senior officers' continued access to privileges as prolonged violence hampers the regime's economic well-being. On the other hand, the decision of junior officers to mount a coup depends less on their access to spoils than on how a particular type of mobilization affects their chances to succeed. As coups from outside the military leadership are likely to fail, junior coup plotters require support from within the military and population in order to enforce their takeover against the military elite. The prospects of securing that support are low if a junior-officer coup occurs amid a major violent unrest that would have the coup appear as an illegitimate action supporting a violent splinter group that threatens the citizens' physical integrity and national security.

I limit the analysis to autocracies for two reasons: First, anti-regime protests may have a differing effect on senior- and junior-officer coups across autocratic and democratic regimes. By focusing only on non-democratic regimes, I eliminate the institutional context as a possible confounding factor. Second, coups have historically been the single most lethal threat to the political survival of non-democratic incumbents since the end of World War II (Kendall-Taylor and Frantz 2014; Svolik 2009). By analyzing how different types of anti-regime mobilization impact different types of coups in all autocratic country-years between 1060 and 2006, the paper speaks to a large and important body of literature that explicitly deals with the determinants of coups in dictatorships (e.g. Kim and Sudduth 2021; Olar 2019).

The remainder of the article is structured as follows. The next section reviews existing literature on the disaggregation of coup types as well as on the link between domestic unrest and coups. This is followed by the theory section, in which I lay out how nonviolent and violent anti-regime mobilization may have a varying effect on senior and junior coups. I then introduce the research design in section 4, followed by a quantitative empirical analysis in section 5. I conclude with a wrap-up and discussion of the results in section 6.

2. Literature review

In recent years, quantitative coup research has developed into a large and vivid strand of civil-military relations literature. It systematically examines the factors prompting military officers to overthrow the incumbent executive. One of the causes that has received much attention is domestic popular mobilization[12] in general and protests in particular (cf. Aksoy, Carter, and Wright 2015; Bell and Sudduth 2017; Casper and Tyson 2014; Johnson and Thyne 2018; Koehler 2017; Pérez-Liñán and Polga-Hecimovich 2017; Powell 2012). Incidences of domestic mobilization as diverse as riots (Gläßel, González, and Scharpf 2020), protests (Casper and Tyson 2014), and civil wars (Bell and Sudduth 2017) have been found to spur coup attempts.

A recent trend in studies on mobilization and coups is to disaggregate popular unrest into different types in order to examine which manifestations of domestic instability are linked to coups. This is because early studies have often lumped together different manifestations of popular dissent into broad measures of domestic political instability, thus concealing which type of domestic unrest is particularly important for coup activity (Casper and Tyson 2014; Powell 2012). Latest approaches have tried to refine these insights, either by studying the effect of different types of domestic unrest on coups (e.g. Aksoy, Carter, and Wright 2015; Gläßel, González, and Scharpf 2020) or by further disaggregating a specific form of mobilization, largely protests, into different types (e.g. Johnson and Thyne 2018; Yukawa et al. 2022). The first approach is, for instance, taken by Gläßel and co-authors (2020) who test the effect of four manifestations of domestic unrests (demonstrations, strikes, riots, and guerilla attacks) on coups. Other recently published studies choose the second approach and focus on protests as a particular form of domestic mobilization, which they further disaggregate into different types. Johnson and Thyne (2018), for example, distinguish protests based on the methods taken by the protesters (violent versus nonviolent) as well as the location of the upheaval (close versus far away from the capital) and find that nonviolent and urban protests have a stronger effect on coup attempts that violent and remote protests.

Though quantitative literature has considerably enhanced our knowledge on the drivers of coups by disaggregating the independent variable (mobilization), it has

[12] Domestic mobilization refers to all incidences of major domestic collective action that are carried out by the broader masses living in a polity. Such incidences of mass-based collective action include all types of protests, strikes, riots, civil war, or guerilla.

largely not taken into account the latest conceptual developments to assess the dependent variable (coups) equally precise. Several novel datasets have recently been published that demonstrate that coups differ in several empirically and theoretically important aspects, such as the coup's consequences for the composition of the regime elite (Chin, Carter, and Wright 2021), the military coup plotters' links to the political elite (Albrecht, Koehler, and Schulz 2021), or the military rank of the coup leaders (De Bruin 2019; Eschenauer-Engler and Herre 2023). Studies using these novel data demonstrate that the identity and background of the coup leader(s) are crucial to understand a coup's causes, dynamics, and outcome. The civilian or military background of the perpetrators, in particular, has been found to condition a coup's chances of success (Singh 2014), the extent of physical force involved in a takeover (De Bruin 2019, 2020), as well as the prospects for post-coup democratic development (Albrecht, Koehler, and Schulz 2021; Eschenauer-Engler and Herre 2023; Koehler and Albrecht 2021).

Despite these recent advancements in the availability of more fine-grained coup data, quantitative literature on coups and protests has only scratched on the surface of these novel conceptual developments so far: A rare exception is the study by Aksoy and colleagues (2015), who find that terrorist attacks encourage coups that are limited to reshuffling the regime leader, while mass protests and civil war promote coups that seek to replace the entire regime. With regard to differences in the military background of the coup leader, there is only evidence by Koehler and Albrecht (2021), demonstrating that major nonviolent anti-regime mobilization in autocracies primarily promotes political takeovers by the military elite. The remaining literature on coups and mobilization still overwhelmingly treats putsches as horizontal threats to the political leadership that originate from within the regime elite. Hence, like most studies on coups, research on coups and mobilization – implicitly or explicitly – equates coup plotters with regime elites: Some argue that widespread public discontent challenges the regime and therefore endangers the interests of elites (e.g. Johnson and Thyne 2018, 601), while others contend that protests signal to dissatisfied elites that a promising opportunity to topple the regime leader has finally come (Casper and Tyson 2014). Yet, this theorizing does not catch up with the empirical distribution of coup leadership: Novel data show that nearly half of all coups since the end of World War II have been led by mid- and low-ranking officers that can hardly be classified as regime elites (Albrecht, Koehler, and Schulz 2021; De Bruin 2019; Eschenauer-Engler and Herre 2023) and whose motives to seize power may

differ starkly from the ones of senior officers (Albrecht and Eibl 2018, 315; Singh 2014). Hence, while many elite-centered arguments in existing coup research are well-suited to explain those coups perpetrated by military elites, coups by lower-ranked soldiers are likely liable to quite different underlying causes. In order to better understand the dynamics linking coups and mobilization, it is necessary to clearly theorize how different types of popular unrest affect the incentives of both high-ranking elite officers and more ordinary soldiers and empirically test the link between different types of mobilization and these varieties of coups. The theory part outlined in the following section therefore pulls away from a purely elite-centrist perspective. Instead, it takes up on several arguments from existing research on mobilization and coups, yet clearly theorizes through which causal mechanisms they are related to a specific type of coup.

3. Theory

The theoretical arguments below systematically distinguish between coup attempts perpetrated by high-ranking military officers that are close to the ruling elite (senior-officer coups) and those attempts led by more ordinary mid- and low-ranking soldiers (junior-officer coups).[13] In order to theorize how different types of protests are linked to different types of coups, I draw on three core assumptions that are derived from pertinent literature.

First, I take up the well-established assumption that protests may prompt coups as they change military officers' *disposition* and *ability* to mount a takeover (e.g. Johnson and Thyne 2018). The terms *disposition* and *ability* hail from classic coup research, which typically assumes that coup plotters need to have both, a willingness – often called *disposition* – to intervene as well as a promising opportunity – often labeled *ability* – to succeed (cf. De Bruin 2020; Finer 1962; Powell 2012). The *disposition* comprises the underlying social, economic, or political causes that render soldiers willing to topple the political leadership (Johnson and Thyne 2018, 199; Powell 2012, 1022). *Ability*, on the other hand, refers to the factors increasing the chances of a successful military takeover. Previous research has argued that incidences of mass-based mobilization spur coups as they endanger the interests of elites (disposition) and/or because wide-spread protests signal disgruntled military

[13] Detailed information on how both coup types are distinguished are given in the research design section.

officers that an opportune moment to overthrow the regime has finally come (ability) (e.g. Casper and Tyson 2014). More recent literature shows, however, that not all types of mobilization affect the disposition and ability of coup plotters uniformly. Nonviolent protests as well as popular unrests near the capital, for instance, have been found to have a stronger effect on the onset of coups than violent and remote mobilization events (Aksoy et al. 2015; Johnson and Thyne 2018). In line with these novel works, I expect different types of mass-based mobilization to impact the ability and disposition of soldiers to launch a coup in a different way.

Second, I assume that the military rank conditions the *disposition* of military officers to intervene as well as their ability to stage a successful coup (e.g. Albrecht and Eibl 2018; De Bruin 2019; Singh 2014). Senior officers lead the armed forces and the military branches, control military intelligence, and sit on advisory boards and security councils (Singh 2014). Because of senior officers' position atop the military hierarchy, they have several advantages over lower-ranked soldiers when it comes to coup-plotting. Due to the military's hierarchical structure, senior coup plotters can simply send orders down the chain of command during a coup and order subordinate officers to act in line (cf. Albrecht and Eibl 2018, 318; see also Aslan 2020). It is therefore less likely that they will have to enforce the takeover against armed resistance from within the military. Furthermore, the higher the military rank, the more likely coup plotters occupy key positions in the regime (Albrecht and Koehler 2021, 153). As a result, senior officers can "feel out potential allies discretely and to coordinate with co-conspirators in advance of the coup" (De Bruin 2019, 5). Finally, high-ranking officers possess superior military education and thus "have more experience planning and executing complex military operations" (De Bruin 2019, 802) than their lower-ranking counterparts. Taken together, while senior officers might have less reason to turn against the regime (*disposition*), their odds to conduct a successful coup are considerably higher than those of lower-ranking soldiers (*ability*).

Mid- and low-ranking soldiers, by contrast, lack commanding authority over the military leadership and other higher-ranking officers. In case junior officers attempt a takeover, high-ranking officers have an easy time overruling their orders and command subordinates to fight off the perpetrators. Therefore, junior coup plotters have a higher probability to fail than senior officers (De Bruin 2019; Singh 2014). In the terms of classical coup research, junior officers have a higher *disposition* to oust the incumbent due to their less privileged position, yet they have a worse *ability* than the military elite to complete a successful takeover.

The third core assumption brings together the insights from the previous two and lays the groundwork for the theoretical arguments elaborated below. Since senior and junior officers are strikingly different in their disposition and ability to intervene, I expect that different types of protests influence the coup-plotting by senior and junior officers in different ways: In general, senior officers have a better ability to succeed, but are less disposed to intervene due to their privileged position. Types of protests that threaten their position and access to privileges should trigger coups by high-ranking officers. Junior officers, on the other hand, have more reasons to intervene (*disposition*), but worse chances to succeed (*ability*). Hence, only protest types that increase their ability to usurp power successfully should render junior-officer coups more likely.

3.1 Nonviolent anti-regime mobilization and types of coups

Nonviolent anti-regime mobilization and senior-officer coups

I assume that major peaceful anti-regime mobilization promotes senior-officer coups as it poses a lethal threat to the material interests of high-ranking officers and thus alters their disposition in favor of a coup (Koehler and Albrecht 2021,153; Croissant, Kuehn, and Eschenauer 2018a, b). In many autocratic regimes, high-ranking officers are deeply intertwined with the incumbent regime and are integrated into the dictator's entourage (cf. Albrecht, Koehler, and Schulz 2021; Koehler and Albrecht 2021; Geddes, Wright, and Frantz 2018; Singh 2014). They often hold political offices in parliament or cabinet, exert a considerable impact on decision-making (see, e.g., Croissant, Eschenauer, and Kamerling 2017), and sometimes even maintain far-reaching business activities (Bou Nassif 2017; Izadi 2022). Hence, senior coup plotters are more likely to be regime-insiders in autocratic regimes, while junior officers are not (Albrecht and Eibl 2018, 315; Albrecht, Koehler, and Schulz 2021).

The upcoming of a major peaceful anti-regime campaign that could possibly initiate a pro-democratic revolution puts the position of senior officers in serious jeopardy. The senior officers' far-reaching political and material benefits are typically not subjected to any effective control mechanism and are irreconcilable with democratic rule. Anti-regime mobilization therefore bears tremendous risks for the military elite as a regime change would likely entail a review of the military's privileges and probably result in the repositioning of the armed forces within the polity (cf. Koehler and Albrecht 2021).

From the military elite's perspective, staging a coup to prevent a regime change is preferable to a violent crackdown on nonviolent protests. Shedding the blood of peaceful demonstrators entails high moral and organizational costs and may provoke an escalation of the mass demonstrations to a serious armed conflict between the military and the citizens (Chenoweth and Stephan 2011; Croissant, Kuehn, and Eschenauer 2018a, b). In light of this risk, taking over political power becomes a means for senior officers to retain their privileges and deter a revolution without having to bear the tremendous costs and risks of an armed crackdown. By ousting the autocratic incumbent, the military elite can portray itself as the protector of the people, while at the same time preventing a full transition to democratic rule that would potentially harm its interests and privileges.

Nonviolent anti-regime mobilization and junior-officer coups

While peaceful anti-regime protests change senior officers' disposition in favor of a coup by endangering their material interests, lower-ranked officers are not regime elites and do not stage coups to hold on to privileges. For them, coup-plotting is fraught with risks because they have less promising abilities to take over power successfully. This is not least because their commands during a coup can easily be overruled by higher-ranking officers (Singh 2014). Hence, low- and mid-ranking officers are expected to start an attack only if the prospects of success are promising (Powell 2012, 1019). An instance that might change the odds to the junior officers' favor are major incidences of peaceful anti-regime protests. Such mass-based events may alter the junior officers' assessment of their ability to succeed in two possible ways:

First, major anti-regime protests weaken the regime and thus have junior officers to evaluate their ability to stage a successful coup more optimistically. What distinguishes major peaceful anti-regime campaigns from other types of protests is that they typically attract a larger number of participants than violent mobilization and appeal to citizens from different social strata, such as age, socioeconomic background, or ethno-religious identity (Chenoweth and Stephan 2011, chapter 2). In light of this sheer manpower, junior officers may perceive the regime as too weak to fend off a takeover by revolting soldiers. What might also play in the junior coup plotters hands' is that the incumbent may not only be too weak to deter a coup but also too occupied with handling the uprising to realize a plot brewing right under his nose. With the regime too distracted to detect a possible coup and too weak to deter

it, low- and mid-ranking officers should see a nonviolent uprising as a window of opportunity that prompts them to evaluate their ability to take over the reins much more promising than in the absence of such an event.

Second, major peaceful protests may encourage junior-officer coups, as they signalize that a possible military intervention could win the support of broader segments of the population. Massive civil discontent reveals to potential coup plotters that a substantial share of the population is no longer willing to accept the political status quo (e.g. Casper and Tyson 2014; Finer 1962). Junior officers might perceive this widespread civil discontent as a situation, in which citizens might accept a military intervention as a necessary evil to get rid of the incumbent. Hence, it is possible that junior officers will meet less public resistance to a military takeover during an anti-regime upheaval than under normal times. The creation of such an actual or symbolic alliance between junior officers and protesters might be facilitated by the fact that mid- and low-ranking occupy a far more ordinary position in the political regime than their privileged superiors and therefore resemble the broader population with regard to their political demands and economic grievances much more than the military elite (Albrecht and Eibl 2018, 318; Albrecht and Koehler 2021, 153). The prospects of facing less opposition from the masses should considerably raise junior officers' ability to succeed and thus promote coups during mass protests.

Taken together, the two mechanisms underline the particular importance of nonviolent mass mobilization for junior officers to improve their otherwise little promising ability to conduct a successful takeover. Because junior officers should estimate their ability to succeed much more optimistically amid a peaceful mass unrest than under normal circumstances, I expect nonviolent anti-regime mobilization not only to spur coups by mid- and low-ranking officers, but to encourage coup-plotting by this rank group in particular. The considerations linking nonviolent anti-regime protests to different types of coups result in the following hypotheses:

Hypothesis 1a: In autocracies, nonviolent anti-regime mobilization increases the likelihood of senior officer and junior officer coups.

Hypothesis 1b: The effect of nonviolent anti-regime mobilization is stronger for junior officer-coups than for senior-officer coups.

3.2 Violent anti-regime mobilization and types of coups

Like peaceful anti-regime protests in autocratic regimes, violent anti-regime mobilization is directed against the incumbent political leadership and aims for a considerable change of the political institutions. In contrast to nonviolent campaigns, they usually attract less participants and are less socially diverse, sometimes even carried out by a particular social or ethnic group (Celestino and Gleditsch 2013, 390; Chenoweth and Stephan 2011). The key difference between violent and nonviolent incidences of mobilization, however, are the primary means taken by participants to enforce their demands (Celestino and Gleditsch 2013; Chenoweth and Stephan 2011). If participants carry weapons and accept to inflict physical harm upon their adversaries to reach their demands, mass mobilization is considered as violent (Chenoweth and Lewis 2013, 419).

Violent anti-regime mobilization and senior-officer coups

As outlined above, high-ranking officers often are closely related or even integrated into the autocratic ruling coalition and therefore enjoy various material and political benefits that only regime elites have access to. The flourishing of these privileges, however, depends on the material well-being of the regime and the upholding of the public order. Violent unrest poses a threat to the privileges of military elites, as prolonged public disruption hampers the economy and deters domestic and international actors from investing. Thus, major anti-regime violence may change the disposition of senior officers in favor of a coup.

Furthermore, armed forces and their leaders, in particular, are conservative organizations that highly value public order (Croissant and Kuehn 2011). A regime leader, who fails to contain major violent anti-regime mobilization and struggles to restore public order, may appear weak and incompetent in the eye of senior officers (Aksoy, Carter, and Wright 2015, 435). High-ranking officers might then portray the coup as a necessary measure to restore public order and end the violence, while at the same time the takeover serves them as a measure to secure their continued access to the regime's privileges and benefits.

Violent anti-regime mobilization and junior-officer coups

The case is different for coup plotters hailing from the lower and middling ranks of the armed forces. While nonviolent protests change junior officers' ability to conduct a

successful coup, violent anti-regime campaigns do little to increase junior officers' ability to conduct a successful takeover and milden their risk of coup-plotting. All coup-plotters regardless of their rank have to pull the non-conspiracy parts of the military onto their side and secure at least the tacit consent of significant parts of the military in order to succeed (Singh 2014). Coup plotters from outside the military's upper echelon, however, have a particularly hard time to attract the approval of the rest of the military. Junior-officer coups are not only a fundamental violation of the armed forces' hierarchy principle but also threaten the military elites' privileges and position. High-ranking officers thus typically oppose junior-officer coups and should "be more than willing to use violence to suppress them" (De Bruin 2019, 802).

Table 1: Expectations on the effect of anti-regime mobilization on types of coups

		Type of anti-regime mobilization	
		Nonviolent	**Violent**
Type of coup	**Senior**	+	+
	Junior	++	0

Notes: + denotes a positive effect of the mobilization type on coups; ++ stands for a stronger effect of the mobilization type on a coup type; 0 indicates that there is no consistent relationship.

As junior officers have to expect stiff resistance from high-ranking officers, it is pivotal for their coup's success to garner support from fellow mid- and low-ranking officers and the broader population. The prospects of securing support among these two groups should be, however, low if junior officers intervene amid a major violent unrest and their coups therefore appears as an action in support of a radical group that threatens national security and the citizen's physical integrity. An attack on the political leadership amid a major violent unrest thus hinders junior coup plotters from securing the urgently needed consent from within the military and the broader population. Junior officers taking the risky decision to stage a coup in the eye of a major violent protests would then have to tackle a double challenge: dealing with the violent protests and fending off armed resistance from within the military. Hence, unlike nonviolent anti-regime mobilization, violent unrest does not increase junior officers' ability to succeed. Therefore, junior-officers are expected to refrain from plotting a coup during such incidences.

Taken together, the considerations on violent anti-regime mobilization and different coup types yield the following hypothesis (cf. table 1 for an overview of all theoretical arguments):

Hypothesis 2: In autocracies, violent anti-regime mobilization should only increase the likelihood of senior-officer coups.

4. Research design

The research sample contains all autocratic country-years from 1960 to 2006 as defined by the regime dataset of Geddes, Wright, and Frantz (2014). The period of study ends in 2006 for reasons of data availability on protest campaigns. Furthermore, the smallest countries are excluded as Geddes and co-authors (2014) only provide regime data for independent countries with a population of at least one million. This yields a sample of 3746 observations across 117 countries.

4.1 Coup data

I operationalize the dependent variables of senior-officer and junior-officer coup attempts, respectively, with data from the Coup Leaders Dataset by Eschenauer-Engler and Herre (2023). Based on Powell and Thyne's sample of coups (2011), this novel dataset provides information on the identity and rank of all coup leaders from 1950 to 2020.[14] Specifically, it contains variables on the name, civilian or military background, and exact military rank of the coup leader(s). Furthermore, it assigns coup leaders to three rank groups (senior, mid-ranking, and low-ranking officers).[15]

Based on the dataset's information on the military rank of the coup leaders, I distinguish between two types of coups, junior-officer coups and senior-officer coups: The variable senior-officer coup is coded with 1 if there was at least one coup attempt in a country-year that was led by an active military officer with the rank of general or above. The variable junior-officer coup is coded with 1 if there was at least one coup attempt in a country-year that was headed by a mid- or low-ranking officer, that is

[14] The authors adhere to the coup definition of Powell and Thyne (2011) who define coups as "illegal and overt attempts by the military or other elites within the state apparatus to unseat the sitting executive" (252).

[15] Eschenauer-Engler and Herre (2023) denote the rank group of a coup by coding the highest rank among the active officers leading the coup.

colonel or below.[16] After coding the dependent variables, the sample contains 103 country-years with coups by senior members of the armed forces and 122 country-years with coup attempts by low- and mid-ranking soldiers.[17]

4.2 Mobilization data

Data on the independent variables, nonviolent and violent anti-regime mobilization, is taken from the NAVCO 2.0 dataset (Chenoweth and Lewis 2013). The dataset provides yearly data on both violent and largely peaceful popular campaigns. A campaign is defined as "a series of observable, continuous, purposive mass tactics or events in pursuit of a political objective" (Chenoweth and Lewis 2013, 416). NAVCO restricts its sample to 'major' campaigns that have "maximal goals and a high level of sustained participation over time (Chenoweth and Lewis 2013, 420). It thus excludes small, spontaneous, and timely restricted incidences of mobilization. This fits to the theoretical arguments outlined in the theory section which refer to major, sustained incidences of anti-regime mobilization.

Using NAVCO's campaign goals variable, I reduced the population of campaigns to only those events that aimed at a regime change. I then disaggregated these anti-regime campaigns into those that are largely nonviolent and those that are primarily violent applying NAVCO's information on the primary methods used by the campaigners. A major incident of mass mobilization qualifies as nonviolent if the protesters do "not directly threaten or harm the physical well-being of their opponent" (Chenoweth and Lewis 2013, 418). Major violent campaigns, by contrast, "involve the use of force to physically threaten, harm, and kill the opponent" (Chenoweth and Lewis 2013, 419) and typically refer to insurgencies, guerilla warfare, and intra-state armed conflicts.

[16] Eschenauer-Engler and Herre (2023) consider colonels as senior officers in countries where the armed forces are regularly led by colonels or colonel is the highest military rank.

[17] Even though the Coup Leaders Dataset distinguishes between three rank groups (high-, mid-, and low-ranking coup leaders), coups by junior and mid-ranking officers are summarized into a common category in this analysis as the theoretical argument focuses on the divide between the military elite and non-elite soldiers from the middling and lower ranks.

4.3 Control variables

Based on previous research, I include several control variables that potentially confound the independent variables' associations with the coup attempt type.

First, I control for a number of political and economic background factors, as military officers operate in a specific decision-making environment that potentially affects their decision whether to attempt a power grab or not. Scholars have contended that coup attempts become less likely as a country becomes wealthier (Belkin and Schofer 2003; Londregan and Poole 1990; Powell 2012). I therefore account for differences in levels of economic development with *GDP per capita* data from (Fariss et al. 2021; data are taken from Coppedge et al. 2023), to which I apply a logarithmic transformation to account for the strong right-skewedness of the data. Moreover, previous research has found an inverted U-shaped relationship between the level of democracy and coup activity, with democracies and full-blown autocracies being less prone to coups that hybrid regimes (Johnson and Thyne 2018; Powell 2012). To account for the possible coup-proneness of these "in-between regimes", I consider the level of *electoral democracy* in my models, measured with V-Dem data (Coppedge et al. 2023). Finally, I control for the *age of the regime* using the regime duration variable from Geddes and colleagues (2014), as recently established regimes may be more susceptible to coups than firmly established, consolidated ones.

Second, since armed forces vary substantially across regimes, I also control for two basic military characteristics. The first military control refers to the amount of money that regimes – at least theoretically – spend on every soldier and what might influence their disposition to turn against the political incumbent (Powell 2012). I create a military *expenditures per soldier* measure (logged) using information on the personnel strength and overall military endowments from the Correlates of War's (COW) National Material Capabilities dataset (version 6; Singer, Bremer, and Stuckey 1972). In addition, I control for military size (logged) as soldiers from larger militaries have to overcome larger coordination obstacles prior and during the coup (Powell 2012; Singh 2014; data taken from COW).

Third, I add a *Cold War* dummy denoting whether a coup took place during or after the Cold War (1960-1991) in order to account for the fundamentally changed international environment after 1991 and the growing challenge of coup plotters to justify their actions vis-à-vis the international community (Marinov and Goemans

2014). This is also important as Yukawa and co-authors (2022, 841) find that nonviolent protests spurred coup attempts particularly in the post-Cold War era as they help coup plotters “to show the international community that their actions were backed by public opinion”.

Finally, as previous coups make regimes more prone to face coups in the future (Londregan and Poole 1990), I control for the time that has passed since the last junior- officer coup (in models on junior-officer coups) and the last senior-officer coup (in models on senior-officer coups). All control variables are lagged by one year. The only exceptions are the *Cold War* indicator and the *military regime* measure from Geddes, Wright and Frantz (2014). This is because the regime variables by Geddes and co-authors are coded for January 1, which makes lagging unnecessary. Table A1 in the appendix provides descriptive statistics for all variables used in the analysis.

4.4 Estimation method

As the two dependent variables are binary (senior-officer coup attempt, and junior-officer coup attempt), I use pooled logistic regressions to assess the effect of anti-regime unrest on coup types. Standard errors are clustered by country to account for unit heterogeneity. To control for time dependency, I add time polynomials as proposed by Carter and Signorino (2010). As it is common in models on different coup types (e.g. Albrecht and Eibl 2018; Kim and Sudduth 2021), I add time cubed and time squared since the last senior-officer coup in models on senior-officer coups. Models on junior-officer coups include time polynomials for the time that has passed since the last junior-officer coup.

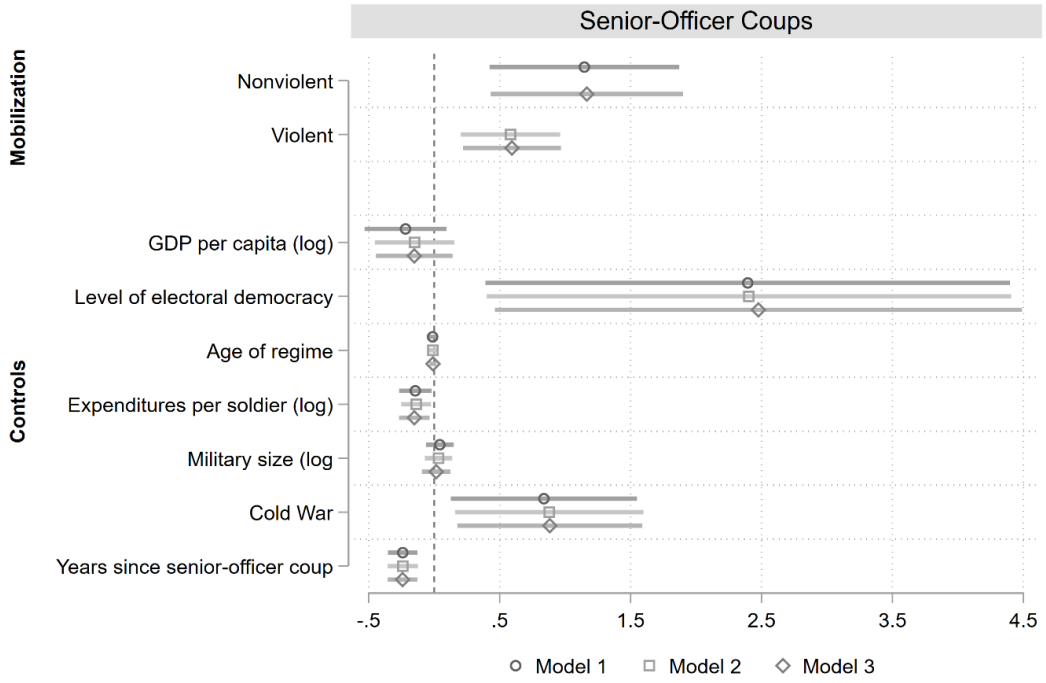
5. Empirical analysis

5.1 Main results

Do different types of anti-regime mass mobilization affect the probability of senior-officer and junior-officer coups differently? In order to answer this question, I run a set of three model specifications for each type of coup: The first model tests the effect of primarily nonviolent anti-regime mobilization on the probability of the respective coup type, while including the full battery of controls. The second model replaces the indicator for nonviolent mobilization with the measure for violent anti-regime

mobilization. The third model includes both types of anti-regime unrest along with all potentially confounding variables. The regression results are reported in figures 1 and 2.

Figure 1: Regression results for senior-officer coup attempts



Notes: Figure displays coefficients (logged odds) for independent variables and controls; whiskers show 90% confidence intervals; time polynomials included but not reported; regression results are reported in table 2 of the appendix.

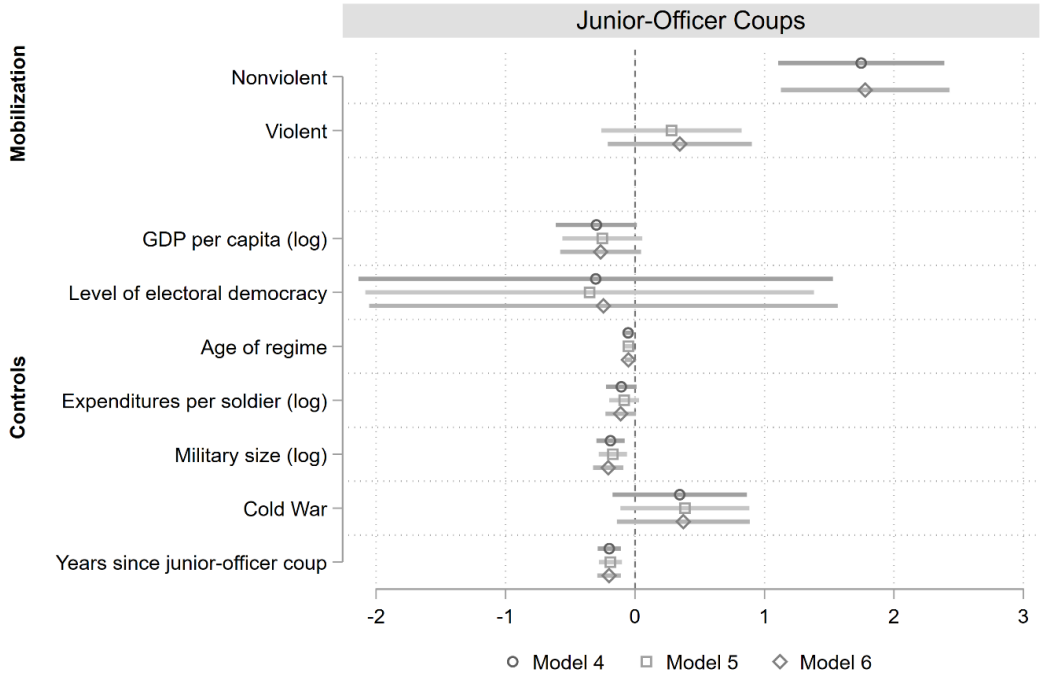
Regarding senior-officer coups, I find that any type of major anti-regime mobilization – regardless of its violent or nonviolent character – renders coups by the armed forces' top tier more likely. As shown in figure 1, the coefficients for both violent and nonviolent incidences of anti-regime unrest are statistically significant at conventional levels as indicated by the confidence intervals that do not cut across the zero line. These findings corroborate the argument that major nonviolent and violent anti-regime mobilization spur senior-officer coups as both types of popular unrest pose a lethal threat to the interests and prerogatives of the military elite. An example that illustrate that high-ranking officers intervene during large-scale uprisings primarily to ensure – and sometimes even extend – their privileges is the 2013 military coup in Egypt. The military elite led by military chief General Abdel Fattah al-Sisi appeared to comply with widespread public demands for an ouster of President Mohamed

Morsi, deposed the president, and took over political power. Since then, the military elite has pushed its political and economic prerogatives to an unprecedented scale. It has massively enlarged its business activities and even changed the constitution to the military's advantage (Bou Nassif 2017; Mandour 2019; Noll 2017). Though publicly portrayed as an act in support of the people, the 2013 coup primarily served the senior officers' interests and cemented their privileges.

In contrast to senior-officer coups, putsches by soldiers from outside the military elite are not triggered by all types of major anti-regime mobilization. Figure 2 shows that only nonviolent forms of anti-regime unrest are consistently related to an increased risk of junior-officer coups. Even though the coefficient for violent anti-regime mobilization is also positive, it fails to reach conventional levels of statistical significance, indicating no clear link between nonviolent unrest against the regime and coups by low- and mid-ranking soldiers. These results support the argument that only nonviolent upheavals are perceived by junior officers as an opportunity to improve their otherwise poor prospects to conduct a successful takeover of political power. As major incidences of anti-regime violence fall short of changing the opportunity structure to the advantage of low- and mid-ranking coup plotters, this type of mobilization is not consistently linked to higher probability of junior-officer coups.

The fact that major incidences of domestic violence are not consistently related to coup attempts contradicts what Bell and Sudduth (2017) offer as one possible explanation for the higher risk of coups during intra-state armed conflict. According to them, "[l]ower-ranked soldiers (…) are more likely to suffer immediate combat-related costs that increase coup motivations" (1436–1437). Since the authors use aggregated data on coups, they cannot examine whether low-ranking soldiers are actually behind the higher likelihood of coups during civil war. The results here, however, underline that coup attempts during major incidences of violent anti-regime mobilization are driven by senior officers, not junior officers. The use of disaggregated data on coup leadership thus helps to test and refine the theorized causal mechanisms linking domestic mobilization and coups.

Figure 2: Regression results for junior-officer coup attempts



Notes: Figure displays coefficients (logged odds) for independent variables and controls; whiskers show 90% confidence intervals; time polynomials included but not reported; regression results are reported in table 3 of the appendix.

Findings on the substantive effect of anti-regime mobilization on coup types underline that the emergence of a major peaceful uprising has indeed a remarkable influence on junior-officer coups (see table 2).[18] The predicted probability of a junior-officer coup is 11,2 percentage points higher if a nonviolent anti-regime uprising occurs than when a comparable popular unrest against the political incumbent does not take place. This change is highly statistically significant. By contrast, the risk of senior officers launching a coup only increases by about 5 percentage points if a major nonviolent upheaval flares up. Hence, while nonviolent anti-regime protests spur all types of coups, they exert particularly pronounced impact on coups by low- and mid-ranking officers. This is because junior officers have a prohibitively high risk to fail with their takeover in normal times and thus are more willing to intervene when the regime appears weakened by a mass-based peaceful uprising.

[18] As the two independent variables are dichotomous, the reported values illustrate the difference in the probability of senior-officer and junior-officer coups when the indicators for nonviolent and violent anti-regime mobilization change from 0 to 1 respectively.

Table 2: Anti-regime mobilization and types of coups: substantive effects

		Type of anti-regime mobilization	
		Nonviolent	**Violent**
Type of coup	**Senior**	0.051*	0.020**
	Junior	0.112***	0.012

Notes: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; the changes in the predicted probabilities are based on the models 3 (for senior-officer coups) and 6 (for junior-officer coups); the two models are identical in their underlying samples and both include the independent variables, controls, as well as time polynomials for each type of coup; control variables are held at their observed sample values in line with Hanmer and Kalkan (2013).

The upcoming of a violent anti-regime mobilization has a differing effect on coups by senior and junior officers. Whereas mass-based violence induces a small, yet statistically significant change in the predicted probability of a senior-officer coup (2 percentage points), the change is only minor for junior-officer coups and fails to reach conventional levels of statistical significance.

5.2 Robustness checks

To strengthen the findings, I run a number of robustness checks (cf. appendix). First, I rerun the main models including region dummies as some regions are more coup-prone than others (tables A4 and A5). Second, I add decade dummies in order to control for time effects (table A6 and A7). Third, I replicate the most comprehensive models for both coup types including decade and region dummies (table A8). Fourth, as researchers have argued that military regimes are particularly susceptible to coups (Belkin and Schofer 2003), I control for military regimes as coded by Geddes, Wright, and Frantz (2014) (tables A9 and A10). All these specifications support the main findings. Fifth, I estimate conditional fixed-effects logistic models. Though the findings corroborate the main results, the sample size in these models is severely reduced as all observations in countries without coups are deleted and therefore variance between countries cannot be studied. In order to account for country-specific heterogeneity but prevent a loss of a large number of observations, I calculated mixed-level random-intercept logistic regressions as a sixth robustness check (tables A11 and A12). Random-intercept models have previously been used in autocracy research (e.g. Svolik 2013) and coup research (e.g. Wig and Rød 2016). Their

general idea is that the intercept varies across groups of observations (e.g. countries) and thus every group in the analysis starts from another zero point. This treat renders random-intercept models particularly appropriate for the analysis of coups, as the risk of experiencing a coup varies substantially across countries and regimes (Belkin and Schofer 2003; see also Wig and Rød 2016, 803). The results of the random-intercept models corroborate the findings as well.

6. Conclusion

This article took a more nuanced look on the nexus between popular mobilization and military coups. It was motivated by the elite-centrist focus imminent in the majority of studies on coups and protests. While these works largely claim that coups are perpetrated by regime elites, empirical reality shows that nearly half of all attempted takeovers are launched by low- and mid-ranking officers from outside of the ruling elite. Taking into account this important difference in coup leadership, I argued that the effect of different manifestations of anti-regime mobilization on coup activity depends on the military background of the coup plotters. Specifically, I contended that nonviolent mass protests increase the probability of all types of coups regardless of the coup leaders' military rank. However, major incidences of mass-based nonviolent protests should be particularly important for the occurrence of coups from outside the military's upper echelon. Major incidences of violent anti-regime mobilization, by contrast, were assumed to be only consistently related to attempted takeovers by the military elite, yet not by the mid- and low-ranking officers. For the empirical analysis, I leveraged novel data on coup leadership and systematically distinguished between senior-officer coups perpetrated by military elites and junior-officer coups staged by non-elite soldiers from the middling and lower ranks. The empirical analysis indeed unearthed crucial differences in the coup activity of senior and junior officers amid major periods of mass unrest. First, nonviolent anti-regime protests increase the likelihood of coups regardless of the rank of the coup leaders, yet this effect is largest for coups by junior officers. This underlines that major peaceful upheavals are a particularly important coup-trigger for mid- and low-ranking officers, who – in normal times – have a particularly high risk to fail with their coups. Major peaceful unrests might then be perceived by junior officers as a signal that the regime is weakened and a coup attempt might turn out successfully. Second, the use of more fine-grained data on coups and their leaders

demonstrated that the effect of major violent incidences of popular mobilization is driven by senior officers, while there is no consistent link between popular violence and junior-officer coups.

With this study, I hope I can contribute to the current state of research in a twofold manner: First, the findings refine what we think we know about the link between popular mobilization and coups d'état. By distinguishing between senior- and junior-officer coups as well as between different types of anti-regime mobilization, I have shown that different types of mobilization have a varying effect of different types of coups. The article therefore speaks to the still small, yet dynamically developing branch of civil-military relations literature that seeks to crack open the military apparatus along empirically and theoretically important criteria and study soldiers' varying motives and resources to influence politics. This article's findings are a further hint that disaggregating coups aids to better understand the causes and dynamics of military interventions into politics in autocratic regimes.

Second, the findings have implications beyond coup research. With liberal democracy being on retreat in many countries and autocratization increasingly taking root in many areas around the globe (Herre 2022), it is of both theoretical and praxeological importance to understand how non-democratic rulers deal with the two most imminent threats to their rule: coups and mass mobilization. Autocracy research has traditionally assumed that coups are horizontal threats perpetrated by regime elites, while mass mobilization is a vertical threat hailing from the disgruntled masses (Gerschewski and Stefes 2018; Svolik 2012). Only in the most recent years, coup research has begun to systematically distinguish those coups stemming from elite members of the military and ruling coalition from those coups plotted by soldiers that neither belong to the ruling elite nor can be equated with the masses. This article's findings strengthen the insight that it would be fruitful for future research to rethink the binary perspective on autocratic regimes crises. In doing so, disaggregating both coups, on the one hand, and different manifestations of mass-based mobilization, on the other, could enhance our knowledge on the inner workings and survival strategies of autocracies and their rulers.

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8. Appendix

8.1 Descriptive statistics and additional regression results

Table A1: Descriptive statistics

Variable	*Obs.*	*Mean*	*SD*	*Min.*	*Max.*
Coup variables (DV)					
Senior-officer coup attempt	3,746	0.027	0.164	0	1
Junior-officer coup attempt	3,746	0.033	0.178	0	1
Mobilization variables (IV)					
Nonviolent anti-regime mobilization	3,746	0.033	0.179	0	1
Media censorship	3,621	1.141	1.059	-2.176	3.094
Controls					
GDP per capita (log)	3,703	1.519	0.768	0.356	5.060
Electoral Democracy Index (Polyarcy)	3,703	0.192	0.120	0.007	0.721
Age of regime	3,746	21.729	29.830	1	265
Expenditures/soldier (log)	3,515	8.301	1.371	0	14.698
Military size (log)	3,674	3.782	1.693	0	8.466
Cold War	3,746	0.733	0.442	0	1
Time since last senior-officer coup	3,703	17.412	13.054	0	55
Time since last junior-officer coup	3,703	17.014	13.015	0	55
Robustness checks					
Military regime	3,746	0.137	0.344	0	1

Table A2: Types of mass mobilization and senior-officer coups: main models

	(1)	(2)	(3)
DV: Senior-officer coup			
Nonviolent anti-regime mobilization	1.147***		1.166***
	(0.440)		(0.447)
Violent anti-regime mobilization		0.583**	0.594***
		(0.231)	(0.227)
GDP per capita (log)	-0.219	-0.150	-0.152
	(0.191)	(0.185)	(0.178)
Electoral democracy index	2.394**	2.403**	2.476**
	(1.218)	(1.218)	(1.224)
Age of the regime	-0.012	-0.010	-0.009
	(0.017)	(0.016)	(0.016)
Expenditures per soldier (log)	-0.145*	-0.138**	-0.152**
	(0.075)	(0.069)	(0.071)
Military size (log)	0.043	0.033	0.015
	(0.065)	(0.063)	(0.067)
Cold War	0.838*	0.879**	0.883**
	(0.432)	(0.437)	(0.429)
Years since last senior-officer coup	-0.241***	-0.240***	-0.242***
	(0.069)	(0.070)	(0.069)
Constant	-2.048**	-2.240**	-2.142**
	(0.970)	(0.975)	(0.972)
Observations	3515	3515	3515
Log pseudolikelihood	-412.317	-413.273	-410.390
Adjusted Pseudo R^2	0.083	0.081	0.085

Note: this table reports the results underlying the coefficient plot in the main analysis (figure 1); * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last senior-officer coup cubed and squared included, but not reported.

Table A3: Types of mass mobilization and junior-officer coups: main models

	(4)	(5)	(6)
DV: Junior-officer coup			
Nonviolent anti-regime mobilization	1.747***		1.778***
	(0.390)		(0.396)
Violent anti-regime mobilization		0.282	0.346
		(0.329)	(0.338)
GDP per capita (log)	-0.298	-0.252	-0.265
	(0.190)	(0.188)	(0.190)
Electoral democracy index	-0.303	-0.351	-0.244
	(1.114)	(1.053)	(1.100)
Age of the regime	-0.053***	-0.051***	-0.051***
	(0.017)	(0.018)	(0.018)
Expenditures per soldier (log)	-0.106	-0.084	-0.110
	(0.072)	(0.069)	(0.072)
Military size (log)	-0.189***	-0.171***	-0.206***
	(0.066)	(0.066)	(0.071)
Cold War	0.345	0.386	0.373
	(0.315)	(0.303)	(0.312)
Years since last junior-officer coup	-0.199***	-0.190***	-0.200***
	(0.054)	(0.054)	(0.055)
Constant	-0.432	-0.722	-0.475
	(0.726)	(0.676)	(0.711)
Observations	3515	3515	3515
Log pseudolikelihood	-458.420	-466.626	-457.705
Adjusted Rseudo R^2	0.097	0.081	0.096

Note: this table reports the results underlying the coefficient plot in the main analysis (figure 2); * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last senior-officer coup cubed and squared included, but not reported.

Table A4: Types of mass mobilization and senior-officer coups: adding region dummies

	(A1)	(A2)	(A3)
DV: Senior-officer coup			
Nonviolent anti-regime mobilization	1.153**		1.194**
	(0.483)		(0.490)
Violent anti-regime mobilization		0.506*	0.536**
		(0.275)	(0.268)
GDP per capita (log)	-0.591**	-0.525**	-0.538**
	(0.234)	(0.233)	(0.230)
Electoral democracy index	3.231***	3.163***	3.329***
	(1.177)	(1.184)	(1.193)
Age of the regime	-0.012	-0.009	-0.009
	(0.016)	(0.015)	(0.015)
Expenditures per soldier (log)	-0.159*	-0.147*	-0.169*
	(0.089)	(0.085)	(0.087)
Military size (log)	0.145**	0.132*	0.120
	(0.073)	(0.076)	(0.076)
Cold War	0.746*	0.774*	0.801*
	(0.416)	(0.424)	(0.415)
Americas	2.343**	2.338**	2.254**
	(1.032)	(1.044)	(1.033)
Sub-Saharan Africa	1.546	1.495	1.467
	(1.006)	(1.027)	(1.009)
Middle East and North Africa	2.261**	2.181**	2.226**
	(1.005)	(1.034)	(1.004)
Asia	0.912	0.917	0.840
	(1.018)	(1.015)	(1.014)
Years since last senior-officer coup	-0.225***	-0.227***	-0.230***
	(0.068)	(0.070)	(0.069)
Constant	-3.642**	-3.781***	-3.626**
	(1.453)	(1.446)	(1.438)
Observations	3515	3515	3515
Log pseudolikelihood	-400.675	-401.993	-399.075
Adjusted Pseudo R^2	0.099	0.097	0.101

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last senior-officer coup cubed and squared included, but not reported.

Table A5: Types of mass mobilization and junior-officer coups: adding region dummies

	(A4)	(A5)	(A6)
DV: Junior-officer coup			
Nonviolent anti-regime mobilization	1.713***		1.744***
	(0.406)		(0.410)
Violent anti-regime mobilization		0.136	0.231
		(0.329)	(0.334)
GDP per capita (log)	-0.566**	-0.524**	-0.540**
	(0.226)	(0.218)	(0.226)
Electoral democracy index	0.273	0.075	0.303
	(1.054)	(0.987)	(1.042)
Age of the regime	-0.052***	-0.049***	-0.050***
	(0.016)	(0.016)	(0.016)
Expenditures per soldier (log)	-0.105	-0.070	-0.110
	(0.075)	(0.076)	(0.075)
Military size (log)	-0.145*	-0.125	-0.158*
	(0.082)	(0.084)	(0.087)
Cold War	0.264	0.265	0.284
	(0.327)	(0.308)	(0.324)
Americas	1.143	1.232	1.095
	(1.020)	(1.014)	(1.029)
Sub-Saharan Africa	0.503	0.486	0.479
	(0.998)	(0.992)	(1.003)
Middle East and North Africa	1.069	0.927	1.052
	(1.069)	(1.063)	(1.070)
Asia	0.082	0.119	0.072
	(1.031)	(1.011)	(1.032)
Years since last junior-officer coup	-0.193***	-0.186***	-0.194***
	(0.056)	(0.056)	(0.057)
Constant	-0.948	-1.249	-0.941
	(1.320)	(1.295)	(1.312)
Observations	3515	3515	3515
Log pseudolikelihood	-452.809	-460.644	-452.490
Adjusted Pseudo R^2	0.100	0.085	0.099

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last junior-officer coup cubed and squared included, but not reported; Europe is excluded.

Table A6: Type of mass mobilization and senior-officer coups: adding decade dummies

	(A7)	(A8)	(A9)
DV: Senior-officer coup			
Nonviolent anti-regime mobilization	1.251***		1.295***
	(0.455)		(0.467)
Violent anti-regime mobilization		0.644***	0.671***
		(0.235)	(0.230)
GDP per capita (log)	-0.263	-0.180	-0.203
	(0.189)	(0.181)	(0.179)
Electoral democracy index	2.527**	2.531**	2.633**
	(1.260)	(1.249)	(1.261)
Age of the regime	-0.010	-0.008	-0.008
	(0.017)	(0.015)	(0.015)
Expenditures per soldier (log)	-0.138*	-0.130*	-0.133*
	(0.078)	(0.075)	(0.077)
Military size (log)	0.043	0.033	0.013
	(0.064)	(0.062)	(0.066)
Cold War	-0.373	-0.352	-0.489
	(1.169)	(1.169)	(1.183)
1960s	0.846	0.909	1.084
	(1.349)	(1.349)	(1.368)
1970s	1.059	1.125	1.276
	(1.342)	(1.346)	(1.363)
1980s	0.956	1.007	1.093
	(1.341)	(1.345)	(1.353)
1990s	-0.525	-0.464	-0.503
	(0.538)	(0.529)	(0.515)
Years since last senior-officer coup	-0.246***	-0.245***	-0.247***
	(0.069)	(0.070)	(0.069)
Constant	-1.771*	-2.029*	-2.002*
	(1.057)	(1.084)	(1.092)
Observations	3515	3515	3515
Log pseudolikelihood	-409.947	-410.949	-407.579
Adjusted Pseudo R^2	0.079	0.077	0.082

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last senior-officer coup cubed and squared included, but not reported; 2000s excluded.

Table A7: Type of mass mobilization and junior-officer coups: adding decade dummies

	(A10)	(A11)	(A12)
DV: Junior-officer coup			
Nonviolent anti-regime mobilization	1.723***		1.769***
	(0.402)		(0.412)
Violent anti-regime mobilization		0.252	0.349
		(0.339)	(0.346)
GDP per capita (log)	-0.295	-0.247	-0.270
	(0.192)	(0.188)	(0.192)
Electoral democracy index	-0.298	-0.368	-0.224
	(1.114)	(1.050)	(1.101)
Age of the regime	-0.054***	-0.052***	-0.051***
	(0.018)	(0.019)	(0.018)
Expenditures per soldier (log)	-0.099	-0.086	-0.097
	(0.079)	(0.076)	(0.078)
Military size (log)	-0.190***	-0.172***	-0.207***
	(0.067)	(0.066)	(0.072)
Cold War	0.498	0.660	0.470
	(0.543)	(0.513)	(0.549)
1960s	0.077	-0.055	0.145
	(0.768)	(0.764)	(0.794)
1970s	0.081	-0.051	0.152
	(0.758)	(0.761)	(0.784)
1980s	-0.021	-0.100	0.004
	(0.782)	(0.771)	(0.796)
1990s	0.302	0.345	0.282
	(0.540)	(0.528)	(0.537)
Years since last junior-officer coup	-0.195***	-0.185***	-0.197***
	(0.053)	(0.052)	(0.053)
Constant	-0.711	-0.942	-0.803
	(0.866)	(0.835)	(0.866)
Observations	3515	3515	3515
Log pseudolikelihood	-458.027	-466.003	-457.328
Adjusted Pseudo R^2	0.090	0.075	0.090

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last junior-officer coup cubed and squared included, but not reported; 2000s excluded.

Table A8: Type of mass mobilization and types of coups: region and decade dummies

	(A13)	(A14)
Dependent variable	*Senior-officer coup*	*Junior-officer coup*
Nonviolent anti-regime mobilization	1.331**	1.724***
	(0.530)	(0.422)
Violent anti-regime mobilization	0.634**	0.225
	(0.272)	(0.343)
GDP per capita (log)	-0.599**	-0.539**
	(0.244)	(0.230)
Electoral democracy index	3.562***	0.334
	(1.253)	(1.036)
Age of the regime	-0.007	-0.051***
	(0.014)	(0.017)
Expenditures per soldier (log)	-0.150	-0.101
	(0.091)	(0.081)
Military size (log)	0.129	-0.159*
	(0.080)	(0.086)
Cold War	-0.591	0.416
	(1.154)	(0.540)
Years since last senior-officer coup	-0.235***	
	(0.070)	
Years since last junior-officer coup		-0.190***
		(0.055)
Constant	-3.585**	-1.239
	(1.538)	(1.410)
Region dummies	yes	yes
Decade dummies	yes	yes
Observations	3515	3515
Log pseudolikelihood	-396.058	-452.126
Adjusted Pseudo R^2	0.099	0.092

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last senior-officer coup cubed and squared included, but not reported; the same hold for time since last junior-officer coup cubed and squared.

Table A9: Types of mass mobilization and senior-officer coups: adding military regime as control

	(A15)	(A16)	(A17)
DV: Senior-officer coup			
Nonviolent anti-regime mobilization	1.040**		1.077**
	(0.450)		(0.459)
Violent anti-regime mobilization		0.506**	0.532**
		(0.242)	(0.237)
Military regime	0.404	0.404	0.331
	(0.324)	(0.322)	(0.332)
GDP per capita (log)	-0.233	-0.169	-0.171
	(0.194)	(0.187)	(0.183)
Electoral democracy index	2.473**	2.455**	2.533**
	(1.226)	(1.220)	(1.234)
Age of the regime	-0.008	-0.006	-0.006
	(0.017)	(0.015)	(0.015)
Expenditures per soldier (log)	-0.150*	-0.143**	-0.155**
	(0.077)	(0.071)	(0.073)
Military size (log)	0.008	-0.000	-0.011
	(0.069)	(0.068)	(0.070)
Cold War	0.799*	0.833*	0.850**
	(0.425)	(0.433)	(0.423)
Years since last senior-officer coup	-0.224***	-0.223***	-0.227***
	(0.072)	(0.073)	(0.072)
Constant	-2.062**	-2.236**	-2.147**
	(0.967)	(0.974)	(0.971)
Observations	3515	3515	3515
Log pseudolikelihood	-411.146	-412.082	-409.615
Adjusted Pseudo R^2	0.083	0.081	0.084

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last senior-officer coup cubed and squared included, but not reported.

Table A10: Types of mass mobilization and junior-officer coups: adding military regime as control

	(A18)	(A19)	(A20)
DV: Junior-officer coup			
Nonviolent anti-regime mobilization	1.534***		1.563***
	(0.409)		(0.416)
Violent anti-regime mobilization		0.111	0.206
		(0.295)	(0.308)
Military regime	0.683***	0.787***	0.652***
	(0.245)	(0.240)	(0.247)
GDP per capita (log)	-0.323	-0.284	-0.303
	(0.209)	(0.199)	(0.207)
Electoral democracy index	0.019	-0.062	0.040
	(1.127)	(1.057)	(1.118)
Age of the regime	-0.041**	-0.039**	-0.040**
	(0.017)	(0.017)	(0.017)
Expenditures per soldier (log)	-0.115	-0.092	-0.118
	(0.074)	(0.073)	(0.074)
Military size (log)	-0.233***	-0.217***	-0.241***
	(0.074)	(0.073)	(0.077)
Cold War	0.307	0.315	0.329
	(0.321)	(0.311)	(0.320)
Years since last junior-officer coup	-0.191***	-0.183***	-0.192***
	(0.055)	(0.055)	(0.056)
Constant	-0.497	-0.765	-0.524
	(0.724)	(0.693)	(0.715)
Observations	3515	3515	3515
Log pseudolikelihood	-454.255	-460.908	-454.006
Adjusted Pseudo R^2	0.103	0.090	0.102

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last junior-officer coup cubed and squared included, but not reported.

Table A11: Types of mass mobilization types of coups: conditional fixed effects model

	(A21)	(A22)	(A23)	(A24)
Dependent variable	*Senior-officer coup*	*Senior-officer coup*	*Junior-officer coup*	*Junior-officer coup*
Nonviolent anti-regime mobilization	0.867*		1.544***	
	(0.473)		(0.431)	
Violent anti-regime mobilization		1.121***		-0.240
		(0.421)		(0.404)
GDP per capita (log)	-1.566*	-1.328	-1.877***	-1.889***
	(0.824)	(0.846)	(0.714)	(0.722)
Electoral democracy index	6.216***	6.015***	3.765***	3.233**
	(1.511)	(1.526)	(1.433)	(1.444)
Age of the regime	0.005	0.010	-0.071***	-0.067***
	(0.014)	(0.014)	(0.019)	(0.019)
Expenditures per soldier (log)	-0.146	-0.140	-0.091	-0.022
	(0.138)	(0.136)	(0.119)	(0.123)
Military size (log)	-0.337	-0.465**	0.118	0.108
	(0.232)	(0.235)	(0.196)	(0.200)
Cold War	2.047***	2.053***	1.513***	1.419***
	(0.501)	(0.491)	(0.431)	(0.432)
Years since last senior-officer coup	-0.120	-0.116		
	(0.077)	(0.077)		
Years since last junior-officer coup			-0.155**	-0.150**
			(0.068)	(0.068)
Observations	1508	1508	1659	1659
Number of countries	49	49	53	53

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time polynomials included, but not reported.

Table A12: Types of mass mobilization and senior-officer coups: random intercept models

	(A25)	(A26)	(A27)
DV: Senior-officer coup			
Nonviolent anti-regime mobilization	1.062**		1.061**
	(0.456)		(0.461)
Violent anti-regime mobilization		0.712**	0.701**
		(0.336)	(0.333)
GDP per capita (log)	-0.390	-0.326	-0.313
	(0.269)	(0.275)	(0.270)
Electoral democracy index	3.244***	3.259***	3.350***
	(1.167)	(1.170)	(1.176)
Age of the regime	-0.011	-0.008	-0.008
	(0.012)	(0.011)	(0.011)
Expenditures per soldier (log)	-0.159*	-0.153	-0.171*
	(0.095)	(0.096)	(0.094)
Military size (log)	0.030	0.002	-0.006
	(0.084)	(0.089)	(0.088)
Cold War	0.999**	1.055***	1.061***
	(0.389)	(0.390)	(0.391)
Years since last senior-officer coup	-0.205***	-0.200***	-0.207***
	(0.072)	(0.072)	(0.072)
Constant	-2.474**	-2.703***	-2.570***
	(0.996)	(1.005)	(0.994)
Observations	3515	3515	3515
Countries	117	117	117
Log likelihood	-409.865	-409.974	-407.761
LR test versus logistic model	4.91**	6.60**	5.26**

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last senior-officer coup cubed and squared included, but not reported.

Table A13: Types of mass mobilization and junior-officer coups: random intercept models

	(A28)	(A29)	(A30)
DV: Junior-officer coup			
Nonviolent anti-regime mobilization	1.724***		1.755***
	(0.375)		(0.373)
Violent anti-regime mobilization		0.205	0.307
		(0.309)	(0.299)
GDP per capita (log)	-0.363	-0.358	-0.315
	(0.223)	(0.238)	(0.218)
Electoral democracy index	-0.054	-0.055	-0.078
	(1.073)	(1.078)	(1.054)
Age of the regime	-0.054***	-0.053***	-0.052***
	(0.013)	(0.014)	(0.013)
Expenditures per soldier (log)	-0.115	-0.091	-0.117
	(0.086)	(0.088)	(0.084)
Military size (log)	-0.193**	-0.179**	-0.207***
	(0.078)	(0.081)	(0.078)
Cold War	0.354	0.384	0.372
	(0.303)	(0.305)	(0.301)
Years since last junior-officer coup	-0.187***	-0.174***	-0.191***
	(0.060)	(0.060)	(0.060)
Constant	-0.512	-0.827	-0.524
	(0.844)	(0.859)	(0.830)
Observations	3515	3515	3515
Countries	117	117	117
Log likelihood	-457.960	-465.730	-457.466
LR test versus logistic model	0.92	1.79	0.48

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last junior-officer coup cubed and squared included, but not reported.

IV. Paper 3

Armed forces and airwaves: media control and military coups in autocracies

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Abstract

Media play a key role in military coups. Yet, there is little research on information environments and coups. Therefore, this article asks whether the extent of media control affects coup attempts and coup success in dictatorships. It argues that autocracies with extensive media control offer an opaque decision environment for plotters, thus decreasing the likelihood of coup attempts. On the outcome stage, extensive media control is expected to lower the prospects of success as conspirators struggle to control public information. Additionally, coups are disaggregated, arguing that the effect of media control varies between regime change and leader reshuffling coups. The arguments are tested by employing regression analyses. As expected, strong media control renders coup attempts and success less likely. While I do not find robust evidence for a varying effect of media control on different types of coup attempts, its influence on coup success is driven by regime change coups.

Key words

Media; civil-military relations; autocracy; coups; military

1. Introduction

Media play a key role in military coup d'états. In 1970 Congo, for instance, rebel military forces briefly seized a radio station to announce the ouster of President Marien Ngouabi. Reportedly, the president himself led loyal forces to recapture the radio station, from which the news of the president's victory was spread (New York Times 1970). Similarly, in Libya, media played an important role in the 1969 coup that brought Muammar al-Gaddafi to power. Hours into the coup, plotters broadcasted a radio speech, in which they proclaimed that the armed forces had taken control, when there was a group of junior officers behind the seizure (Sullivan 2009, 28).

These examples illustrate that media are essential for military coups. Coup plotters occupy media stations, manipulate news coverage, and issue public statements, in which they call on soldiers and citizens to support the overthrow. Incumbents, in turn, use media to rally support, generate opposition to the takeover, and demonstrate unrestrained authority over the polity. Hence, media, news, and information are at least as important and decisive for a coup's success as weapons, tanks, and ammunition.

How the media contribute to the survival and fall of political regimes has long been a prominent question in the scholarly debate. Autocracy research in particular has asked how and under which circumstances media strengthen dictatorships or contribute to the erosion of authoritarian rule (e.g. Edmond 2013; Lorentzen 2014; Rød and Weidmann 2015).[1] Despite an intense exchange on the role of media and information for the stability and longevity of political regimes, only few empirical studies have touched on the relationship between media, coups, and, in particular, their outcomes. Focusing on coup attempts, Casper and Tyson (2014), for instance, find that the probability of coup attempts in the eye of protests increases with rising levels of media freedom. Addressing coup outcomes, Singh (2014) stresses that coup plotters 'must convince the rest of the military that their victory is a fait accompli' (Singh 2014, 22) and therefore 'use the media to create the appearance of widespread support' (Singh 2014, 40). Yet, even though the few studies as well as anecdotal evidence show that media are decisive for coups, the media's impact on

[1] I use the term dictatorship, autocracy, and non-democracy interchangeably.

coups has not been empirically studied in large-N research designs involving both stages of a coup.

To shed more light on the relationship between media and coups, I build on these earlier studies and ask how a regime's extent of media control affects both the likelihood of military coup attempts as well as their chances of success in dictatorships. I argue that the information environment unfolds its effect through different mechanisms in the two sequences of a coup: its occurrence and its outcome. Prior to the coup, it is all about obtaining information. In this phase, the level of media control determines to which extent information is accessible for potential conspirators. Since coups are inherently risky, potential coup plotters absorb information that help them milden the uncertainty of a coup. As extensive media control offers an opaque decision environment, projects regime strength, and raises the regime's prospects to prevail in a coup, I expect coups to be less likely in these autocracies. When a coup is already under way, however, controlling information in order to 'generate common knowledge' (Singh 2014, 28) is key for its success. In this phase, I expect severely restricted media to lower the coup plotters' chances to succeed as they have worse chances to control information throughout the putsch.

In addition, I disaggregate coups into regime change coups and leader reshuffling coups using the novel COLPUS dataset (Chin, Carter, and Wright 2021) and analyze the effect of media control on these two different types of putsches. While reshuffling coups replace the regime leader, 'but mostly preserve the existing regime structure and the elites that benefit from it', regime change coups 'seek to topple the regime and change the group of elites from which leaders are chosen' (Chin, Carter, and Wright 2021, 1041). I argue that the level of media control is only relevant for military regime change coup attempts and their success but not for military reshuffling coup attempts. This is because regime change coups require broader support outside of the ruling coalition that can be won by controlling public information throughout the coup. Since controlling information should be more difficult in dictatorships with strong media control, I expect these regimes to be less prone to successful regime change coups. Conversely, I expect no comparable effect of media control on leader reshuffling coups. Leaders of such coups typically come from the autocratic ruling coalition and have access to inside information from within the ruling elite. Therefore, the regime's ability to control public information is expected to be less relevant for the attempt and success of reshuffling coups.

The scope of this study is limited to autocracies, as coups have been an important mode of leader exit in autocracies since the end of the Second World War (Kendall-Taylor and Frantz 2014; Svolik 2012). Moreover, media freedom has been found to vary across the autocratic realm (Egorov, Guriev, and Sonin 2009; Stier 2015) and this surprising diversity renders the universe of dictatorships a particularly interesting sample to study the influence of media control on coups.

I test the theoretical arguments in a quantitative research design, involving both sequences of a military coup. As expected, the empirical analysis provides evidence that more restricted media environments are associated with a lower likelihood of military coup attempts. Furthermore, more restricted information environments render attempted coups less successful. Contrary to the expectations, I do not find robust evidence that the effect of media control is different for regime change coup attempts and leader reshuffling coup attempts. However, I find that the effect of media control on military coup success is primarily driven by regime change coups. This type of coup is more likely to succeed when media are less controlled and biased to the advantage of the government.

These findings have important implications for three strands of relevant literature: First, they speak to the body of studies on the role of media under dictatorship by focusing on a particular threat to authoritarian rule, namely military coups. Second, the study contributes to the large and fruitful coup literature. While coup research has gained substantial ground in identifying factors that render coup attempts more likely, we know less about the conditions that heighten the chances of their success. By showing that the information environment matters for both coup attempts and, very importantly, coup success, the study expands on research on the determinants of coup outcomes. And third, the varying importance of media control for different types of coups echoes novel findings in coup literature that underline that disaggregating coups helps to better understand their various causes.

The remainder of the article is structured as follows: The next section reviews existing research on the role of media in autocracies and coups. Section 3 comprises theoretical arguments on the link between media, information, and military coups in non-democracies. Section 4 presents the research design, followed by the empirical analysis in section 5. I conclude with a wrap-up and discussion of the results in section 6.

2. Literature review

Autocracy research has drawn a multifaceted picture of media and information in nondemocratic regimes. Though harassment of journalists, censorship, and media regulation are surely more common in autocracies than in democracies, recent studies have found media freedom to vary across the authoritarian universe (Egorov, Guriev, and Sonin 2009; Stier 2015). And while some scholars underline the liberating effect of (digital) media (cf. Diamond 2010; Groshek 2009), others emphasise that media can become a tool of repression and authoritarian resilience (e.g. King, Pan, and Roberts 2013; Rød and Weidmann 2015; Stockmann and Gallagher 2011) or find that freer media can actually serve autocrats' interests (Egorov, Guriev, and Sonin 2009).

This intense debate on media and regime survival has not spread to empirical coup research in general and the study of coup outcomes in particular.[2] To date, most of our knowledge on the role of media for coups has been derived from single case studies or anecdotal evidence (e.g. Bleck and Michelitch 2017; Bonnell and Freidin 1993). Quantitative studies that deliver insights beyond individual cases have remained rare. While some large-N studies analyse the post-coup period and investigate the negative effect of coup attempts on press freedom (Bjørnskov, Freytag, and Gutmann 2018; VonDoepp and Young 2012), little is known about the information environment's role for coup attempts. One exception is the study by Casper and Tyson (2014), in which they find that freer media strengthen the effect of protests on coup attempts. Here, media freedom is introduced as a conditioning variable, moderating the protest-coup-relationship. Media and information have also not been a prominent topic in empirical (large-N) studies on coup outcomes, which have focused on important explanatory factors such as counterbalancing and coup-proofing (Böhmelt and Pilster 2015), civil wars (Bell and Sudduth 2017), institutions (Olar 2019), or military ranks (Singh 2014) in recent years. A study that brings together information and coup outcomes is Singh (2014): He argues that coups are 'won by whichever side is best able to manipulate the beliefs of other actors, convincing them that the side has wide support and their victory is inevitable' (Singh 2014, 63). In order to secure the necessary consent of the non-conspiracy parts of the military, putschists may strategically use the media and broadcasts in order to

[2] Boleslavsky and co-authors (2021), for instance, develop a formal model dealing with media freedom and coups.

portray themselves as victorious (Singh 2014, 27–32). Though Singh touches on the coup-information nexus, he does not test the link in his quantitative analysis due to lacking data (Singh 2014, 63–64).

Another shortcoming in research on coups concerns the conceptualisation of the outcome. Previous studies overwhelmingly fall back on aggregated data that only allow for distinguishing between successful and failed coups (Powell and Thyne 2011). In recent years, however, an increasing number of quantitative coup studies has demonstrated that coups differ in several theoretically and empirically important aspects, such as in their aims and targets, the coup plotters' relationship to the regime, as well as in the military rank of the coup leaders (e.g. Albrecht, Koehler, and Schulz 2021; Chin, Carter, and Wright 2021; De Bruin 2019). These variations have been found to be related to differences in the causes and consequences of coups: Different types of coups are spurred and prevented by different factors (Aksoy, Carter, and Wright 2015; Albrecht and Eibl 2018), result in variations in the unfolding of the takeover (De Bruin 2019), and entail different consequences for post-coup democratic development (e.g. Albrecht, Koehler, and Schulz 2021). In light of these novel conceptual developments, knowledge on the role of media on coup activity could be further advanced by disaggregating the outcome and by testing more fine-grained theoretical arguments linking the information environment to specific types of coups.

Taken together, though there is ample evidence that information and media play an important role for coup attempts and their outcome, this relationship has not been studied in a larger sample. Breaking down coups into different types using novel coup data, in particular, promises new insights on the role of the information environment for coup activity.

3. Theory: media and military coups

Coup research makes an analytical distinction between the two sequences of a coup: the attempt and its outcome (e.g. Bell and Sudduth 2017; Powell 2012). In line with this two-tiered understanding, several scholars have theorised and analyzed the factors determining both the attempt and success of coups in two-stage research designs. Findings of such studies indicate that some factors are related to both the attempt and its outcome (e.g. Florea 2018), while others affect only one stage (e.g. Böhmelt and Pilster 2015; Olar 2019). Some analyses even show that the same

factors may have a differing effect, spurring (deterring) coups on the one hand, yet reducing (increasing) its chances of success on the other (e.g. Bell and Sudduth 2017). I follow up on this analytical distinction between coup onset and coup outcome as well as their common analysis in one research design. I theorise that an autocracy's extent of media control affects both coup attempts and their chances of success, yet through different mechanisms at the two stages.

The argument builds on the assumption that information is central for coup plotters, yet plays a varying role in each sequence of the takeover: Prior to attempting a coup, conspirators seek to obtain information (Casper and Tyson 2014). Once a coup has started, however, coup plotters have to control information in order to succeed (Singh 2014).

Both the coup plotters' ability to obtain and to control information is expected to be influenced by the specific information environment, in which the coup takes place. Although media are surely on average more firmly controlled in dictatorships than in democracies, non-democratic regimes have been found to regulate their media to different extent (Cho, Lee, and Song 2017, 147–148; Egorov, Guriev, and Sonin 2009; Stier 2015). While some autocracies allow for partial pluralism or restrict coverage only in certain areas, others regularly interfere in the media, directly censor contents, and – in the most extreme form – suppress any form of free and critical reporting. Hence, there is substantial variation regarding the government's meddling in the media across autocracies. How these variations might be related to the coup plotters' ability to obtain and control information and, thus, influence coup attempts and their success is elaborated below.

3.1 Media control, information, and coup attempts

Coups are fraught with risks for those, who plan and execute them. Coups fail if conspirators underestimate the regime's ability to deter the seizure and fail to win the support of regime elites, opposition leaders or, very importantly, non-conspiracy segments of the military. In case of a failure, coup plotters face punishments, ranging from the dismissal from the military to imprisonment, exile, torture, and death (Svolik 2009, 481). Given the high risks of a coup, potential putschists 'should only attempt a coup when the expected rewards of the maneuver and its probability of victory are high enough to offset the dire consequences of a failed putsch' (Powell 2012, 1019).

Since plotters conspire under uncertainty, the daunting risks of a coup thus pose a dilemma for the conspirators: Should they stay in the barracks or grab for power?

In view of this quandary, obtaining information is crucial for soldiers gauging whether to stage a coup or not. An autocracy's information environment might influence the magnitude of this dilemma in three possible ways:

First, in line with previous arguments touching on the role of information for coup attempts (Casper and Tyson 2014), the extent of media control mediates the wealth and credibility of public information that is accessible for potential coup plotters. Autocracies with intense media control filter, which news are passed to the public, how government actions are communicated, and gloss over information that have the regime appear vulnerable. Propaganda and indoctrination may reduce popular challenges to the incumbent (Carter and Carter 2021), boost support for the regime, and spread pro-regime views (Sirotkina 2021; Stockmann and Gallagher 2011; Xia 2022). Hence, autocracies with severely biased media confound public information on their rule. As a result, in severely biased media environments officers struggle to obtain information on conditions favourable for a successful coup. Since this uncertainty renders potential coup plotters more hesitant and cautious, coup attempts should be less likely.

A second causal mechanism related to information provision claims that the extent of media control does not only determine the wealth and reliability of information, but is also a valuable information in itself. Regimes may not only meddle in the media to generate desired contents and indoctrinate the public, but also to project an image of strength and resilience in order to deter subversive anti-regime actions (e.g. Huang 2015, 421). A regime's sheer ability to control information may discourage soldiers to revolt as it may be perceived as a signal of regime strength (Walker and Orttung 2014, 74), thus discouraging soldiers from revolting.

Third, regimes that maintain curtailed media may not only present themselves as resilient, but actually have the means to withstand a takeover. From the coup plotters' perspective, the extent of media control might convey information about their prospects of completing a successful seizure. As discussed in more detail below, coup plotters have to control public information throughout the coup in order to succeed. Regimes with tightly controlled media are expected to dispose of better means to maintain control over public information throughout the coup and fend off a seizure than regimes with more permeable media control. As coup plotters weigh their odds prior to the coup, any factor that reduces their chances of success should

also reduce their willingness to start an attempt in the first place. Hence, as media control is expected to lower the coup plotters' prospects of victory, it should also decrease the coup plotters' willingness to stage a coup in the first place.

Taken together, the three mechanisms on information provision yield the following hypothesis: In autocracies, military coups are less likely in tightly controlled information environments (*hypothesis 1*).

3.2 Media control, information, and coup success

Media are not only central in the planning phase of a coup but also during its actual execution. While prior to the coup collecting information is vital for the conspirators, controlling media is their 'most important weapon' (Luttwak 2016 [1968], 131) once the coup has begun.

Drawing on the basic ideas from Singh's (2014) coups as coordination games theory of coup outcomes, I develop arguments on why the extent of media control should matter for the outcome of coups in autocracies. Singh's understanding of coups as coordination games rests on his observation that coup success largely depends on the behaviour of soldiers that are not taking part in the plot from the beginning (Singh 2014, 5). Since coups may entail serious consequences for those, who end up on the wrong side, non-conspiracy soldiers carefully evaluate, which side – the plotters or the regime – is more likely to win, and join the one with the more promising prospects (Singh 2014, 22; see also Geddes 2009). In order to convince these non-conspiracy soldiers to consent to the coup, plotters have 'to make the victory of the coup attempt seem inevitable and resistance futile, thus creating self-fulling expectations around the coup's success' (Singh 2014, 15).

Singh argues that there are several factors shaping the rest of the military's expectations of the coup's success: Coup plotters can, for instance, occupy symbols of state authority, reduce the number of casualties, or seize media stations (Singh 2014, 28–39). Upon seizing media stations, coup plotters have to convey statements proving their irrevocable vigour and thus induce the remaining soldiers to acquiesce in the takeover (Singh 2014, 29–30). Hence, controlling information is essential for the coup plotters and their success (Singh 2014, 28; see also Luttwak 2016 [1968], 131).

If media play such an important role during coups and controlling information affects their immediate outcomes, coup plotters might have quite different chances

to succeed in varying information environments. Singh, too, reasons that there could be a link between the media environment and coup outcomes, as he mentions that 'it would have been useful to ascertain whether coups are more likely to succeed in countries where the government holds a monopoly on broadcast media' (Singh 2014, 64). He apparently assumes that coup plotters have better chances to control public information, where media are monopolised (Singh 2014, 85). However, a lack of data hinders Singh from testing the link between media and coups quantitatively and there is no thorough theoretical discussion on coups in varying media environments.[3] I build on this general idea that differences in the media environment affect coup outcomes, as they apparently influence the coup plotters' ability to control information.[4]

As outlined above, once a coup is under way, both – the regime and the coup plotters – seek to win the war of information. Hence, coup plotters and incumbents alike have to strategically use public statements during the first and decisive hours or days of a coup. The rebellious soldiers seize media stations in order to assure the remaining soldiers of their irrevocable takeover and have resistance appear forlorn (Singh 2014, 29–30). The government has to overrule the challengers' official statements and demonstrate publicly that it is still standing (Singh 2014, 113–114). It has to deter elites from defecting, to rally popular opposition to the takeover, and, most importantly, to ensure the loyalty of hesitating soldiers pondering whether to stick with the regime or back the coup.

Yet, the specific information environment, in which the coup takes place, might affect the coup plotters' and regimes' prospects to prevail in this struggle. I argue that the information environment determines which side has a comparative advantage in controlling information and thus better prospects to succeed. Controlling information

[3] I take up Singh's general idea that characteristics of the media/information environment might be related to coup outcomes. In contrast to Singh, however, I do not focus on media monopolisation/liberalisation as, to my knowledge, global data on this topic are still not available for extended time periods. For this reason, I develop own arguments that are based on his basic idea that the information environment is relevant for coup outcomes.

[4] Singh's ideas suggest that monopolised media can be conductive to a coup's success as monopolisation facilitates to take control over public information once the media outlets have been conquered. A possible counter-argument could be that highly monopolized media in the hands of an autocratic regime bear a high risk of failure for coup plotters. While it is surely right that controlling information is easier once a highly monopolized information environment is brought under control, it may be particularly challenging for coup plotters to conquer a media landscape, where the autocratic regime holds a media monopoly. Therefore, coup success could also be less likely in the most monopolized information environments. Based on this reasoning, I test whether extensive control of the regime over the media is associated with a higher probability of coup failure.

goes beyond seizing media stations at some point during the coup, what is a common feature of most attempted seizures. Instead, it means 'to monopolise public information for the duration of the coup attempt' (Singh 2014, 29). This entails credibly contesting the narratives issued by the opposite side, strategically spreading news of the own victory, and, thereby, dominating the public interpretation of the events unfolding.

A regime' s capacity to keep or regain control over public information should vary with its previous efforts to control the media. Autocracies that have established a firm grip on their media should be better able to control public information throughout a putsch as well. This is because reviewing and censoring media content demands infrastructural capabilities resources, and provides regimes with knowledge how to steer public information in times of crises. Regimes with more curtailed media are expected to more easily oppose the coup plotters' attempts to monopolise information and disseminate statements that ensure the loyalty of key players in their ruling coalition. The Thai coup in March 1977, for instance, was a 'battle of the broadcasts' (Andelman 1977) between the coup plotters and the ruling military junta, in which the coup plotters failed to monopolise public information. The coup plotters announced the takeover of the regime in a radio broadcast and ordered military units to stay in the barracks. Members of the military regime, however, appeared on the media to demonstrate that the junta is still in charge, countering the coup plotters' narrative. The coup, merely 'a war of words' (Andelman 1977), failed in just a couple of hours. During the 1969 Panama coup, too, regime supporters strategically used media to generate pro-regime support. Already before the coup, President Omar Torrijos had started 'a massive publicity campaign (…) to build popular support' (Washington Post 1969). When opponents tried to topple Torrijos in December 1969 while he was on trip abroad, 'his supporters made repeated radio broadcasts to urge people to demonstrate their support' (Los Angeles Times 1969). When Torrijos returned to Panama, he was accompanied by large crowds of supporters and made a triumphant entrance into the capital. The president prevailed over his opponents and ruled for another twelve years.

From this logic follows, however, that the plotters' chances to control information during a coup should vary with the severity of government control over the media. In less controlled regimes, coup plotters might have a greater chance to win the war of information during the decisive phase of the coup. In contrast, military officers are expected to meet steep hurdles when trying to control public information

in autocracies with intense media. These considerations yield a second hypothesis: In autocracies, extensive media control reduces the likelihood that a coup will succeed (*hypothesis 2*).

3.3 Media control, information, and types of coups

In order to test whether the information environment is linked to all coups or exerts its impact only on a specific type, I disaggregate military coups into leader reshuffling and regime change coups relying on concepts and data from the COLPUS dataset (Chin, Carter, and Wright 2021; see also Aksoy, Carter, and Wright 2015). Leader reshuffling coups are limited in their political consequences as they 'do not seek to overthrow the entire regime but simply replace the leader with another from within the same group of political elite' (Aksoy, Carter, and Wright 2015, 425). Regime change coups, by contrast, lead to far-reaching changes of the regime as they 'seek to topple the regime and change the group of elites from which leaders are chosen' (Chin, Carter, and Wright 2021, 1041).

These two types of coups also differ with regard to the background of the actors behind these coups: Since reshuffling coups are limited to changing the leader, but not the ruling elite, they tend to be staged by 'regime insiders who are either members of the ruling elite or operating on their behalf' (Aksoy, Carter, and Wright 2015, 429). Regime change coups, on the other hand, are more likely attempted by opponents from outside the ruling elite, who intend to fundamentally change the regime and its supporters (Chin, Carter, and Wright 2021, 1041). Hence, a key difference between the two types of coups is the position of the plotters vis-à-vis the ruling elite: while plotters staging leader reshuffling coups often are 'coalition insiders', coups that change the political system tend to be headed by 'coalition outsiders' (Kim and Sudduth 2021).

Given these marked differences in terms of aims and perpetrators, it is possible that the extent of media control does not affect all coups in the same way. Instead, I expect a tightly controlled information environment to reduce the risk and success of military regime change coups, while it should not have a comparable relevance for leader reshuffling coups. In order to elaborate on this idea, I differentiate between two types of information: publicly available information whose accuracy and wealth are determined by the level of media control and inside information that circulates independently from the level of media control within the ruling coalition.

As outlined above, obtaining information of their chances of success is crucial for soldiers pondering whether to launch a coup or not. Yet depending on the aim they seek to realise, coup plotters are in need of quite different types of information that are not all equally influenced by the level of media control. While the extent of media control exerts considerable impact on public information, it does not affect inside information to the same extent.

Officers planning a leader reshuffling coup usually are coalition insiders, who want to oust the regime leader without changing the ruling coalition (Aksoy, Carter, and Wright 2015, 429). For this purpose, conspirators have to sound out the preferences of other coalition insiders and forge alliances with them prior to staging a takeover. Information on the preferences of fellow elites, however, is inside knowledge that can hardly be obtained through publicly available information, but instead has to be gathered through direct consultation among coalition insiders. Since plotters of reshuffling coups typically hail from inside the acting ruling elite, assessing this type of information is feasible (Aksoy, Carter, and Wright 2015, 431), even if public information is severely controlled. Thus, the extent of media control should not be associated with reshuffling coups.

Regime change coups usually are led by coalition outsiders and more frequently involve lower-ranking soldiers than reshuffling coups (Chin, Carter, and Wright 2021, 1046–1047). This particular feature in terms of perpetrators has important consequences for the information coup leaders have access to and the extent to which media control affects their decision-making process. Senior officers often are integrated into the dictator's inner circle (Albrecht and Eibl, 2018, 315), consult on a regular basis (Singh 2014, 80), and thus have better access to inside knowledge, such as on the strength of the regime or the cohesion of the elite (Aksoy, Carter, and Wright 2015, 431). Their lower-ranking colleagues, by contrast, are neither part of the military leadership nor members of the ruling elite. In the absence of inside knowledge, they have to fall back on less reliable, yet at least available public information. Since the extent of media control mediates the wealth and credibility of public information, coup plotters aiming at a regime change can better compensate for their lack of inside knowledge in a regime with less restricted media. Staunchly restricted media landscapes, however, pose a particular challenging and uncertain decision-making environment for conspirators planning a regime change, rendering this type of coup less likely. The notions on the link between media control and coup types result in the following hypothesis: In autocracies, military regime

change coups are less likely in tightly curtailed information environments, while a similar effect is not expected for leader reshuffling coups (*hypothesis 3*).

Regarding coup success, leaders of leader reshuffling coups should have two organizational advantages over regime change coup plotters that renders them capable of waging a successful coup, even against a regime that censors extensively. First, in order to reach their aim, they first and foremost have to convince other members of the current coalition to approve the ouster of the leader. Therefore, these plotters are less dependent on controlling public information during a takeover as the approval of those needed for a successful coup can be won through established interpersonal contacts within the ruling elite. Especially when senior officers are among the coup plotters, they can fall back on established ways of intra-military communication to coordinate horizontally and command vertically during a coup (Singh 2014, 79–80). Due to their commanding authority, it is more likely that other officers obey their orders (Albrecht and Eibl 2018, 318).

Since regime change coups are more fundamental in their aims, their leaders require the support of broader segments of the society and elites that are not involved in the current ruling coalition. Forging alliances beyond the regime coalition thus requires coup plotters to control public information throughout their seizure in order to credibly assure non-conspiracy soldiers, coalition outsiders, and the public to acquiesce in the takeover. This is particularly challenging for plotters of regime change coups, as such takeovers regularly involve officers from the lower ranks of the military, who cannot be sure if remaining soldiers will follow their orders (e.g. Albrecht and Eibl 2018, 319). Therefore, the success of regime change depends on the coup plotters' prospects of successfully controlling public information to generate the required support. When the information environment is tightly controlled, however, the coup plotters' chances to manipulate public information are worse than in less severely controlled regimes. In these regimes, plotters are expected to have a hard time securing the broad-based support to initiate a successful regime change. These thoughts lead to the final hypothesis: In autocracies, military regime change coups are less likely to succeed in tightly curtailed information environments, while a similar effect is not expected for leader reshuffling coups (*hypothesis 4*).

4. Data and methods

I test the hypotheses using a sample that comprises all autocratic country-years from 1965 to 2010 as defined by the dataset of Geddes and co-authors (2014).[5]

4.1 Coup data

The sample of successful and failed coup cases is drawn from the novel COLPUS dataset (Chin, Carter, and Wright 2021). Since the theoretical arguments only refer to military coups and build on previous works that centre on the military as the primary coup-plotting actor (Singh 2014), I exclude non-military coups from the sample. The dichotomous dependent variable *military coup attempt* is equal to 1 if COLPUS identifies a coup in a country-year that included at least one active member of the military (Chin, Carter, and Wright 2021, 1043). The second dependent variable *military coup success* indicates whether the first military-led coup attempt in a country-year was successful (1) or failed (0). For the analysis of the disaggregated outcomes, I use the COLPUS data to identify whether there was a military coup attempt in a country year that aimed at a regime change (*military regime change coup*) and/or whether there was a military coup attempt in a country year that was limited to toppling the political leader (*military reshuffling coup*). Concerning the outcome of the disaggregated coup types, the dichotomous variable *reshuffling coup success* indicates whether the first military leader reshuffling coup in a year was successful, whereas the binary variable *regime change coup success* informs whether the first military regime change coup in a year was victorious. After coding the dependent variables, the sample covers 213 coup attempts, 110 (52 percent) of which failed and 103 (48 percent) succeeded.

4.2 Independent variable: media control

In order to grasp the extent of media control, I use the *government censorship effort* variable from the Varieties of Democracy project (VDem, Coppedge et al. 2022a), which depicts the government's efforts to control print and broadcasting media. The

[5] Geddes and co-authors (2014) only provide data for independent countries with a population of at least one million.

variable was originally coded on an ordinal scale[6] and transformed by VDem to an interval scale using a measurement model (Pemstein et al. 2022). As the variable focuses on the government's efforts to interfere in the media landscape, it is more suitable as a proxy for the regime's extent of media control than other variables on media and media freedom. To make the interpretation of the empirical results more intuitive, I recoded the variable so that higher values indicate higher levels of government interference and label it *media censorship*. The variable was lagged by one year.

4.3 Control variables

I control for a number of factors that might be linked to coup attempts and coup success and may also affect the level of the government's media restrictedness. First, *GDP per capita* (logged) is integrated to control for income effects (Fariss 2021; data are taken from Coppedge et al. 2022a). Bad economic performance is expected to increase the likelihood of coup attempts (e.g. Londregan and Poole 1990). Economic hardship, in addition, might raise non-conspiracy soldiers' and the public's willingness to tolerate a military takeover, resulting in a higher probability of success. Second, since previous research has linked hybrid regimes to an increased probability of coups (Johnson and Thyne 2018; Powell 2012) and found that 'coups attempted against the strongest autocrats will be unfruitful' (Powell 2012, 1035), I control for the level of *electoral democracy*, again with VDem data. Controlling for regime features ensures that it is really the lower degree of media censorship that heightens the probability of coup attempts and their success and not a less restrictive political regime setting per se. Third, I add a *Cold War* dummy indicating whether the coup was staged before or after the end of the Cold War (1960–1990). This also accounts for the fundamental transformation media have undergone since the start of the investigation period in 1965. Fourth, domestic civil unrest has been found to spur coup attempts (Casper and Tyson 2014; Johnson and Thyne 2018; Powell 2012). Furthermore, protests indicate public discontent with the political leadership and might present a situation in which the populace will be less opposed to a military grab

[6] The levels of the ordinal scale of the government censorship variable are: (0) direct and routine attempts, (1) indirect but nevertheless routine attempts; (2) direct attempts but limited to especially sensitive issues; (3) indirect attempts limited to especially sensitive issues, and (4) rare attempts (see in detail Coppedge et al. 2022b, 202).

of power, potentially resulting in a higher probability of coup success. The NAVCO 2.0 dataset is consulted to identify a *protest campaign* (Chenoweth and Lewis 2013).[7] Fifth, I control for the military's material well-being, since well-funded soldiers may have less reason to stage, but also to join coups (Collier and Hoeffler 2007). Data on *military expenditure per soldier* (logged) are calculated using the National Material Capabilities dataset by Correlates of War (COW) (version 6; Singer, Bremer, and Stuckey 1972). Finally, I add a binary indicator for *military regimes* (Geddes, Wright, and Frantz 2014) as military regimes have been found to be more vulnerable to coups (Powell 2012). Controls are lagged by one year.[8] The online appendix provides descriptive statistics for all controls (see Table A1).

4.4 Methods

I use Heckman models that allow for estimating the attempt and success of coups simultaneously by accounting for a selection effect between the selection and outcome stages (see, e.g., Powell 2012). The information environment is theorised to affect both stages and the success of a coup is dependent on the fact that it has been launched in the first place. A less limited information environment increases the likelihood of a military coup, as plotters have better access to information, which then also increases the chances of the coup's success, as the conspirators are expected to be better able to control information. Conversely, a more curtailed information landscape reduces the probability of a coup to take place and, if nevertheless realised, lowers its chances of success. To model this selection effect and since the dependent variables in both stages are binary, I use the Heckman probit variant (Van de Ven and Van Praag 1981). The dependent variable in the selection stage is the dichotomous military coup attempt (regime change coup attempt, reshuffling coup attempt) variable. Once a coup is attempted, the observation is selected into the outcome stage, which runs a probit model with the dependent variable military coup success (regime change coup success, reshuffling coup success). Since recent coups render regimes more vulnerable to experience consecutive coups (Londregan and Poole 1990) and in order to control for time dependency, I include a time since the last coup variable and associated polynomials as proposed by Carter and

[7] All models including the protest variable only comprise years until 2007 for reasons of data availability.

[8] Exceptions are the indicator for military regime and Cold War.

Signorino (2010) to the selection stage.[9] In order to meet the Heckman's exclusion restriction, I exclude the three time variables from the outcome stage as common in two-stage models (for coup research, see, e.g., Böhmelt and Pilster 2015; Florea 2018; Powell 2012; for other examples, see, e.g., Houle and Kayser 2019). Standard errors are clustered by country.

5. Empirical analysis

5.1 Main results

Does media control affect the likelihood of coup attempts and their chances of success? Table 1 summarises the findings of three Heckman probit models. Model 1 is a lean model that includes only the media censorship indicator in both stages and the time variables in the selection equation. Model 2 adds political and context factors that may have an effect on both coup activity and the level of media control. Model 3 additionally includes the two variables depicting military characteristics, military regime and expenditure per soldier.

Starting with the selection stage, the coefficient for media censorship is negative and statistically significant across all model specifications. As expected, and in line with hypothesis 1, the results indicate that higher levels of media control are associated with a lower likelihood of military coup attempts. Conversely, dictatorships interfering less into their media appear to be more vulnerable to subversive actions by military officers (Table 1).

Does the extent of media control also have an impact on the success of coups? Looking at the outcome equation, again, the coefficients of media censorship are consistently negative and statistically significant, indicating that more curtailed information environments decrease the likelihood that an attempted coups turns out to be successful. Taken together, harshly controlled media environments deter military officers from mounting a coup and also reduce the chance that a coup succeeds if nevertheless attempted (hypothesis 2).

[9] For models on regime change coups and reshuffling coups, I integrate variables measuring the time since the last regime change/reshuffling coup and associated time polynomials.

Table 1: Heckman models for military coup attempts and military coup outcomes

	Model 1		Model 2		Model 3	
	Attempt	Success	Attempt	Success	Attempt	Success
Media censorship	-0.079**	-0.136**	-0.185***	-0.243***	-0.169***	-0.202***
	(0.035)	(0.062)	(0.052)	(0.074)	(0.052)	(0.067)
Democracy level			-0.894*	-0.663	-0.610	-0.136
			(0.473)	(0.960)	(0.483)	(0.866)
GDP per capita			-0.171***	-0.112	-0.161**	-0.112
			(0.062)	(0.131)	(0.070)	(0.116)
Cold War			0.311***	0.574***	0.263**	0.516***
			(0.095)	(0.204)	(0.103)	(0.192)
Protest			0.237***	0.168	0.180**	0.121
			(0.076)	(0.146)	(0.085)	(0.135)
Military regime					0.287***	0.374***
					(0.097)	(0.145)
Expenditure per soldier					-0.044	-0.118
					(0.029)	(0.076)
Years since last coup	-0.112***		-0.092***		-0.087***	
	(0.020)		(0.021)		(0.023)	
Constant	-0.922***	-1.109***	-0.797***	-1.467***	-0.563*	-0.857
	(0.080)	(0.281)	(0.175)	(0.381)	(0.294)	(0.634)
Observations	3621	211	3447	209	3285	203
Rho	0.648		0.778		0.877	
Log pseudolikelihood	-882.279		-848.133		-810.042	

Notes: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last coup cubed and squared included in the selection stage (coup attempt) but not reported.

Taking a brief look at the control variables, the results overall correspond well to pertinent research. Coups are more likely to be staged and successful during the Cold War. Military regimes are more prone to coup attempts than civilian non-democracies and are also more successful in surviving these challenges (Powell 2012). The finding on the coup-inducing effect of protests also fits into the current debate on the relationship between political instability and coups (Casper and Tyson 2014; Johnson and Thyne 2018). Finally, economic development decreases coup attempts

Does media control affect regime change and leader reshuffling differently? Tables 2 and 3 present the findings on the disaggregated coup types, proceeding in the same way as the aggregated analysis. Results in Table 2 provide strong support for the expectation that higher levels of media control decrease the likelihood of regime change coup attempts. Across the three model specifications, I find this type of coup to be less likely in a more thoroughly controlled information environment (hypothesis 3). Turning to the outcome stage, rising levels of media control are linked to a lower probability of successful regime change coups (hypothesis 4).

Turning to reshuffling coups, results contradict the expectations in one model. While media censorship does not exert a statistically significant effect in the lean and in the most comprehensive model, it reaches conventional levels of significance in model 8 that controls for the regime setting (hypothesis 3). Regarding the outcome of coups, the level of media censorship is not consistently associated with successful leader reshuffling coups as expected in hypothesis 4.

Hence, results on regime change and reshuffling coups point to an interesting finding: The effect of the information environment on coups appears to vary depending on the type of coup, especially with regard to their chances of success. While more media control decreases the probability of success of regime change coups, this tends to be not the case for the success of reshuffling coups. This finding strengthens the assumptions that conspirators planning a reshuffling coup can disseminate and control information through established intra-regime channels of information, while plotters of regime change coups often lack these resources and have to control public information throughout the coup.

Table 2: Heckman models for military regime change coup attempts and military regime change coup outcomes

	Model 4		Model 5		Model 6	
	Attempt	Success	Attempt	Success	Attempt	Success
Media censorship	-0.149***	-0.355***	-0.246***	-0.430***	-0.236***	-0.392***
	(0.043)	(0.081)	(0.058)	(0.097)	(0.058)	(0.101)
Democracy level			-0.808	-0.330	-0.675	0.288
			(0.533)	(1.155)	(0.565)	(1.383)
GDP per capita			-0.244**	-0.319**	-0.192*	-0.208
			(0.095)	(0.138)	(0.100)	(0.163)
Cold War			0.288**	0.680**	0.269**	0.651**
			(0.117)	(0.276)	(0.129)	(0.299)
Protest			0.122	0.153	0.145	0.181
			(0.107)	(0.143)	(0.112)	(0.158)
Military regime					-0.144	-0.017
					(0.119)	(0.225)
Expenditure per soldier					-0.069**	-0.214**
					(0.032)	(0.096)
Years since coup type	-0.110***		-0.095***		-0.108***	
	(0.025)		(0.025)		(0.027)	
Constant	-1.148***	-1.633***	-0.907***	-1.755***	-0.364	-0.330
	(0.105)	(0.192)	(0.204)	(0.394)	(0.314)	(0.787)
Observations	3621	129	3447	127	3285	124
Rho	0.893		0.939			
Log pseudolikelihood	-594.461		-594.461		-541.703	

Notes: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last regime change coup cubed and squared included in the selection stage but not reported.

Table 3: Heckman models for military leader reshuffling coup attempts and military leader reshuffling coup outcomes

	Model 7		Model 8		Model 9	
	Attempt	Success	Attempt	Success	Attempt	Success
Media censorship	0.004	0.155	-0.123*	-0.064	-0.080	-0.003
	(0.051)	(0.104)	(0.072)	(0.115)	(0.063)	(0.110)
Democracy level			-1.387**	-3.356**	-0.647	-2.808
			(0.651)	(1.523)	(0.593)	(1.853)
GDP per capita			-0.087	0.192	-0.115	0.059
			(0.066)	(0.193)	(0.078)	(0.232)
Cold War			0.259*	0.009	0.239*	-0.050
			(0.135)	(0.363)	(0.138)	(0.412)
Protest			0.372***	0.192	0.166	0.045
			(0.096)	(0.261)	(0.108)	(0.219)
Military regime					0.801***	0.459
					(0.111)	(0.421)
Expenditure per soldier					0.009	0.090
					(0.043)	(0.097)
Years since coup type	-0.081***		-0.066***		-0.036	
	(0.023)		(0.023)		(0.026)	
Constant		-1.719***	-1.320***	-1.495**	-1.865***	-2.310**
		(0.456)	(0.254)	(0.673)	(0.377)	(0.968)
Observations	3621	90	3447	90	3285	86
Rho	0.711		0.842		0.887	
Log pseudolikelihood	-466.124		-446.628		-400.807	

Notes: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last leader reshuffling coup cubed and squared included in the selection stage but not reported.

The control variables also yield interesting results. Military regimes are only related to leader reshuffling coups, which mirrors Chin and authors' finding that 'leader reshuffling coups are most common in military regimes' (Chin, Carter, and Wright 2021, 1045). Furthermore, the two material variables – GDP per capita and military expenditure per soldier – are only statistically significant in the regime change coup models. Soldiers that are more well-off under a regime appear to be less willing to initiate a regime change coup.

5.2 Robustness checks and discussion

In order to assess the sensitivity of these findings, a number of robustness checks are conducted. First, I substitute the electoral democracy measure in the two most comprehensive models for each coup type with VDem's Civil Liberties index in order to test whether the effect of media control on coups remains robust when controlling for the overall extent of civil freedoms in a regime (Tables A2 & A3). Second, I control for two measures that have been discussed as coup-proofing strategies in pertinent literature (Tables A4 & A5): I integrate military size in the most comprehensive model for each type of coup since soldiers in larger militaries have to overcome larger coordination obstacles when staging a coup (Powell 2012). Additionally, I add a control for the number of counterbalancing forces to the coup-proofing model on military coups (aggregate). Using the same counterbalancing measure, I also run logistic regression on the disaggregated coup attempts (Table A5). Third, I test whether the effect of media control stays the same when repeating models 2 and 3 from the main analysis for the last military coup attempt in a year (Table A6). Findings remain robust in all of these tests.

Finally, I replicate the two most comprehensive Heckman probit models for each type of coup with two alternative media indicators from the VDem project (Coppedge et al. 2022a; see Tables A7-A9). First, I use media bias, which measures the 'media bias against opposition parties or candidates' (Coppedge et al. 2022b, 205). I choose this variable as it measures in how far the regime, in a situation of acute crisis, might profit from an information environment that is biased to its advantage. Thereafter, I replicate several models using VDem's print/broadcast media critical variable, which depicts the extent to which the media 'routinely criticize the government' (Coppedge et al. 2022b, 203).

This last round of robustness checks yields several interesting results: First, regardless of the media variable used, the results remain robust for military coup attempts (Table A7). Hence, military coups are less likely to be staged in information environments that are tightly censored, severely biased, and unbalanced to the favour of the regime. Contrary to the expectations, however, these robustness checks imply that stronger media control may also decrease the probability of reshuffling coups. In all models using an alternative media variable (Table A9), the information environment is consistently related to this type of coup. Hence, media environments structured to the advantage of the regime reduce the risk of coups regardless of its type.

The key finding, however, is that the effect of the information environment is particularly important for the success of different types of coups: While none of the media variables in the main models and the robustness tests are significant for leader reshuffling found to decrease the success of regime change coups (models A19 & A20 in Table A8). While media bias loses statistical significance for the outcome of military coups (models A15 & A16 in Table A7), the findings remain robust for regime change coups. This hints that the effect of the information environment on coups is primarily driven by coups striving for regime change. Only in the robustness check using the media critical variable (models A21 & A22 in Table A8), the information environment fails to reach conventional levels of statistical significance in the regime change coup models, what, however, might be related to the fact that this indicator, measuring how often the media criticise the government, might not as properly capture the extent of control as the level of censorship and the extent of media bias.

6. Conclusion

The purpose of this article was to shed light on the relationship between media and military coups in autocracies. It investigated whether varying levels of media control have an impact on military coup attempts and the success thereof. Both the theoretical arguments and empirical analysis have shown that coup attempts are less likely to occur in a more curtailed information landscape and are less likely to be successful if nevertheless realised. Disaggregating military coups into regime change and leader reshuffling coups, I find that the effect of media control on the success of military coups is largely driven by regime change coups. Such coups are significantly more likely to succeed in a less severely controlled information environment.

The article's contributions to the recent literature on autocracies and military coups are threefold: First, the findings expand on the debate on the role of media under autocratic rule by emphasising the coup perspective. While less media restriction might legitimize authoritarian rule, can provide information on citizens' preferences, and inform about the effectiveness of the administration (Egorov, Guriev, and Sonin 2009; Lorentzen 2014), less media control can also increase autocrats' risk of being toppled in a military coup. Second, the study speaks to the quantitative literature on coups by underlining a thus far barely studied perspective. Third, the study speaks to a promising strand of novel coup literature that investigates the causes and consequences of different types of coups. Demonstrating that media control has a varying effect on the outcome of different types of coups, my findings underline that disaggregating coups would help to better retrace the hidden causal mechanisms of different types of coups.

Future research might take up this study's findings and analyse coups and the media in the digital era. Globally, media have become more liberal and diverse since the end of the Cold War and non-democratic rulers appear to have adopted to these new developments (Keremoğlu and Weidmann 2020), as we do not witness more frequent and more successful coups in the past two decades. Furthermore, the rise of new forms of communication, the spread of the internet, and the emergence of social media have radically changed the media landscape. The 2016 coup in Turkey, for instance, has demonstrated the profound impact of social media and instant messaging on coup-making in the digital age. When a faction inside the armed forces attempted to topple the government, CNN Turk broadcasted a live Facetime call by President Recep Tayyip Erdogan, in which he urged 'the Turkish people to convene at public squares and airports' (Kingsley 2016). The conspirators ultimately 'lost the media battle' (Esen and Gumuscu 2017, 63) when thousands followed Erdogan's call and took to the streets to oppose the coup. Future research on media and coups could therefore explore whether and how the internet and social media have changed the coup plotters' and regimes' strategies and tactics during a coup.

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8. Appendix

8.1 Descriptive statistics and additional regression results

Table A1: Descriptive statistics

Variable	*Obs.*	*Mean*	*SD*	*Min.*	*Max.*
Coup variables (DV)					
Military coup attempt	3,644	0.058	0.235	0	1
Military coup success	213	0.484	0.501	0	1
Mil. regime change coup attempt	3,644	0.036	0.186	0	1
Mil. regime change coup success	131	0.458	0.500	0	1
Mil. reshuffling coup attempt	3,644	0.025	0.155	0	1
Mil. reshuffling coup success	90	0.533	0.502	0	1
Media variable (IV)					
Media censorship	3,621	1.141	1.059	-2.176	3.094
Controls					
Electoral Democracy Index	3,621	0.199	0.126	0.007	0.727
GDP per capita (log)	3,621	1.566	0.798	0.357	5.060
Cold War	3.644	0.662	0.473	0	1
Expenditures/soldier	3,441	8.470	1.366	0	14.698
Military regime	3,644	0.135	0.342	0	1
Protest campaign	3,447	0.212	0.409	0	1
Time since last military coup	3,644	14.936	12.971	0	60
Time since last regime change coup	3,644	16.967	13.517	0	60
Times since last reshuffling coup	3,644	20.106	13.759	0	60
Robustness checks					
Media bias	3,621	1.126	1.331	-2.644	3.354
Media critical	3,621	0.988	1.274	-2.266	3.263
Military size (log)	3,594	3.807	1.660	0	8.466
No. counterbalancing forces (log)	2,540	0.797	0.516	0	2.30

Table A2: Heckman models of military coup attempts and military coup outcomes with civil liberties index

	Model A1		Model A2	
	Military Coup		Military Coup	
	Attempt	Success	Attempt	Success
Media censorship	-0.177***	-0.199**	-0.167***	-0.178**
	(0.059)	(0.086)	(0.057)	(0.077)
Civil liberties	-0.365	0.076	-0.276	0.149
	(0.332)	(0.646)	(0.323)	(0.572)
GDP per capita	-0.159**	-0.118	-0.156**	-0.117
	(0.063)	(0.134)	(0.071)	(0.116)
Cold War	0.345***	0.623***	0.285***	0.534***
	(0.097)	(0.196)	(0.102)	(0.181)
Protest	0.221***	0.171	0.163*	0.131
	(0.080)	(0.151)	(0.091)	(0.138)
Military regime			0.299***	0.369**
			(0.098)	(0.150)
Expenditure per soldier			-0.042	-0.121
			(0.030)	(0.075)
Years since last coup	-0.096***		-0.089***	
	(0.021)		(0.023)	
Constant	-0.870***	-1.672***	-0.614**	-0.944
	(0.204)	(0.428)	(0.299)	(0.616)
Observations	3447	209	3285	203
Rho	0.767		0.880	
Log pseudolikelihood	-849.364		-810.342	

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last coup cubed and squared included in the selection stage (coup attempt) but not reported; the Civil Liberties Index is taken from Coppedge et al. (2022a) and ranges from 0 to 1.

Table A3: Heckman models of disaggregated military coup attempts and military coup outcomes with civil liberties index

	Model A3		Model A4		Model A5		Model A6	
	Regime change coup		Regime change coup		Reshuffling coup		Reshuffling coup	
	Attempt	Success	Attempt	Success	Attempt	Success	Attempt	Success
Media censorship	-0.277***	-0.406***	-0.261***	-0.332***	-0.052	-0.013	-0.038	0.032
	(0.068)	(0.115)	(0.067)	(0.110)	(0.082)	(0.125)	(0.067)	(0.115)
Civil liberties	-0.630*	0.114	-0.526	0.684	-0.058	-0.873	0.060	-0.835
	(0.364)	(0.782)	(0.374)	(0.816)	(0.447)	(0.865)	(0.406)	(0.894)
GDP per capita	-0.222**	-0.315**	-0.177*	-0.215	-0.090	0.219	-0.130	0.025
	(0.099)	(0.148)	(0.104)	(0.165)	(0.069)	(0.194)	(0.080)	(0.188)
Cold War	0.304***	0.727***	0.284**	0.690***	0.324**	0.177	0.278**	0.083
	(0.113)	(0.235)	(0.121)	(0.242)	(0.140)	(0.333)	(0.140)	(0.313)
Protest	0.094	0.163	0.119	0.215	0.372***	0.125	0.164	-0.073
	(0.114)	(0.149)	(0.118)	(0.162)	(0.099)	(0.279)	(0.116)	(0.257)
Military regime			-0.132	-0.067			0.816***	0.561*
			(0.121)	(0.203)			(0.110)	(0.310)
Expenditure per soldier			-0.066**	-0.221**			0.010	0.128
			(0.033)	(0.090)			(0.045)	(0.104)
Years since coup type	-0.100***		-0.110***	-0.556	-0.066***		-0.038*	
	(0.025)		(0.028)	(0.732)	(0.022)		(0.023)	
Constant	-0.828***	-1.916***	-0.325	-0.556	-1.668***	-1.938***	-2.068***	-2.887***
	(0.215)	(0.416)	(0.292)	(0.732)	(0.282)	(0.718)	(0.420)	(0.846)
Observations	3447	127	3285	124	3447	90	3285	86
Rho	0.933		0.959		0.821		0.868	
Log pseudolikelihood	-564.580		-539.922		-450.498		-402.169	

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last regime change coup/last leader reshuffling coup cubed and squared included in the selection stage (coup attempt) but not reported; the Civil Liberties Index is taken from Coppedge et al. (2022a) and ranges from 0 to 1.

Table A4: Coup-proofing measures (Heckman models)

	Model A7		Model A8		Model A9		Model A10	
	Military coup		Regime change coup		Reshuffling coup		Military coup	
	Attempt	Success	Attempt	Success	Attempt	Success	Attempt	Success
Media censorship	-0.161***	-0.190***	-0.227***	-0.347***	-0.068	0.003	-0.153**	-0.190***
	(0.052)	(0.060)	(0.059)	(0.096)	(0.063)	(0.100)	(0.067)	(0.072)
Expenditure per soldier	-0.049*	-0.132*d	-0.072**	-0.236***	-0.001	0.074	-0.110***	-0.183**
	(0.029)	(0.068)	(0.032)	(0.091)	(0.041)	(0.093)	(0.042)	(0.079)
Military size	-0.042*	-0.110***	-0.043	-0.150**	-0.058*	-0.071	-0.069**	-0.112**
	(0.024)	(0.041)	(0.027)	(0.061)	(0.034)	(0.061)	(0.027)	(0.051)
Counterbalancing							0.155*	-0.062
							(0.089)	(0.232)
Democracy level	-0.633	-0.157	-0.696	0.503	-0.634	-2.712	-0.515	0.351
	(0.486)	(0.835)	(0.567)	(1.324)	(0.582)	(1.744)	(0.633)	(1.025)
GDP per capita	-0.132*	-0.011	-0.161	-0.054	-0.072	0.114	0.037	0.113
	(0.074)	(0.121)	(0.099)	(0.173)	(0.079)	(0.243)	(0.090)	(0.106)
Cold War	0.246**	0.498***	0.251*	0.659**	0.229	-0.048	0.293**	0.459**
	(0.105)	(0.168)	(0.131)	(0.265)	(0.142)	(0.381)	(0.129)	(0.198)
Protest	0.225**	0.247**	0.192*	0.320*	0.223*	0.125	0.305***	0.349**
	(0.089)	(0.122)	(0.112)	(0.166)	(0.117)	(0.210)	(0.106)	(0.149)
Military regime	0.313***	0.395***	-0.124	-0.039	0.823***	0.486	0.277***	0.371**
	(0.099)	(0.137)	(0.123)	(0.206)	(0.110)	(0.384)	(0.105)	(0.181)
Years since coup type	-0.083***		-0.108***		-0.035		-0.086***	
	(0.027)		(0.026)		(0.028)		(0.032)	
Constant	-0.443	-0.617	-0.242	0.002	-1.684***	-2.087**	-0.205	-0.393
	(0.299)	(0.558)	(0.321)	(0.721)	(0.374)	(0.907)	(0.360)	(0.681)
Observations	3285	203	3285	124	3285	86	2330	155
Rho	0.933		0.9589		0.903		0.948	
Log pseudolikelihood	-806.912		-538.160		-399.366		-590.535	

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last type of coup cubed and squared included in the selection stage but not reported; data on military sized (logged) come from the National Material Capabilities dataset by Correlates of War (COW) (version 6; Singer & Stuckey, 1972); the Security Forces Dataset (De Bruin 2021) provides data on number of counterbalancing forces (logged).

Table A5: Coup-proofing measures (logistic regressions)

	Model A11	Model A12
	Regime change coup	Reshuffling coup
Media censorship	-0.462***	-0.207
	(0.168)	(0.182)
Expenditure per soldier	-0.274***	-0.033
	(0.098)	(0.155)
Military size	-0.168**	-0.168*
	(0.072)	(0.091)
Counterbalancing	0.582***	-0.038
	(0.219)	(0.299)
Democracy level	-1.342	-2.097
	(1.664)	(1.589)
GDP per capita	-0.056	0.194
	(0.318)	(0.223)
Cold War	0.717*	0.485
	(0.387)	(0.435)
Protest	0.461	0.722**
	(0.304)	(0.298)
Military regime	-0.236	1.746***
	(0.297)	(0.286)
Years since coup type	-0.270***	-0.065
	(0.069)	(0.057)
Constant	0.402	-2.987**
	(0.941)	(1.263)
Observations	2330	2330
Pseudo R^2	0.12	0.15

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last regime change coup/leader reshuffling coup cubed and squared but not reported; data on military sized (logged) come from the National Material Capabilities dataset by Correlates of War (COW) (version 6; Singer & Stuckey, 1972); the Security Forces Dataset (De Bruin 2021) provides data on number of counterbalancing forces (logged).

Table A6: Heckman models of military coup attempts and military coup outcomes for the last military coup in a year

	Model A13		Model A14	
	Military coup		Military coup	
	Attempt	Success	Attempt	Success
Media censorship	-0.186***	-0.270***	-0.169***	-0.221***
	(0.052)	(0.088)	(0.052)	(0.076)
Democracy level	-0.907*	-0.836	-0.621	-0.224
	(0.474)	(1.093)	(0.483)	(1.037)
GDP per capita	-0.173***	-0.011	-0.162**	-0.039
	(0.063)	(0.179)	(0.070)	(0.140)
Cold War	0.313***	0.645***	0.266***	0.556**
	(0.094)	(0.250)	(0.103)	(0.222)
Protest	0.236***	0.156	0.179**	0.114
	(0.076)	(0.160)	(0.084)	(0.135)
Military regime			0.289***	0.534***
			(0.097)	(0.163)
Expenditure per soldier			-0.045	-0.153*
			(0.029)	(0.081)
Years since last coup	-0.093***		-0.088***	
	(0.020)		(0.021)	
Constant	-0.789***	-1.242**	-0.555*	-0.552*
	(0.174)	(0.517)	(0.292)	(0.293)
Observations	3447	209	3285	203
Rho	0.621		0.814	
Log pseudolikelihood	-848.967		-808.126	

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last coup cubed and squared included in the selection stage (coup attempt) but not reported.

Alternative indicators for media control

In the tables A7-A9, I replicate the Heckman models from the main paper using two different media variables from the Varieties of Democracy dataset (Coppedge et al. 2022a). First, I used the media bias indicator, which measures the "media bias against opposition parties or candidates" (Coppedge et al. 2022b, 205). Thereafter, I replicate several models using VDem's print/broadcast media critical variable, which depicts the extent to which the media "routinely criticize the government" (Coppedge et al. 2022b, 203). Higher values of the original variables reflect less bias in the media and a media landscape that more frequently criticizes the government. Like the censorship variable, both variables were collected on an ordinal scale and transformed to an interval scale using a measurement model (Pemstein et al. 2022). Again, in order to make the results more intuitive, the variables were recoded so that higher values reflect a more biased media and a less critical environment for the government.

Table A7: Heckman models of military coup attempts and military coup outcomes with alternative media variables

	Model A15		Model A16		Model A17		Model A18	
	Military coup		Military coup		Military coup		Military coup	
	Attempt	Success	Attempt	Success	Attempt	Success	Attempt	Success
Media bias	-0.163***	-0.123	-0.135***	-0.083				
	(0.036)	(0.082)	(0.038)	(0.078)				
Media critical					-0.189***	-0.065	-0.170***	-0.010
					(0.036)	(0.102)	(0.038)	(0.101)
Democracy level	-0.892**	0.056	-0.538	0.567	-1.017**	0.481	-0.764	1.086
	(0.428)	(1.022)	(0.454)	(0.967)	(0.439)	(1.226)	(0.481)	(1.217)
GDP per capita	-0.201***	-0.157	-0.186**	-0.156	-0.215***	-0.161	-0.196***	-0.155
	(0.066)	(0.139)	(0.074)	(0.128)	(0.066)	(0.149)	(0.073)	(0.137)
Cold War	0.352***	0.599***	0.297***	0.537***	0.345***	0.587***	0.288***	0.526**
	(0.095)	(0.215)	(0.103)	(0.206)	(0.097)	(0.225)	(0.102)	(0.215)
Protest	0.201***	0.097	0.156*	0.065	0.171**	0.075	0.131	0.057
	(0.077)	(0.150)	(0.084)	(0.144)	(0.076)	(0.152)	(0.083)	(0.146)
Military regime			0.245**	0.370**			0.228**	0.410***
			(0.098)	(0.157)			(0.095)	(0.157)
Expenditure per soldier			-0.047	-0.124			-0.049	-0.129
			(0.030)	(0.081)			(0.031)	(0.085)
Years since last coup	-0.089***		-0.087***		-0.086***		-0.085***	
	(0.021)		(0.023)		(0.021)		(0.022)	
Constant	-0.821***	-1.616***	-0.567*	-0.952	-0.780***	-1.660***	-0.484	-1.022
	(0.163)	(0.385)	(0.301)	(0.675)	(0.163)	(0.420)	(0.305)	(0.720)
Observations	3447	209	3285	203	3447	209	3285	203
Rho	0.755		0.851		0.715		0.824	
Log pseudolikelihood	-848.371		-811.369		-845.082		-806.988	

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last coup cubed and squared included in the selection stage (coup attempt) but not reported; alternative media variables are taken from Coppedge et al. (2022).

Table A8: Heckman models of regime change coup attempts and regime change coup outcomes with alternative media variables

	Model A19		Model A20		Model A21		Model A22	
	Regime change coup		Regime change coup		Regime change coup		Regime change coup	
	Attempt	Success	Attempt	Success	Attempt	Success	Attempt	Success
Media bias	-0.135***	-0.229***	-0.134***	-0.223***				
	(0.045)	(0.078)	(0.043)	(0.081)				
Media critical					-0.150***	-0.129	-0.158***	-0.053
					(0.044)	(0.101)	(0.045)	(0.095)
Democracy level	-0.276	1.324	-0.177	1.804	-0.344	2.043	-0.330	2.688
	(0.492)	(1.165)	(0.522)	(1.370)	(0.525)	(1.494)	(0.573)	(1.770)
GDP per capita	-0.289***	-0.367**	-0.227**	-0.230	-0.303***	-0.421**	-0.242**	-0.264
	(0.103)	(0.167)	(0.108)	(0.190)	(0.104)	(0.165)	(0.109)	(0.201)
Cold War	0.307**	0.824***	0.296**	0.827**	0.298**	0.808**	0.285**	0.717**
	(0.124)	(0.298)	(0.136)	(0.328)	(0.124)	(0.321)	(0.136)	(0.332)
Protest	0.082	0.087	0.113	0.122	0.052	0.039	0.080	0.087
	(0.108)	(0.158)	(0.112)	(0.175)	(0.105)	(0.159)	(0.110)	(0.176)
Military regime			-0.165	-0.053			-0.177	0.134
			(0.116)	(0.215)			(0.122)	(0.251)
Expenditure per soldier			-0.073**	-0.249**			-0.074**	-0.268**
			(0.034)	(0.109)			(0.034)	(0.113)
Years since coup type	-0.099***		-0.111***		-0.100***		-0.114***	
	(0.027)		(0.028)		(0.027)		(0.029)	
Constant	-1.040***	-2.201***	-0.462	-0.521	-1.001***	-2.285***	-0.388	-0.560
	(0.197)	(0.415)	(0.322)	(0.827)	(0.201)	(0.476)	(0.325)	(0.901)
Observations	3447	127	3285	124	3447	127	3285	124
Rho	0.893		0.911		0.857		0.898	
Log pseudolikelihood	-572.945		-547.531		-573.786		-547.308	

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last regime change coup cubed and squared included in the selection stage (coup attempt) but not reported; alternative media variables are taken from Coppedge et al. (2022).

Table A9: Heckman models of leader reshuffling coup attempts and leader reshuffling coup outcomes with alternative media variables

	Model A23		Model A24		Model A25		Model A26	
	Leader reshuffling coup		Leader reshuffling coup		Leader reshuffling coup		Leader reshuffling coup	
	Attempt	Success	Attempt	Success	Attempt	Success	Attempt	Success
Media bias	-0.225***	-0.046	-0.155***	0.034				
	(0.049)	(0.149)	(0.050)	(0.167)				
Media critical					-0.244***	-0.137	-0.185***	-0.074
					(0.046)	(0.113)	(0.051)	(0.153)
Democracy level	-2.273***	-2.971*	-1.323**	-2.174	-2.360***	-3.774***	-1.515**	-3.010*
	(0.616)	(1.628)	(0.619)	(1.807)	(0.639)	(1.398)	(0.648)	(1.819)
GDP per capita	-0.100	0.162	-0.124	0.022	-0.113	0.163	-0.128	0.032
	(0.073)	(0.188)	(0.080)	(0.229)	(0.072)	(0.202)	(0.084)	(0.298)
Cold War	0.311**	0.063	0.278**	-0.002	0.297**	0.067	0.262*	0.032
	(0.138)	(0.356)	(0.137)	(0.457)	(0.140)	(0.347)	(0.137)	(0.489)
Protest	0.342***	0.166	0.170	0.031	0.316***	0.172	0.156	0.086
	(0.099)	(0.250)	(0.108)	(0.236)	(0.100)	(0.225)	(0.109)	(0.206)
Military regime			0.729***	0.470			0.713***	0.470
			(0.111)	(0.402)			(0.114)	(0.410)
Expenditure per soldier			0.009	0.088			0.004	0.070
			(0.043)	(0.103)			(0.043)	(0.103)
Years since last coup	-0.056**		-0.029		-0.054**		-0.025	
	(0.022)		(0.031)		(0.021)		(0.041)	
Constant	-1.130***	-1.587***	-1.710***	-2.415**	-1.110***	-1.428**	-1.638***	-2.192***
	(0.233)	(0.615)	(0.401)	(0.940)	(0.234)	(0.592)	(0.405)	(0.763)
Observations	3447	90	3285	86	3447	90	3285	86
Rho	0.859		0.891		0.869		0.932	
Log pseudolikelihood	-437.350		-396.217		-435.675		-395.065	

Note: * = p < 0.1; ** = p < 0.05; *** = p < 0.01; standard errors in parentheses are clustered by country; time since last reshuffling coup cubed and squared included in the selection stage (coup attempt) but not reported; alternative media variables are taken from Coppedge et al. (2022).

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V. Paper 4

Soldiers and protest: a set-theory perspective on military repression of anti-regime mass mobilization in autocracies

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Abstract

This article studies the military's decision to repress major, regime-threatening mass protests in autocracies or refuse violence from a set-theoretic perspective. So far, knowledge on such diametrical military reactions has been mainly derived from temporally and geographically restricted small-N analyses. This article expands on existing research by studying the combined relevance of five factors in a Qualitative Comparative Analysis. This configurational method identifies which factors or combinations thereof induce an outcome and assumes that the same phenomenon can be reached through different causal pathways. Using a sample of 24 nonviolent anti-regime uprisings in autocracies between 1986 and 2011, the analysis uncovers that no factor is individually sufficient for military repression. Instead, military repression arises from an interplay of factors and different combinations lead to repression: Militaries repress when (1) they are materially spoiled and internally cohesive, or (2) enjoy financial benefits, are recruited along sectarian lines, and there is conscription. They refuse repression if (1) they are incohesive and not recruited along social cleavages, or (2) are not materially spoiled. Finally, the analysis shows that different ensembles of determinants are at work in different socio-political environments. The article's findings could inspire ideas for future research in the broader field of civil-military relations. Acknowledging the complexity of military behavior could deliver precious insights into the determinants of armed forces' conduct in other highly relevant areas, such as coups or armed conflicts.

Key words

Autocracy; civil-military relations; mass protest; military repression

1. Introduction

When major nonviolent anti-regime mass protests flare up in nondemocratic regimes[1] that cannot be contained by police and security forces, autocrats turn to their militaries in a last-ditch effort to secure their political survival. In these regime-threatening crises, some militaries crush the demonstrations, while others defect and provoke the downfall of the regime. In October 2000, for instance, reams of citizens took to the streets to protest against Yugoslav President Slobodan Milošević. The armed forces, however, did not intervene on the president's behalf and Milošević stepped down. Similarly, the Tunisian military did not secure long-term President Ben Ali when a wave of protests swept across Arab autocracies in early 2011. In other instances of popular upheaval, however, soldiers took up their arms. Militaries in Syria and Bahrain, for instance, cracked down on Arab Spring demonstrations. And in 2009 Iran and 1992 Thailand, too, regimes unleashed their militaries to quell unrest.

These diametrical military reactions have prompted a plethora of studies exploring why some militaries shoot protesters, while others do not. Among the factors discussed are the military's level of institutionalization/professionalism (e.g. Bellin 2012; Lutterbeck 2013), its material and political privileges (e.g. Bou Nassif 2015, 2021; Nepstad 2013), the forces' religious, ethnic, or tribal composition (e.g. McLauchlin 2010), the relationship between soldiers and society, as well as characteristics of the protest movement (e.g. Bellin 2012; Lutterbeck 2013). Scholars have also studied the effect of cohesion (e.g. Kim 2013; Lee 2009) and counterbalancing (e.g. Bou Nassif 2021; Lutscher 2016), and the military's professional identity and roles (e.g. Pion-Berlin, Esparza, and Grisham 2014; Pion-Berlin and Trinkunas 2010).

While this research has greatly improved our understanding of the various factors that influence armed forces' reactions to regime-threatening protests, most studies, however, are qualitative small-N studies, often focusing on just one particular region or wave of protests or even a single case.[2] Hence, we know which factors are

[1] The terms autocracy, nondemocracy, and dictatorship are used interchangeably. The same holds for autocrat, dictator, and nondemocratic leader.

[2] Several qualitative studies have investigated military behavior during the Arab Spring (e.g. Albrecht and Ohl 2016; Bellin 2012; Bou Nassif 2021), others focused on East and Southeast Asia (e.g. Kim 2013; Lee 2009, 2015), and some have concentrated on Latin America (e.g. Pion-Berlin and Trinkunas 2010).

relevant in particular cases, but lack systematic knowledge on the determinants of military behavior in more comprehensive samples. Quantitative studies for a broader universe of cases, on the other hand, are rare and often concern just one central independent variable (e.g. Koehler 2017; Lutscher 2016). And finally, there are qualitative studies investigating various factors in an interregional sample with a medium number of cases (ten or more) (e.g. Barany 2016; Pion-Berlin, Esparza, and Grisham 2014).[3] What can be seen in such more comprehensive qualitative studies is that multiple factors are important for military behavior, with two or more being regularly present when a certain outcome occurs. Yet, while the literature is rich in identifying such factors, we know less about their interplay. Moreover, findings imply that the same outcome may be observed under quite different conditions. Literature tells us, for instance, that sectarian bonds between soldiers and the regime were one important determinant of repression in Syria or Bahrain (e.g. Nepstad 2013), yet the Chinese military had never been recruited along such socially salient lines and nevertheless shot protesters on Tiananmen Square in 1989. And while conscription is said to have had a restraining effect on the Tunisian military (Lutterbeck 2013), Thai soldiers cracked down on protests despite conscription in 1992. Hence, research on this topic could be further advanced by analyzing the interplay of several explanatory factors in a comprehensive cross-case analysis and by systematizing which factors are decisive in some cases, but not in others.

In order to explore such complex conditions under which armed forces repress major nonviolent anti-regime protests in autocracies (or not), the article approaches the determinants of military loyalty from a novel methodological angle. I apply a Qualitative Comparative Analysis (QCA), which is a set-theoretic method that enables researchers to depict the conditions or combinations thereof that are linked to an outcome, and assumes that the same phenomenon can be reached through different causal pathways (Ragin 2000, 2008; Schneider and Wagemann 2012). It allows for integrating the detailed case knowledge and the various relevant factors from previous studies, while at the same time it is able to unearth the different configurations of these factors leading to military repression in a more comprehensive comparative analysis. While QCA has found its way into several related fields of research, such as conflict research (e.g. Lindemann and Wimmer 2018) or

[3] Barany (2016), e.g., analyzes 22 individual factors grouped into four categories for a medium number of cases and concludes his investigation by evaluating the explanatory power of the factors analyzed.

authoritarian survival (e.g. Maerz 2020), it neither is an established method in studying civil–military relations in general nor militaries' responses to protests in particular.

Based on pertinent literature, I include five factors into the analysis: (1) the preferential recruitment of key military personnel along societal cleavages, (2) the military's unity, (3) its material benefits, (4) its previous role in domestic repression, and (5) conscription. A crisp-set QCA is run on an interregional sample of 24 instances of largely nonviolent mass mobilization in autocracies from 1986 until 2011. The article finds that military repression is produced by multiple (alternative) combinations of relevant factors. More specifically, I find that militaries repress when they are (1) materially coopted and cohesive, or (2) when they receive material benefits, key positions are recruited along societal divides, and there is conscription. Only regarding the absence of the outcome, I find an individually sufficient condition: Militaries refuse repression if (1) they are not materially coopted, or (2) are not recruited along social cleavages and are incohesive. I also uncover interesting cross-case patterns: Cases from similar regional backgrounds cluster around certain pathways, showing that in different socio-political contexts varying conditions are decisive. Another key finding is the central role of material privileges, underlining that the military's decision is heavily influenced by the soldiers' vested interests.

The article is structured as follows: The next section identifies the conditions included into the empirical analysis. Section three introduces the research design. Section four comprises the empirical analysis and a detailed discussion of the results. The final section summarizes the article's contribution and outlines avenues for future research.

2. Conditions of military repression

The paper's contribution to the debate on military and protest is to approach the puzzle of military behavior through a novel methodological lens. In line with the QCA's set-theoretic perspective, the paper aims at exploring in how far (1) military behavior in mass protests arises from an interplay of different influential factors and which (2) (alternative) combinations of these factors lead to repression (or its absence) in autocratic regimes.

The factors – termed conditions in a QCA – included in the analysis derive from a review of pertinent literature touching on the determinants of military loyalty. This

body of research includes research on military responses to protest, studies on coups and civil-military relations, as well as analyses on autocracies and transitions.

In order to keep the number of conditions limited, I focus on those variables that most likely determine military behavior amid mass-based peaceful protests. Since previous research has found that external factors are less relevant than domestic factors (Barany 2016, 171), the analysis is restricted to characteristics of the military itself and its relationship to the political system and society. In order to derive a comprehensive assessment of the military's domestic role, I condensed five factors from the pertinent literature that capture the military's embeddedness in a polity in different domains: They touch on its relationship to the incumbent regime (material spoils, preferential recruitment), depict military characteristics (military unity), and approximate the armed forces' role vis-à-vis the population (conscription, role in domestic repression). In doing so, the chosen factors sketch each military's role in multiple areas at the time when the mass protests set in and are thus suitable to explore, which case-specific combinations of factors contribute to repression or its absence.

The analysis centers on the behavior of the military elite (e.g. Bou Nassif 2015). This is especially important since the military does not always react cohesively to mass uprisings. During the Arab Spring, for instance, the highly factionalized armed forces in Libya and Yemen disintegrated and, in Syria, though vast parts of the armed forces remained loyal, a considerable number of – particularly lower-ranking – soldiers deserted. Disaggregating the military into different ranks and strata is also important, since novel coup research shows that the interests, motivations, and behavior of elite officers and ordinary soldiers may diverge (e.g. Albrecht and Eibl 2018). Therefore, I restrict the analysis to the behavior of the military leadership since it is the body where the decision to repress or not is made. Once military leaders have agreed on a reaction to the protests, this decision is commanded down the chain of command. Hence, the military leadership's behavior is key for the military's reaction to protests, even though its decision is not always adhered to by all members of the military (e.g. Syria, Yemen, Libya). Therefore, in the following, I theorize how the factors deemed decisive for military behavior specifically affect the decision-calculus of military elites.[4]

[4] Future research could focus more on the factors that explain why some militaries react cohesively, why others split into factions that chose different reactions to the mass protests. Neu (2018) presents an interesting first inquiry into different types of loyalty shifts (united

2.1 Material spoils

Both coup-research and previous studies on military responses to mass protest have found that the armed forces' material well-being and loyalty correlate: Powell (2012), for instance, finds that better financed militaries are less likely to stage coups, while Pion-Berlin, Esparza, and Grisham (2014, 238) show that militaries whose "material conditions (…) were poor or had deteriorated over time" overwhelmingly refused to obey repressive orders amid mass unrest.

Materially coopting the military works through different channels and varying means. A regime may maintain a large defense budget, purchase prestigious armament, provide the military with adequate equipment, and/or pay officers – compared to the population and other government agencies – a comparatively high salary. Some regimes also grant the members of the military access to subsidized goods, special housing programs, or leisure activities. Yet, regimes may also buy the military's loyalty using more subtle, informal material, from which particularly senior members of the military profit: Autocracies may promote or tolerate high-ranking officers' business activities, turn a blind eye to corruption, as well as promise loyal military elites lucrative positions in the bureaucracy or state economy after retiring from duty (e.g. Barany 2016, 31; Bou Nassif 2015, 254–256; Makara 2013, 336; Nepstad 2013, 338; Pion-Berlin, Esparza, and Grisham 2014, 238–242).

In the eye of a mass upheaval, material spoils are expected to retain the military leadership's loyalty: Military elites profiting under the current political leadership fear losing their privileges after a victorious mobilization campaign. An opposition-led government might cut back the armed forces' budget or equipment, drain the military elites' opportunities to enrich themselves, wind down their economic activities, or deny them a profitable career after retirement. Furthermore, high-ranking officers entangled in corruption may block a transition and favor repression "because the autocrat who keeps the officers above the law can shield them from prosecution only as long as he remains in power" (Bou Nassif 2015, 255). Hence, the provision of financial perks binds the loyalty of the military elite to the political survival of the incumbent leader. I therefore hypothesize that extensive financial benefits under the incumbent regime contribute to military repression amid anti-regime protests in autocracies.

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defections, low level loyalty shifts, and fragmented high level loyalty shift) and their determinants.

2.2 Military recruitment along societal cleavages

Recruiting the military along socially salient cleavages is another coup-proofing measure regimes use to shield themselves from military interventions and that may also affect its stance toward mass protest. Autocrats applying this strategy attempt to foster military loyalty by the "effective exploitation of family, ethnic, or religious loyalties for coup-critical positions" (Quinlivan 1999, 133). For instance, leaders may stack the leadership of the military with members from their own kin or tribe to create a tight bond of loyalty between the military elite and the regime (Harkness 2022; McLauchlin 2010). In Bahrain with its Shia population majority, for instance, the military is dominated by Sunni Muslims and the military elite is tightly wed to the regime through familial bonds to the ruling Khalifa family (Albrecht and Ohl 2016, 44; Lutterbeck 2013, 42).

Several scholars have shown that the loyalty-inducing effect of this coup-proofing practice can be transferred to regime-threatening crises (e.g. Makara 2013; McLauchlin 2010). Since the interests of military elites profiting from this strategy are tied to an upholding of the political status quo, they have vested interests to defend the incumbent regime (McLauchlin 2010, 339). If the regime falls, the military along with recruitment and promotion policies will probably be reformed. Military elites that have gained their position due to shared ethnic, religious, or familial bonds with the political leadership would have to fear being purged from their leadership positions and their privileges being cut (Makara 2013, 341). For military leaders profiting from these recruitment and promotions practices, ordering a crackdown ensures the continuation of their privileges and financial wellbeing (Bellin 2012, 133). Furthermore, by preferentially recruiting members of their own minority into the military apparatus, minority regimes create a "shared identity" between the regime and the soldiers, "which differentiates them from the rest of society" (Makara 2013, 337) and what may reduce the soldiers' restraint in crushing anti-regime demonstrations (Lutterbeck 2013, 33). I thus assume that the exploitation of social cleavages for recruitment and promotion of officers to leadership positions of the military contributes to a military crackdown.

2.3 Military unity

Promoting intra-military rivalries is another coup-proofing practice expected to affect the military's willingness to crush mass mobilization. Fearing a military coup, leaders regularly fragment the existing military apparatus into competing units and promote rivalries among them (Belkin and Schofer 2005, 155). These measures are intended to disperse the overall power of the military, create coordination obstacles between units, and ensure that coup-plotters will likely face resistance by rivaling military officers in case they stage a putsch (Belkin and Schofer 2005; Pilster and Böhmelt 2011; Quinlivan 1999).

When a mass uprising materializes, however, this divide-and-rule strategy may backfire on the autocrat as it might create horizontal (within the military's upper echelon) and vertical (between the military elite and ordinary soldiers) frictions within the military. Lee (2009) demonstrates that leaders promoting conflict within the upper echelon of the military risk creating winners and losers within the military elite. If mass mobilization arises, the losers might perceive the crises as an opportunity to get rid of the officers they are competing with (Lee 2009, 646). Kim (2013, 696), too, shows that politicized promotions in the South Korean military in favor of the so-called Hana faction marginalized other officers and severely reduced intra-military unity before the 1987 mass protests, "eroding the capacity of the authoritarian regime to block the transition to democracy."

Yet, conflict within the military elite is not the only manifestation of disunity that may deprive the military leadership of orchestrating a repressive response to the protests. Disunity between the top brass and the ranks below may also render the military leadership incapable of ordering a crackdown on the uprising (Bou Nassif 2015). While the senior officers atop of the military take the decision to put down the protests or not, it is the mid- and low-ranking officers that have to execute the repression order. If military leaders have reasonable suspicion that ordinary soldiers sympathize with the protesters or are unwilling to shoot at unarmed civilians, they risk fracturing the military in case of a repression order (Bou Nassif 2015). Since ensuring the institutional survival of the military is a core interest of the military, senior officers may shy away from actions that bear the risk of splitting the military institution into opposing factions (Geddes 1999, 126; Pion-Berlin, Esparza, and Grisham 2014, 235). In the eye of mass protests, a military leadership may therefore hesitate to issue

a repression order if it has credible reason to assume that other factions will refuse to carry out such an order (Pion-Berlin, Esparza, and Grisham 2014, 235).

Taken together, the autocrat's inability to have the military intervene on his behalf paradoxically results from the very coup-proofing strategies previously applied against military interventions. Conflicts and rivalries within the military may reduce its internal unity, hampering the military leadership's capability and willingness to crush mass protests. Since a military has to be sufficiently cohesive to carry out a crackdown, intra-military unity is expected to contribute to military repression during anti-regime protest in autocracies.

2.4 Conscription

While the aforementioned factors focus on intra-military dynamics and the relationship between the military (leadership) and the regime, another line of argument explains military responses to protests by evaluating its links to society. A factor, which is consulted to approximate the military's relationship to the population, is the presence of conscription. Conscripted militaries are expected to be more restrained than voluntarily recruited forces when asked to shoot on fellow countrymen amid large-scale protest (Barany 2016, 29; Cebul and Grewal 2022; Lutterbeck 2013, 33). The underlying reasoning is that militaries drawing their members from the midst of society are socially more representative (Lutterbeck 2013, 33) and "will be more likely to sympathize with a broad-based revolutionary movement" (Barany 2016, 29).

Yet, how may the existence of a compulsory military service affect the decision-making of military leaders, who are not linked to the population through conscription and do not share ordinary citizens' grievances and interests? If military leaders have credible reasons to assume that their subordinates may not adhere to a crackdown order due to their close links to society, the military leadership cannot issue a repression order without risking the integrity of the military institution. Hence, if conscription tends to bring the lower ranks of the military closer to the average population, it might deprive the military elite of its opportunity to put down the mass unrest. I therefore expect that the absence of conscription contributes to military repression.

2.5 Previous internal repression and operational repertoire

Finally, the military leadership's decision may also be shaped by the military's regular spectrum of duties (Pion-Berlin, Esparza, and Grisham 2014, 234–235) and its "past conduct toward society" (Barany 2016, 30). When mass unrest rocks regimes, the military elite faces a daunting dilemma between its allegiance toward the political leadership and the well-being of the people. How a military leadership solves this dilemma and which behavior it perceives as appropriate, might be shaped by the missions the armed forces have previously fulfilled and have regularly been occupied with (Pion-Berlin, Esparza, and Grisham 2014, 234–235). If a military has already been an agent of domestic repression before the current uprising and has been deployed against political opponents, repressing protesters may test the military leadership's loyalty, yet is not a task that runs completely counter the military's previous missions and domestic roles. In contrast, if armed forces have primarily been a defensive force and were first and foremost occupied with national defense and external missions, ordering soldiers to crack down on primarily peaceful protests may contradicts the military leadership's professional identity as well as the missions that fall within its operational portfolio (Pion-Berlin, Esparza, and Grisham 2014, 243–244).

Furthermore, military elites that have not been entangled in the regime's repressive actions against the population do not have to fear the takeover of a new government. Military elites, in turn, that are responsible for such actions may enjoy impunity only as long as the incumbent is in power and may be confronted with juridical consequences under a new government (Barany 2016, 30; O'Donnell and Schmitter 1986, 28–29). I therefore assume that a military's previous involvement in domestic repression should contribute to military repression amid protests in autocracies.

3. Research design

3.1 Method

In order to identify which factors or combinations thereof prompt militaries to put down protests, I employ a QCA. It is a set-theoretic method that enables researchers to unravel the necessary and sufficient conditions of an empirical phenomenon and

uses Boolean Algebra to express these relationships between conditions and outcome (Ragin 2000, 2008; Schneider and Wagemann 2012). The method is based on a complex understanding of causality: The same empirical phenomenon may be reached through different causal pathways (equifinality), and more often than not a certain outcome is not produced by one specific factor, but by various combinations of relevant factors (conjunctural causation) (Oana, Schneider, and Thomann 2021, 8; Ragin 2000, chapter 4; Schneider and Wagemann 2012, 78–79). The factors that form such a sufficient combination are called INUS conditions: They are insufficient when studied individually, but represent a necessary component of a conjunction of conditions that is unnecessary but sufficient for an outcome (Mackie 1965, 246; see also Mackie 1980, chapter 3; Mahoney, Kimball, and Koivu 2009, 124–126).[5]

Finally, QCA is asymmetric regarding its understanding of causality. If the presence of a condition contributes to the occurrence of the outcome, its absence does not necessarily lead to the non-occurrence of the outcome. Regarding military repression of protests, asymmetric causation means that the conditions linked to a crackdown do not automatically have to be the same conditions that – when absent – also lead to the absence of repression. Therefore, a QCA involves both an analysis of the outcome and an analysis of its negation (Schneider and Wagemann 2012, 81–83).

Owing to its specific research logic, studying military reactions to protest using a QCA promises new insights in a twofold manner: First, QCA serves as an integrative approach in this study. It allows for integrating theoretical arguments and explanatory factors from previous, mainly small-N studies, while at the same time its configurational logic helps to uncover in how far military behavior in protests results from a complex interplay of such factors. The empirical analysis therefore strongly builds on previous research, yet expands it by approaching military behavior from a novel methodological angle in a temporarily and geographically broader sample.

Second, QCA is able to identify cross-case patterns that may deliver important insights on civil–military relations across autocracies. In order to determine the various causal paths to the outcome, cases in a QCA are understood as "configurations of aspects" and "examined in terms of their multiple memberships in

[5] Another causality concept is SUIN conditions: A SUIN condition is not necessary when looked at in isolation from other factors, but forms "(…) a sufficient but unnecessary part of a factor that is insufficient but necessary for an outcome (Mahoney, Kimball, and Koivu 2009, 126).

sets, viewed as configurations" (Ragin 2000, 66, 122). In doing so, QCA helps to systematically assess, which cases are covered by which (combination of) relevant conditions. If cases in the same region share the same causal pathway, for instance, this pattern may imply that in certain geographical or social contexts specific mechanisms are influential, while other combinations are more relevant in other environments.

Among the different variants of QCA, I choose the crisp-set variant, which is based on a binary logic: cases are either a member of a set or not (Schneider and Wagemann 2012, 13). For my research purpose, a crisp-set QCA is suitable since the majority of the conditions as well as the outcome are only accessible as dichotomous variables.

3.2 Case selection

The universe of cases is drawn from the Dictator's Endgame Dataset (DED) (Croissant, Eschenauer-Engler, and Kuehn 2022), which comprises 40 so called endgames from 1946 to 2014. Its concept of an endgame is inspired by Pion-Berlin, Esparza, and Grisham's (2014, 236) endgame scenario and is understood as a situation marked by four characteristics: (1) the protests occur in a nondemocratic regime and (2) are largely nonviolent, (3) demonstrations are directed against the regime and the incumbent, and (4) the civilian security apparatus fails to disperse the crowds (Croissant, Kuehn, and Eschenauer 2018b, 177). In such a regime-threatening scenario, the autocrat's last hope to remain in office is the armed forces' willingness to use their manpower and weaponry to put down the upheaval. In order to obtain their sample of cases meeting these conditions, Croissant and co-authors first identify large-scale peaceful protests in nondemocratic regimes using regime data by Geddes, Wright, and Frantz (2014) and the NAVCO 2.0 data on protest campaigns (Chenoweth and Lewis 2013). Based on this preliminary sample, they investigate whether the domestic security apparatus failed at quelling the campaign and code the behavior of the military leadership.

The DED's sampling criteria substantially narrow down the number of incidences, in which military behavior can potentially be analyzed. This limitation, however, is important because – even though protests "seem to belong to the regular political landscape of numerous authoritarian regimes" (Schedler 2018, 56) – not all of them pose an existential threat that can only be averted by large-scale military

violence. In the circumstances identified by the DED, the regime leadership is entirely dependent on a loyal military elite that is willing to bear the tremendous costs of a military crackdown on largely peaceful protests for the sake of saving the very existence of the regime. Hence, such regime-threatening protests have to be differentiated from related mass-based phenomena, such as violent riots, economically motivated protests, secessionist rebellions, strikes, etc. The DED's clearly defined scope conditions thus enable the identification of a comparable sample of mass-based anti-regime protests that pose a similar decision-making environment for military elites across dictatorships.

The DED distinguishes between three military reactions: repression, a loyalty shift to the opposition, or a coup. Repression, which is the outcome of interest in this paper, entails "the organized use of large-scale military violence by the armed forces against protesters with the aim of putting down the mass unrest" (Croissant, Kuehn, and Eschenauer 2018a, 144; 2018b, 177). This goes far beyond the mere deployment of troops to central sites and restrained acts of violence committed by individual soldiers or units. Instead, it refers to the actual and systematic application of massive military power, which aims at ultimately ending the upheaval and saving the regime. An example of this form of large-scale military violence is the massive crackdown on the 8-8-88 Uprising in Burma, which reportedly resulted in a four-digit number of protesters being killed (Egreteau 2009). Other comparable cases are Iran's suppression of the 2009 post-election mass protests or the 1989 Tiananmen massacre in China.[6] A loyalty shift takes place either if the military leadership officially switches sides to the opposition or if the military remains neutral, what, however, deprives the regime of its coercive power and risks its downfall. A coup takes place if the military leadership usurps power amid the anti-regime mass protests.

[6] The case of 2011 Egypt does not qualify as a repression case as defined by the DED: Though soldiers were deployed to central sites in the first days of the uprising (Albrecht and Bishara 2011), assisted the police to some degree, and likely partook in some acts of violence (Holmes 2019), the military leadership "balked at issuing orders for soldiers to shoot at the protesters" (Bou Nassif 2015, 265). Hence, the military leadership did not use systematized military force to an extent that would have been necessary to put down the protests at all costs. Instead, though it surely was reluctant to forsake Mubarak (Bou Nassif 2015), the military elite ruled out to use force as early as January 31, 2011, and, when it became obvious that the uprising would not seize, it finally called for meeting of the Supreme Council of the Armed Forces on February 10 without Mubarak, the commander in chief, attending (Albrecht and Bishara 2011, 16; Bou Nassif 2015, 262–263). It then took over political power after Mubarak's resignation. Therefore, Croissant and co-authors code the case – in accordance with major coup datasets (e.g. Powell and Thyne 2011) – as a coup.

The outcome coding only refers to the behavior of the military leadership. Hence, if parts of the military desert (e.g. Syria 2011), the armed forces fracture (e.g. Libya 2011), or parts of the military stage a coup (e.g. Mali 2011), the response of the military elite is nevertheless decisive. Furthermore, the outcome only refers to the initial reaction of the military leadership. If it first chooses repression (in line with the repression definition above), but later defects from the regime, the coding only refers to the military elite's initially chosen response.

Table 1: Case selection

Outcome: repression=1	Negated outcome: repression=0
Bahrain 2011	Albania 1990
Burma 1988	Czechoslovakia 1989
China 1989	Bangladesh 1990
Iran 2009	East Germany 1989
Libya 2011	Indonesia 1998
Mali 1991	Kyrgyzstan 2005
Myanmar 2007	Madagascar 1991
Nigeria 1993	Malawi 1993
Yemen 2011	Philippines 1986
Thailand 1992	Romania 1989
Syria 2011	Serbia 2000
	South Korea 1987
	Tunisia 2011
N=11	N=13

I draw a subsample from the DED that comprises 28 endgames from 1986 to 2011. Additionally, I exclude four cases, in which the military staged a coup (Haiti 1986, Egypt 2011, Egypt 2013, Burkina Faso 2014) in order to include only repression cases (outcome repression = 1) and cases in which the military refused to use violence by staying neutral or shifting loyalty to the opposition (repression = 0). This yields a research sample of 24 cases (see Table 1). I leave out the coups since coup-staging militaries do not only refuse to repress protests but also take over political power for themselves. Civil-military relations research has recently started to conceptually distinguish such different forms of military insubordination and study their respective causes (e.g. Johnson 2021; Schiel, Powell, and Faulkner 2021). Hence, when analyzing the non-occurrence of the outcome, I would include quite heterogeneous cases in the set of non-repressing militaries. Furthermore, there is an own body of literature in coup research studying the link between domestic unrest

and coup activity (e.g. Albrecht and Koehler 2021). Taken together, though coup-staging and loyalty-shifting militaries are both disloyal, equating both types of military disobedience would blend or conceal the varying underlying reasons for each type of insubordination. I therefore concentrate on those militaries that eschewed violence but did not attempt to usurp power.

The temporal scope is tailored to the 25 years between 1986 and 2011 for two reasons: First, it yields a temporally and regionally diverse sample. While previous small-N studies often analyzed a limited number of cases in one wave of protests (e.g. the Arab Spring), this case selection includes cases from different regions and decades. Moreover, it covers several waves of popular protest, such as the wave in Asian dictatorships in the late 1980s and 1990s, the uprisings against Communist rule in Central and Eastern Europe, and two Color Revolution cases (Serbia 2000, Kyrgyzstan 2005). Second, this sample captures the recent trend in the challenges facing autocratic rule: Mass revolts have gained significance as a major threat to autocratic incumbents in the last three decades (Kendall-Taylor and Frantz 2014). To account for this trend, I start my research period witch the 1986 Philippine People Power Revolution, which marked the beginning of a series of mass revolts that swept across Asian autocracies in the late 1980s and 1990s. I conclude with the 2011 Arab Spring cases.[7]

3.3 Operationalization of the conditions for military repression

The DED contains useful data on all cases in the research sample and therefore is the primary source for coding the conditions. Its coding is based on information from pertinent literature on civil-military relations and armed forces in protests as well as country-specific publications. These data are supplemented with data on the composition of the military's top tier and recruitment. The coding of the outcome and of all conditions is listed in the Online Appendix.

Material spoils (spoils). The set *material spoils* reflects the coding of the *financial spoils* variable in the DED. Based on the assessment of the military's privileges in pertinent literature, this variable qualitatively denotes whether the dictator used formal (e.g. defense budget, arms purchases, comparatively high loans) and/or

[7] The only post-2011 endgame would have been 2014 Burkina Faso. This case constitutes a coup and therefore is excluded.

informal material means (e.g. bribes, special housing, discounted prices for goods, lucrative second career opportunities, economic activities) to spoil the military elite. The condition material spoils is coded as follows: Cases are assigned a membership score of 1 if the military leadership enjoyed wide-spread material privileges and receive a membership score of 0 if not. Cases also receive a membership score of 0 if the sources indicate that the regime channels vast resources into a coercive unity outside of and at the expense of the regular armed forces. A score of 0 is also assigned if the sources hint that the military (elite) has suffered a relative material decline prior to the anti-regime mass unrest. Even though a dichotomous coding entails a loss of information, it has two advantages for the purpose of this study: First, data on military expenditures is not available for all cases. Second, focusing only on official government data on military spending, arms purchases, and soldiers' salaries could miss more indirect measures to buy off the military elite's loyalty (e.g. privileged healthcare, subsidized commodities, the military elite's business activities and corruption) that are not listed on the official payroll. Among the various channels through which a regime can materially coopt the military, official expenditures are but one possibility.[8]

Military recruitment along societal cleavages (preferential). I use data on the ethnic, religious, or regional composition of the high-ranking officers from the data set by Geddes, Wright, and Frantz (2017, 2018) to operationalize whether ascriptive criteria were used to recruit the military's top tier. Geddes and co-authors offer three nominal variables on the high-ranking soldiers' background (milethnic_inclusive, milethnic_hetero, and milethnic_homo). I assign cases a membership score of 1 in the set *preferential recruitment* if Geddes, Wright, and Frantz indicate that there is a salient cleavage and high-ranking officers are disproportionally or all recruited from certain ethnic or religious groups or particular regions (milethnic_hetero or milethnic_homo coded with 1; Geddes, Wright, and Frantz 2017, 20). I code a membership score of 0 if otherwise.[9]

[8] The Online Appendix contains short descriptions for every coding of the material spoils variable.

[9] Data are lagged by 1 year. Since Geddes, Wright, and Frantz only include countries that had a population of one million in 2009, the coding for Bahrain is based on secondary literature.

Military unity (unity). Regarding the military's internal unity, I refer to the DED. Militaries are considered to be cohesive (*unity* = 1) if according to the source data there are no significant disputes, rivalries, or cleavages that seriously affect the military's overall unity. Cases are coded with 0 if the military's internal unity was reduced due to intra-military disputes, rivalries, or cleavages.

Conscription (conscription). I rely on data from the Military Recruitment Data Set (Toronto 2014) to code the conscription condition. I calibrate whether conscription (*conscription* = 1) or volunteer recruitment (*conscription* = 0) is used as the method of recruitment in the armed forces.[10]

Previous internal deployment and human rights violations (violation). Data for the condition violation are taken from the DED, which distinguishes whether a military has been deployed in domestic repression before the mass upheaval (*violation* = 1) or not (*violation* = 0). A military is considered an agent of domestic repression if the relevant literature indicates that a military can be viewed as a tool of domestic repression and has carried out actions that are directed against domestic political opponents of the incumbent regime before the current regime crisis, including the suppression of protests, human rights violations, torture, extra-judicial killings etc. A case receives a membership score of 0 if the military was not a major tool of domestic repression and has not been used (or only sporadically and to limited extent) in deterrence of domestic political dissent.[11]

4. Empirical analysis

4.1 Conditions for military repression during large-scale peaceful protests

A QCA involves a test for necessary and sufficient conditions as two separate, consecutive steps (Schneider and Wagemann 2012). All analyses are carried out using the R packages QCA (Dusa 2019) and SetMethods (Oana and Schneider 2018). The empirical analysis starts with the test of necessity. A condition is necessary if "whenever the outcome is present, the condition is also present"

[10] Data are lagged by 1 year. Since data on conscription are only available until 2008 inclusively, I code all cases from 2010 onwards based on secondary literature (see Online Appendix).

[11] Short descriptions for every coding of the violation variable are in the Online Appendix.

(Schneider and Wagemann 2012, 72). I set the minimum threshold for considering a condition as necessary at 0.9 (Oana, Schneider, and Thomann 2021, 69).

As illustrated in Table 2, among the tested single conditions as well as their negations one condition (material spoils) surpasses the consistency threshold and also shows reasonable coverage and Relevance of Necessity (RoN) scores. The consistency score of 1 indicates that there was no military leadership that chose to put down protests without having previously profited from material privileges.[12]

Table 2: Necessary conditions for military repression

Condition	Consistency	Coverage	RoN
Spoils	1.0	0.73	0.69
Preferential	0.73	0.67	0.75
Unity	0.64	0.54	0.65
Conscription	0.64	0.44	0.47
Violation	0.82	0.69	0.73
Negated conditions	Consistency	Coverage	RoN
~ Spoils	0.0	0.0	0.63
~ Preferential	0.27	0.25	0.57
~ Unity	0.36	0.36	0.65
~ Violation	0.18	0.18	0.59
~ Conscription	0.36	0.50	0.80

Note: ~ is used to denote the absence of a condition (logical “NO/NOT”); RoN refers to the Relevance of Necessity measure.

Next, I perform the analysis of sufficient conditions. A condition is sufficient if “whenever it is present across cases, the outcome is also present in these cases” (Schneider and Wagemann 2012, 57). A condition can be sufficient alone or in conjunction with other conditions. This step of the analysis is based on a so-called truth table, which comprises all 2k possible combinations of the conditions. Each row in the truth table represents one possible combination of the conditions (Schneider and Wagemann 2012, 92–93). As for necessary conditions, a minimum threshold has to be defined for a condition to be considered sufficient for an outcome. Since pertinent literature recommends a consistency threshold of at least 0.75, I set it at 0.8

[12] A union of two conditions – conditions that are linked through a logical OR (+) – passes the necessity threshold of 0.9 and also exhibits reasonable coverage and RoN score: previous human rights violations by the military OR the absence of conscription. However, in order to declare such a disjunction necessary for an outcome, a researchers must have a conceptually and theoretically meaningful explanation why these two or more factors are mutually replaceable components of a superordinate concept (Schneider and Wagemann 2012, 74; see also Schneider 2018). Since I lack such an explanation, I do not declare it necessary.

(Ragin, 2008, 46; Schneider and Wagemann 2012, 279). The abbreviated truth table shows that there are several rows with a consistency of 1, followed by a sharp drop in consistency to a score of 0.5 (see Table A5 in the Online Appendix). Hence, all rows with a perfect consistency of 1 are considered as sufficient for the outcome; all rows below are not sufficient. In order to derive the results, I follow the Enhanced Standard Analysis (ESA) as proposed by Schneider and Wagemann (2012, chapter 8.2; see also Oana, Schneider, and Thomann 2021, chapter 4.4.2).[13]

Since some QCA methodologist argue that the most parsimonious solution outperforms the other solution types, and causal interpretations can only be based on the most parsimonious solution (Baumgartner and Thiem 2020; Thiem 2022), I report the (enhanced) parsimonious solution in Table 3.[14]

Table 3: Sufficient conditions for military repression (enhanced most parsimonious solution

Model: repression = f (preferential, unity, spoils, violation, conscription)			
	Raw Coverage	Unique Coverage	Consistency
spoils*unity	0.636	0.545	1
spoils*preferential*conscription	0.364	0.273	1
Solution coverage: 0.909091 Solution consistency: 1			

Note: * stands for a logical AND.

The results in Table 3 show that none of the conditions alone is sufficient for a military crackdown. Instead, the solution term comprises two causal pathways leading to military repression: The first term is a conjunction of material spoils and intra-military unity and with a unique coverage of 0.545 it is the empirically more relevant pathway, applying to more than half of all repression cases (seven out of eleven, see Table 6).

[13] These are solutions that contradict the claim of necessity, simplifying assumptions that are contradictory or combinations that contradict common sense (Schneider and Wagemann 2012, chapter 8.2).

[14] Since material spoils has been identified as a necessary condition repression, rows that contradict this statement of necessity were not treated as simplifying assumption in order to derive the enhanced parsimonious solutions. There were no assumptions that were contradictory or against common sense (Schneider and Wagemann 2012, chapter 8.2). The also includes the (standard) most parsimonious solution), the standard (intermediate) solution, the conservative and the enhanced intermediate solution. The most parsimonious solution of the Standard Analysis identified two models that equally well describe the data. However, the enhanced parsimonious solution does not indicate model ambiguity. To derive this solution, logical remainder rows that contradict the necessity claim (material spoils are necessary) were not used as a simplifying assumption.

Prominent cases of violent repression are covered by this path, including the military crackdown on Arab Spring protests in Bahrain 2011 or the 2007 Saffron Revolution in Myanmar. In these cases, the military had incentives to support the regime as it was materially spoiled and, at the same time, was sufficiently cohesive to put down an uprising.

The second path combines preferential recruitment, material spoils, and conscription. This conjunction applies to three of the four Arab Spring cases in the sample, in which militaries responded to mass mobilization at gunpoint (Syria 2011, Libya 2011, Yemen 2011). The consistency threshold of 1 for the solution term as well as for both conditions denotes that every time one of the two pathways was present in a case, it led to a military cracking down on mass protests. The high coverage of 0.91 underlines that the majority of cases (ten out of eleven) is explained by one of the two sufficient conditions (see Table 6).

4.2 Conditions for the absence of military repression during large-scale peaceful protests

The previous section has shown that an interplay of different factors explains well why military repression occurs during large-scale, peaceful protests in autocratic regimes. Yet, do these factors or an interplay thereof also explain why military repression does not occur?

Table 4: Necessary conditions for the absence of military repression

Condition	Consistency	Coverage	RoN
Spoils	0.31	0.27	0.45
Preferential	0.31	0.33	0.60
Unity	0.46	0.46	0.61
Conscription	0.69	0.56	0.53
Violation	0.31	0.31	0.55
Negated conditions	Consistency	Coverage	RoN
~ Spoils	0.69	1.0	1.0
~ Preferential	0.69	0.75	0.80
~ Unity	0.54	0.64	0.77
~ Violation	0.69	0.82	0.87
~ Conscription	0.31	0.50	0.80

Note: ~ is used to denote the absence of a condition (logical “NO/NOT”).

I proceed as above, starting with the analysis of necessity followed by the test of sufficiency. The analysis of necessity in Table 4 reveals that none of the individual

conditions as well as their negations exceed the consistency threshold, indicating that there are no necessary conditions for the non-occurrence of the outcome.[15]

The analysis of sufficiency in Table 5 identifies two sufficient conditions for the negated outcome:[16] First, among all conditions tested in the analysis, the absence of material spoils is the only factor that is found to be – individually – sufficient for military behavior in mass protest. It is even the empirically more relevant path for the absence of the outcome (unique coverage: 0.54), covering eight of the 13 cases of military disloyalty during mass protests. Among the cases exclusively covered by this term are the three military defections during the revolutions of 1989 in Central and Eastern Europe, heralding the end of Communism in the region (East Germany 1989, Czechoslovakia 1989, Romania 1989). When mass protests arose, these militaries did not have access to extensive material privileges that would have been worth to spill their countrymen's blood.

Table 5: Sufficient conditions for the absence of repression – most parsimonious solution

Model: repression = f (preferential, unity, spoils, violation, conscription)			
	Raw Coverage	Unique Coverage	Consistency
~spoils	0.692	0.538	1
~preferential*~unity	0.385	0.231	1
Solution coverage: 0.923			
Solution consistency: 1			

Note: ~ is used to denote the absence of a condition (logical "NO/NOT").

The second causal pathway is a combination of the absence of preferential recruitment and the absence of military unity.[17] In these cases, armed forces were marked by significant internal conflicts and rivalries and autocrats apparently failed to tie the high-ranking officers' interests to the persistence of the regime through disproportional ethnic, religious, or tribal recruitment. Too incohesive to orchestrate a crackdown and lacking the material incentives to safeguard the regime, military

[15] I find four unions of conditions (disjunction) that pass the consistency threshold and also show reasonable coverage and RoN scores: ~spoils + ~unity, ~spoils + ~preferential recruitment, ~spoils + ~counterbalacing, and ~preferential recruitment + ~violation. As discussed in footnote 11, I do not treat them as necessary conditions due to a lack of convincing arguments how each union grasps some higher concepts.

[16] Since no condition or union of conditions is regarded as necessary for the absence of the outcome and the enhanced analysis for the outcome did not unearth contradictory assumptions or simultaneous subset relations, I report the most parsimonious solution.

[17] The truth table for the negated outcome is shown in the Online Appendix.

leaders refused to crush the demonstration. This causal pathway applies to 5 of the 13 instances of militaries refusing to crack down on protests, among them are 2 prominent cases of military defection that occurred during the wave of mass protests in East and Southeast Asia in the late 1980s and 1990s (Philippines 1986; South Korea 1987, Table 6). Turning to the overall fit of the solution term, I find that the solution is perfectly consistent and covers 92% of the outcome (12 out of 13 cases in which military repression was absent during the regime crises, see Table 6). Hence, the conditions and their negations explain the occurrence as well as the non-occurrence of military repression equally well.

Table 6: The complexity of military responses to mass protest in nondemocratic regimes

	Outcome		Outcome	
	Military repression		Absence of military repression	
Sufficient path	spoils*unity	spoils*preferential*conscription	~spoils	~preferential*~unity
Cases covered	Iran 2009 **Syria 2011** Bahrain 2011 China 1989 Burma 1988 Myanmar 2007 Thailand 1992	Mali 1991 **Syria 2011** Libya 2011 Yemen 2011	**Albania 1990** **Madagascar 1991** Czechoslovakia 1989 East Germany 1989 Romania 1989 Tunisia 2011 Kyrgyzstan 2005 Malawi 1993 Serbia 2000	**Albania 1990** **Madagascar 1991** Bangladesh 1990 Philippines 1986 South Korea 1987
Cases not covered	Nigeria 1993		Indonesia 1998	

Note: cases in bold are covered by multiple solution terms.

5. Discussion

Analyzing military responses to nonviolent, anti-regime mass protests in autocracies from a set-theoretic perspective, this paper yields five essential insights: First, the factors, that previous studies have identified as relevant, explain military repression amid mass protests well, yet none of them is individually sufficient for large-scale military violence. Instead, a large-scale military crackdown results from a casually complex interplay of relevant factors. Regarding the absence of the outcome, only

one causal condition (the absence of material spoils) is found to be individually sufficient for the military's refusal to put down mass protests, yet only for a particular set of cases. Hence, all in all, military behavior in protests is a causally complex phenomenon.

Second, the QCA reveals that here are only two cases in the sample that are covered by multiple paths (Syria 2011, Albania 1990, Madagascar 1991). Thus, most cases can only be explained by one specific conjunction. This finding implies that some (combinations of) factors are decisive in certain cases, whereas other incidences of military (dis)loyalty can—uniquely—be explained by another interplay of conditions. The application of a QCA thus helped to unearth and systematize these equifinal ways to military repression or its absence during mass protests.

Third, and related to the previous insight, we see cases from particular regions cluster around certain pathways. For instance, the results for the sufficient conditions show that all Asian cases of military repression are covered by just one conjunction. Armed forces in Burma 1988, Myanmar 2007, and China 1989 did not only possess the material incentives to defend the status quo, but were also sufficiently cohesive to orchestrate a violent suppression (Barany 2016, 96; Lee 2009). In contrast, the majority of military crackdowns on protests during the Arab Spring (Libya 2011, Yemen 2011, Syria 2011) are covered by a different pattern. Arab military apparatuses are not only comparatively well taken care of and extraordinarily robust (Bellin 2012), the region's autocrats regularly make use of Arab countries' social structures and exploit societal divides to boost the loyalty of their coercive apparatuses or key military units (e.g. Lutterbeck 2013; McLauchlin 2010). Yemen's Saleh, Syria's Assad, and Libya's Gaddafi all exploited ascriptive criteria, such as tribal membership, kinship, or religious affiliation, to fill key positions in their militaries. This particular mixture of financial spoils and promotion along societal cleavages prompted Arab militaries to choose a repressive response. Shared patterns between cases from similar regions can also be identified when looking at the conditions linked to the absence of military repression. European militaries that defected when popular protests swept across the region's communist regimes in the late 1980s all lacked material incentives to engage in violence against their populations. Disloyal Asian militaries, in contrast, share that they were similarly incohesive and not recruited along sectarian lines when their loyalty to the regime was tested (1990 Bangladesh, 1987 South Korea, and the 1986 Philippines). A set-theoretic perspective helps to

unveil such cross-case patterns, demonstrating that certain factors appear to be particularly important in a specific regional context.

Fourth, the results underline that the military's material privileges are a key factor in determining military behavior. Material spoils is not only a necessary condition for repression and a component of both sufficient causal pathways leading to a military crackdown. Its absence is even individually sufficient for the negated outcome. These results underline that quelling anti-regime protests is largely driven by soldiers' rationalist motives, apparently resulting from a bargain between the autocratic leadership and the military: Dictators grant their militaries direct or indirect material privileges and in return reap the military's loyalty in times of crises. However, quenching the military's thirst for material privileges – though necessary for military repression – is not sufficient to guarantee the soldiers' willingness to shoot protesters, but only in combination with other contributing factors. This finding has important implications for the stability of autocratic regimes more generally: While coup research underlines that better financed militaries have less reasons to stage a coup, the QCA results show that autocrats have to use a mix of strategies to retain their militaries' loyalty, of which material spoils are just a part of. Regarding the prospects of protesters to initiate regime change in dictatorships, the finding implies that enforcing a revolution against a materially spoiled military elite is a highly risky endeavor. A possible strategy for opposition activists to pull military elites onto their side could be to credibly assure military elites that they will be allowed to keep certain privileges beyond regime change.

Fifth, findings on conscription contradict the theoretical expectations on its restraining effect on military repression. Its presence is sufficient for a military crackdown on anti-regime protests in combination with financial spoils and preferential recruitment. However, this finding may be explained by looking at the interplay of the factors in the solution as well as relating the findings back to the cases covered by this sufficient causal pathway. The results show that conscription is only sufficient in combination, among others, with preferential recruitment. Hence, even though conscription exists, key positions in the military are nevertheless disproportionally filled with members of particular social groups, what might neutralize the potentially restraining effect of conscription. This reading is backed by case evidence. Libya, Yemen, and Syria are all covered by the solution path, which includes both conscription and preferential recruitment. In Syria, for instance, the majority of conscripts are Sunni Muslims (Barany 2016, 155), while members of

religious minority groups disproportionately fill the senior positions and members of Bashar al-Assad's family head key units (Albrecht and Ohl 2016, 47; Bou Nassif 2021). This practice is part of the explanation, why – despite numerous defections by lower-ranking soldiers and several high-profile desertions – the critical parts of the Syrian military have remained loyal and the regime has endured. As Springborg (2014, 150) puts it, "in Libya, Yemen, and Syria (…) military units commanded by sons or, in the case of Syria, both brother Maher al-Assad and brother in-law Assef Shawkat, played the most important role in attempting to subdue the opposition." Hence, on closer examination, the finding on conscription can be read as military repression did take place despite conscription, not because of it.

Sixth, and finally, I tested the robustness of the findings by adding information on the regime type to the analysis. I rerun the analysis including a dichotomous condition depicting whether the autocratic regime is a personalist autocracy (Geddes, Wright, and Frantz 2014). This is because personalist regimes often maintain security forces next to the military (Escribà-Folch, Böhmelt, and Pilster 2020). Resulting rivalries between such alternative security forces and the regular armed forces might reduce the military's loyalty to the regime, resulting in a defection amid mass protests. As in the previous analysis, I report the enhanced most parsimonious solution for the outcome military repression and the most parsimonious condition for its absence. Results remain robust. A personalist regime neither is a necessary nor a sufficient or INUS condition for the absence or presence of military repression (see Tables A14–A19).

6. Conclusion

The aim of this article was to identify the determinants of military repression (and its absence) in the eye of regime-threatening, mass-based protests in nondemocratic regimes. While previous research on this topic is shaped by regionally and temporarily focused qualitative case studies, this article approached military behavior in regime crises from a thus far barely taken methodological perspective in civil–military relations research. Applying a crisp-set QCA, this study identified the causal pathways contributing to military violence (or its absence) amid mass mobilization in a medium-N sample. Integrating five factors deemed important in pertinent literature on soldiers in protest, the analysis demonstrated that large-scale military repression toward mass protests largely results from a causally complex interplay of conditions

and various of these paths lead to the same outcome. Results show that militaries crack down on protests when they (1) receive material privileges and are internally cohesive or (2) enjoy financial benefits, key positions are recruited along societal divides, and there is conscription. Moreover, the analyses highlighted that the military elite's material spoils are a key component in the majority of pathways associated with the outcome and even sufficient for the refusal of military leaders to come to the regime's rescue. Finally, the configurational approach to military coercion has unearthed patterns of influential factors across the cases, showing that different ensembles of determinants are at work in different socio-political environments.

These results have important implications for understanding military coercion in the eye of vertical crises in particular as well as for the study of civil-military relations more general: Regarding research on soldiers in protest, future studies might take up on this article's findings. While existing research is rich concerning the potential determinants of soldiers' reactions to anti-regime threats, future research might want to concentrate more on the interplay of decisive factors and theorize why these particular constellations have militaries react to protests in a certain way. Besides the study of soldiers' conduct toward protests, the article's findings also have the potential to inspire ideas for future research in the broader field of civil-military relations. The notion that military behavior is causally complex and produced by alternative combinations of relevant factors may well travel beyond the study of soldiers' behavior in anti-regime protests. It is possible, and even highly likely, that militaries' roles in other decision-making contexts are similarly multi-causal and equifinal. Take the field of contemporary coup research as an example. The field is dominated by quantitative methods that focus on the influence of one or a small number of factors, while controlling for a several other contributing factors. Factors, however, that may not reach conventional levels of significance in quantitative models and are therefore rejected as being irrelevant, might nevertheless be INUS conditions for coups that do only unfold their decisive effect when combined with other conditions and only in particular cases. Furthermore, contemporary coup research concentrates on the analysis of coup attempts, while we know far less about their outcomes and, in particular, why attempted coups fail. QCA's asymmetric understanding of causality could help differentiate between the complex conditions that render attempted coups successful and those conditions that contribute to a coup's failure. Acknowledging this complexity of military behavior and applying configurational methods to study it could deliver precious insights into the

determinants of armed forces' meddling in political affairs and the military's conduct in other highly relevant areas, such as coups d'état or armed conflicts.

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8. Appendix

8.1 Coding information

Table A1: Sample and coding of outcome and conditions

	Case	Outcome	Material spoils	Preferential recruitment	Military unity	Conscription	Previous domestic repression
Central and Eastern Europe	Albania 1990	no repression	0	0	0	1	0
	Czechoslovakia 1989	no repression	0	0	1	1	0
	East Germany 1989	no repression	0	0	1	1	0
	Romania 1989	no repression	0	0	1	1	0
	Serbia 2000	no repression	0	1	1	1	0
Sub-Saharan Africa	Mali 1991	repression	1	1	0	1	1
	Nigeria 1993	repression	1	1	0	0	1
	Madagascar 1991	no repression	0	0	0	1	0
	Malawi 1993	no repression	0	1	1	1	0
Middle East and Maghreb	Iran 2009	repression	1	0	1	1	1
	Bahrain 2011	repression	1	1	1	0	0
	Libya 2011	repression	1	1	0	1	1
	Syria 2011	repression	1	1	1	1	1
	Tunisia 2011	no repression	0	0	1	1	0
	Yemen 2011	repression	1	1	0	1	1
Asia and Pacific	Bangladesh 1990	no repression	1	0	0	0	1
	Burma 1988	repression	1	1	1	0	1
	China 1989	repression	1	0	1	1	0
	Indonesia 1998	no repression	1	1	0	0	1
	Kyrgyzstan 2005	no repression	0	1	0	1	0
	Myanmar 2007	repression	1	1	1	0	1
	Philippines 1986	no repression	1	0	0	0	1
	South Korea 1987	no repression	1	0	0	1	1
	Thailand 1992	repression	1	0	1	1	1

Table A2: Descriptions and sources clarifying the coding of the condition material spoils

	Case	Outcome	Material spoils	Description and sources
Europe	Albania 1990	no repression	0	The military was inadequately financed and equipped (Goldman 1997, 78) and soldiers lived in "substandard living conditions" (Danopoulos and Skandalis 2011, 405), which is why "the demoralized and impoverished military was no longer willing to come to the party's rescue" (ibid., 406) when the regime was challenged by mass unrest in 1990. As Elsie (2010, 23) notes: "The fall of the communist dictatorship found the Albanian armed forces in a desolate state. Equipment was vastly outdated, there was little leadership, and morale had reached an all-time low."
	Czechoslovakia 1989	no repression	0	The military was less generously funded, especially in comparison to the notorious internal security apparatus. Especially after the so called "Praque Spring" (1968) in neighboring Hungary, the resources were channeled into the internal security apparatus, which grew "in lieu of, and at the expense of, the military" (Szayna 1992, 6). This material imbalance led to a potential rivalry between the regular armed forces and the domestic security forces (ibid.).
	East Germany 1989	no repression	0	Though the East German party state maintained a rather modern, better equipped and trained military than other Warsaw Pact armed forces (Herspring 1988, 98), resources channeled into the military apparatus were not intended to safeguard the loyalty of the armed forces, but to enlarge the power of the party state, which – instead – maintained tight control over its coercive forces through close surveillance (Bröckermann 2011, 872). There was widespread dissatisfaction and disillusionment across career officers prior to the mass protests, also with regard to material endowments (Bröckermann 2011, 817; Ehlert 2004, 691).

Table A2: (continued)

	Case	Outcome	Material spoils	Description and sources
Europe	Romania 1989	no repression	0	Segal and Philips (1990, 970) write that "[t]he Securitate in Romania was built up specifically as a tough and loyal palace guard to protect the ruling Ceausescus, and the armed forces were equally specifically starved and humiliated." There was a rivalry concerning material endowments between the domestic security apparatus and regular armed forces as the latter "were also unhappy with their inferior salaries and perquisites as well as basic resources, especially compared to those of *Securitate* employees" (Barany 2016a, 125). The military "was treated poorly" (Barany 2016a, 128) by the regime. Soldiers even had to engage in nonmilitary activities to sustain their own food supplies, such as farming (Barany 2016a, 125).
	Serbia 2000	no repression	0	The Serbian military vied with the domestic security apparatus for budgets and equipment and numerous members of the military perceived a material degradation in contrast to other coercive units of the regime (Binnendijk and Marovic 2006, 417; see also Pion-Berlin, Esparza, and Grisham 2014, 241).
SSA	Mali 1991	repression	1	The opportunities to profit materially from Traoré's rule differed starkly between ordinary soldiers and military elites. While low-ranking soldiers "frequently went unpaid for weeks at a time" (Clark 1995, 210), higher ranking officers and regime elites were granted opportunities by the Traoré regime to enrich themselves through rampant corruption (François 1982, 32).

Table A2: (continued)

	Case	Outcome	Material spoils	Description and sources
SSA	Nigeria 1993	repression	1	Prior to the 1993 anti-regime mass protests, "the military still enjoy[ed] a disproportionate share of national expenditures. The military share of the federal government budget [was] one of the largest items of expenditure" (Agbese 1990, 295). Furthermore, there was limited civilian oversight over the military's financial endowments (Ruiz-Ramón 1994, 442). Next to this more formal military spoils, Babangida also ensured the military's loyalty with more informal means: "Field commanders were given huge sums of money disguised as security votes, which they were not required to account for. And all military officers from the rank of captain were given a new car which cost the nation several millions of naira" (Ikpe 2000, 155).
	Madagascar 1991	no repression	0	Before the 1991 mass uprisings, Madagascar's economic situation had been strained, which did not only result in a worsening of living conditions of the Malagasy population (Marcus and Ratsimbaharison 2005, 502), but also posed a challenge for the financing of the military. When the Soviet Union and the Eastern bloc started to disintegrate, this also resulted in declining military assistance, straining the already dire financial situation (Metz 1995, 298–299, 302–306). Reportedly, the lion's share of the purchased arms did not go to the regular military, but to the internal security apparatus (Covell 1987, 115–116).
	Malawi 1993	no repression	0	Banda did not extensively invest in his military, limiting its size, weaponry, and training (Charman 1997). He instead channeled funds into the Malawi Young Pioneers, which was also Banda's main tool of domestic repression (see previous domestic violation).

Table A2: (continued)

	Case	Outcome	Material spoils	Description and sources
MENA	Iran 2009	repression	1	President Mahmud Ahmadinejad provided the IRGC and Basij with various economic privileges and material perks during his first presidency. This enabled the Revolutionary Guards to build up a vast and dubious economic empire, which includes, for instance, farming and food production, activities in the building industry, or banking (e.g. Alfoneh 2007; Ottolenghi 2011, 41; Hashim 2012, 77; Thaler et al. 2010, 59–60).
	Bahrain 2011	repression	1	The Bahrain Defence Force (BDF) is "military is well funded, equipped, and trained by larger allies" (Mecham 2014, 351). The Khalifa monarchy spoils the military and its members with a comparatively large budget, advanced weaponry, and decent salaries (Barany 2016b, 12–13)
	Libya 2011	repression	1	The military was highly factionalized and Gaddafi created several coercive units with overlapping responsibilities to spy and counterbalance each other (Burns 2018, chapter 5; Gaub 2013): "The leaders of the military, particularly the regime-protection units, were Qaddafi family members, and the units were filled with tribal allies" (Burns 2018, 171). Hence, the coding refers only to the military leadership and the units essential for regime protection. Though the military, in general, was rather poorly equipped and suffered from financial scarcity (Lutterbeck 2013, 40), senior officers and special units profited materially from Gaddafi's rule (Barany 2016a, 147). The 32nd Brigade, led by Gaddafi's son Kahmis, in particular, was allocated better financial endowments, equipment, and training than other parts of the regular military (Gaub 2013; Lutterbeck 2013, 40).

Table A2: (continued)

	Case	Outcome	Material spoils	Description and sources
MENA	Syria 2011	repression	1	The Syrian regime's material perks targeted the senior officers in particular. The regime offered them the opportunity to maintain dubious business activities, what enabled them to enrich themselves and wedded their loyalty to the regime (Bou Nassif 2015a, 269; Springborg 2011). Soldiers of the Syrian Armed Forces also enjoyed other material privileges, such as a special housing program (Khaddour 2015).
	Tunisia 2011	no repression	0	The military was not particularly spoiled, especially not when compared to the personnel and vast resources of the internal security apparatus, which was Ben Ali's preferred coercive institution for deterring political dissent. While Ben Ali channeled vast resources into the security apparatus and its various coercive units, the military was worse off in terms of political influence, finances, and personnel (Bou Nassif 2015b; Bou Nassif 2021, 221–223; Lutterbeck 2013).
	Yemen 2011	repression	1	„In Saleh's Yemen, the army's top brass was treated well and paid off by the regime in several ways. Perhaps the most important of these was the Military Economic Corporation that emerged in the mid-1980s and was renamed Yemeni Economic Corporation in 1999. It has become an increasingly prosperous conglomerate overseen by military officers and was a main source of revenue for both Saleh and senior army commanders" (Barany 2016a, 147). Moreover, elite units led by Saleh's family members were materially better off than ordinary military forces (International Crisis Group 2013, 7–8).
Asia & Pacific	Bangladesh 1990	no repression	1	The military enjoyed material privileges under the rule of Ershad. Its expenditures were increased and the soldiers' wages and living were comparatively better than those of other public employees (Kochanek 1993, 62–63; Baxter and Rahman 1991, 52).

Table A2: (continued)

	Case	Outcome	Material spoils	Description and sources
Asia & Pacific	Burma 1988	repression	1	The Military profited immensely from the regime in material terms. Its budget regularly constituted the largest post among government expenditures (Selth 2002, 132). The military also was economically engaged: “Burma’s entire national wealth [was put] into the hands of the armed forces. Through the central government apparatus, which the regime seeded with thousands of retired and serving military officers, the Tatmadaw controlled all state-operated economic enterprises, and used them […] to support its military activities.” (Selth 2002, 146).
	China 1989	repression	1	Due to Deng’s modernization agenda, the regime purchased advanced, prestigious weaponry for the armed forces (Teufel Dreyer 1988, 218; Teufel Dreyer 1989, 650). Compared to the average population, members of the military were granted “better food, housing, and transportation” (Teufel Dreyer 1988, 219).
	Indonesia 1998	no repression	1	Suharto’s regime showered military elites with wide-reaching material benefits. They were allowed to engage in – often dubious and corrupt – business activities. And they had the prospects of being offered a position in the economy or administration after retirement (Mietzner 2009; Ufen 2002).
	Kyrgyzstan 2005	no repression	0	For economically stricken Kyrgyzstan, it was a major economic challenge to establish a capable and skilled national military following the collapse of the Soviet Union and the establishment of independent Kyrgyzstan in 1991 (Marat 2018, 63–64, 70; Toktomushev 2017, 105). Hence, the armed forces’ financial situation was dire prior to the 2005 political crisis (Grebenshchikov 2005).

Table A2: (continued)

	Case	Outcome	Material spoils	Description and sources
Asia & Pacific	Myanmar 2007	repression	1	Prior to the 2007 mass protests, the Burmese military regime spent vast amounts of the national budget on expanding the military's size and capabilities (Myoe 2009, chapter 4; Selth 2008, 288, 292ff.). Members of the military, their families, and veterans were granted privileges, such as scarce commodities, as well as access to special health care, welfare or education facilities (Croissant 2016, 321). Moreover, the military's ownership of two large business conglomerates – the Myanmar Economic Corporation and the Union of Myanmar Economic Holdings Ltd. – enabled officers to pursue business interests and exert significant influence on the national economy (Croissant 2016, 320; Myoe 2009, 175).
	Philippines 1986	no repression	1	Though economic problems forced Marcos to reduce the military's spending and personnel before the 1986 People Power Revolution (Miranda and Ciron 1988, 171), the armed forces had access to a number of financial privileges and material perks throughout his presidency (Casper 1991, 199; Hernandez 1985, 910; Lee 2015, 82ff.). Under Marcos, the military was also engaged in business activities, what served as another material perk (Casper 1991).
	South Korea 1987	no repression	1	The sources do not indicate that the military had to accept a material decline prior to the endgame. In fact, military expenditures increased prior to the 1987 crisis (Croissant 2004, 367). Furthermore, military officers had prospects for lucrative second-career opportunities after in the public or private sector after retirement (Croissant et al. 2013, 61). Under Chun, retired military officers constituted nearly half of all executives of public companies (Moon and Rhyu 2011, 256ff.).

Table A2: (continued)

	Case	Outcome	Material spoils	Description and sources
Asia & Pacific	Thailand 1992	repression	1	At the time of the endgame, key positions in the military were in the hand of a particular faction, the so called Class 5, which refers to a particular class of the Thai military academy (Lee 2006). Being a members of Class 5 meant substantially better prospects to be promoted to command positions, which was accompanied by a material ascent (Bhuchongkul 1992, 325; Christensen 1991, 99). Faction membership also enabled officers to engage in business, to be appointed to state companies, and enabled officers to enrich themselves.

Table A3: Coding conscription (2009-2011) and corresponding sources

Case	Conscription	Source
Tunisia 2011	Yes	Lutterbeck 2013
Libya 2011	Yes	Barany 2016a
Yemen 2011	Yes	Albrecht 2016
Bahrain 2011	No	Barany 2016b
Iran 2009	Yes	Azodi 2022
Syria 2011	Yes	Droz-Vincent 2016

Table A4: Descriptions and sources clarifying the coding of the condition previous military repression

	Case	Outcome	Previous domestic repression	Description and sources
Europe	Albania 1990	no repression	0	The armed forces were not an agent of domestic repression and deterrence of political opposition as the Communist regime mainly relied on its secret police Sigurimi for regime security (O'Donnell 1995).
	Czechoslovakia 1989	no repression	0	As other European Communist regimes, the Czechoslovak Socialist Republic (CSSR) relied on notorious and oppressive secret police in order to control the population, unearth political dissent, and suppress political opposition. Hence, the military did not play a major part in the regime's domestic political repression. During previous crises, the Czechoslovak People's Army (CSPA) remained passive and did not emerge an agent of domestic repression. The armed forces were deployed against demonstrations in Plzen in 1953, but reportedly "refused to put down the riot" (Barany 1992, 3). Also, during the 1968 crisis and the invasion of Czechoslovak Socialist Republic by other Soviet pact countries, "CSPA units remained in their barracks and were passive observers of the events" (ibid.).
	East Germany 1989	no repression	0	The East German military (Nationale Volksarmee, NVA) was not a domestic agent before the regime crisis as its primary mission was external security (Heinemann 2011, 58, 67–68). Instead, deterrence of political dissent and domestic political repression was the duty of the People's Police (Volkspolizei) and the East German security agency, the Ministry of State Security (*Stasi)* (Sperlich 2006, 90).

Table A4: (continued)

	Case	Outcome	Previous domestic repression	Description and sources
Europe	Romania 1989	no repression	0	The military was not a major tool of domestic political repression (Barany 2016a, 126). Instead, Ceausescu primarily relied on the notorious internal security agency Securitate to deter opposition to his rule and repress political dissent. As a consequence, the public "held their conscript army in high esteem, particularly when contrasted with the militia and the *Securitate"* (Barany 2016a, 126).
	Serbia 2000	no repression	0	The military was a domestic repressive agent under Milosevic. While the regular military was kept "relatively weak" (Downes and Keane 2006, 182), Milosevic maintained an internal security apparatus, including "a highly politicised, militarised, and centralised police force, a secret police and intelligence service" (ibid.). These domestic coercive forces were Milosevic's primary tools of political repression as they served "as an extension of his personalised political rule" and "were designed to control and eliminate opposition and civil liberties" (ibid.).
SSA	Mali 1991	repression	1	Prior to the 1991, the armed forces had been deployed to suppress rebelling and secessionists Tuareg in the north of Mali (Bere 2017, 62; Turrittin 1991, 99). Military deployment was also accompanied by human rights violations. For instance, following a Tuareg attack on a police station, the "punitive expedition of the Malian army led to arrests and executions of many persons. In July 1990 more than 100 civilians, including women and children, were executed without any legal proceedings" (Krings 1995, 60).

Table A4: (continued)

	Case	Outcome	Previous domestic repression	Description and sources
SSA	Nigeria 1993	repression	1	Babangida used the military as an agent of internal repression and deployed soldiers to conduct domestics security mission: As Ruiz-Ramon (1994, 454) notes: "This has often been the case in recent years when Army troops have intervened to quell widespread and violent religious riots pitting Muslims against non-Muslims, to suppress violent student uprisings and riots associated with price increases in food, fuel, and other commodities at one time or another" (ibid., 454).
	Madagascar 1991	no repression	0	Under the Ratsiraka regime, serious human rights violations were committed. Yet, the main institutions involved in the regime's domestic repression were the intelligence service and the Presidential Guard, not the regular military (Allen 2018; Metz 1995).
	Malawi 1993	no repression	0	Since Banda relied primarily on his internal security forces, including the police and the Malawi Young Pioneers (MYP), for deterring opposition to his rule, the armed forces were not a regular tool of domestic repression (Bratton and Van de Walle 1997, 214).
MENA	Iran 2009	repression	1	The coding refers to the Revolutionary Guard (IRGC) and its subordinate, the Basij militia. Both institutions were involved in serious human rights violations before the 2009 mass protests (e.g. Golkar 2020; US Department of State 2009). The IRRG are also involved in Iran's notorious prison system, where regime opponents suffer from mistreatment and torture (e.g. Human Rights Watch 2004). The Revolutionary Guard and the Basij milita also suppressed student protests before the 2009 mass protests, such as in 1999 and 2003 (Golkar 2019, 4; Hashim 2012, 75).

Table A4: (continued)

	Case	Outcome	Previous domestic repression	Description and sources
MENA	Bahrain 2011	repression	0	Prior to the 2011 major anti-regime unrest, the Bahrain's regular armed forces were not a domestic repressive agent. Though the regular armed forces constituted "the regime's last domestic line of defense versus its political foes" (Barany 2016b, 9), it "[was] seldom deployed against the people and [did] not ordinarily perform police functions" (ibid.). Domestic security and repression fall within the duties of the police (Mecham 2014, 351).
	Libya 2011	repression	1	"Members of the regular armed forces were not held in high regard […] in Libya, even if they were seldom used as tools of domestic suppression" (Barany 2016a, 147). While the ordinary units were poorly equipped and did not play a major role in providing internal security, Gaddafi maintained several elite military units next to the regular troops that were designed to protect Gaddafi and his regime against domestic enemies. The most capable and important of these units were the so called 32nd Brigade, led by Gaddafi's son Khamis, and the Revolutionary Guard (United Nations 2012). The military is identified as an agent of internal repression in (Croissant, Eschenauer, and Kamerling 2017).
	Syria 2011	repression	1	The Syrian military has a history of human rights violation and has been deployed in domestic repression prior to the endgame, for instance, it committed a massacre in Hama in the 1980s (Barany 2016a, 156; McLauchlin 2010).
	Tunisia 2011	no repression	0	In regional comparison, the Tunisian military was more apolitical and professional military than other Arab militaries. It was not involved in the regular domestic repression of President Ben Ali's police state, which was instead committed by the police and the internal security apparatus (Barany 2016a, 137; Brooks 2016, 213).

Table A4: (continued)

	Case	Outcome	Previous domestic repression	Description and sources
MENA	Yemen 2011	repression	1	The military has been used as a tool of domestic repression before the 2011 uprising and Saleh deployed soldiers to fend off opposition to his rule (Houthi rebellion) (see Heidelberg Institute for International Conflict Research. 2004 and following).
Asia & Pacific	Bangladesh 1990	no repression	1	The military played a major part in the provision of domestic security (Codron 2007, 57). Under Ershad, many military officers were appointed to key posts within the police, resulting in a militarization of the civil administration. In 53 out of 64 districts military officers were the superintendents of police (Hakim 1998, 289).
	Burma 1988	repression	1	The military was used before the crackdown on the 8-8-88 Uprising as an agent of domestic repression, committing human rights violations: “Ne Win used the army to suppress political opponents, protesters, students, monks, ethnic and religious minorities, and other civilians on numerous occasions, though most particularly in 1962, 1974, and 1988, arresting, torturing, and killing thousands” (McCarthy 2006, 125).
	China 1989	repression	0	Concerning a crackdown on major protests, Barany (2016a, 129) argues that Chinese soldiers “were *professionally* unprepared for their task of controlling and dispersing crowds because they were not previously called upon to conduct such operations”
	Indonesia 1998	no repression	1	The military has been used to deter political opposition to Suharto’s regime (Honna 2003) and had put down protests before the massive anti-regime protests in 1998 (Lee 2009, 658). As Lee (2015, 109) describes, the military’s “inaction in 1998 contrasts starkly with their repressive behavior where they had been quick to forcefully suppress any political opposition to the regime.”

Table A4: (continued)

	Case	Outcome	Previous domestic repression	Description and sources
Asia & Pacific	Kyrgyzstan 2005	no repression	0	There are no sources indicating a prior deployment of the military as an agent of domestic repression.
	Myanmar 2007	repression	1	The military has a history of domestic human rights violations (see Burma 1988).
	Philippines 1986	no repression	1	Under Marcos, the military was involved in the provision of internal security and served as an agent of internal repression (Hernandez 1985, 908, 914). Lee (2015, 67) noted that “members of the military were involved in the disappearances, torture, and murder of political dissidents” during the martial law period.
	South Korea 1987	no repression	1	The military was deployed to put down a major anti-regime uprising seven years before the 1987 protests. In 1980, thousands of troops, including special military forces, cracked down on an uprising in Kwangju, resulting in a high number of casualties (Kim 2012; Lee 1981; Oberdorfer 2001, 124–129; Oh 1999).
	Thailand 1992	repression	1	The military has been used in the provision of internal security before the 1992 mass uprising (Lee 2006, 58).

Table A5: Truth table for the outcome military repression of mass protests in autocracies

Spoils	Preferential	Unity	Conscription	Violation	Outcome (Repression)	N	Consistency	Cases
1	1	0	1	1	1	3	1	Mali 1991, Libya 2011, Yemen 2011
1	1	1	0	1	1	2	1	Burma 1988, Myanmar 2007
1	0	1	1	1	1	2	1	Iran 2009, Thailand 1992
1	1	1	0	0	1	1	1	Bahrain 2011
1	0	1	1	0	1	1	1	China 1989
1	1	1	1	1	1	1	1	Syria 2011
1	1	0	0	1	0	2	0.5	Nigeria 1993, Indonesia 1998
0	0	1	1	0	0	4	0	East Germany 2011, Czechoslovakia 1989, Romania 1989, Tunisia 2011
1	0	0	0	1	0	2	0	Bangladesh 1990, Philippines 1986
0	0	0	1	0	0	2	0	Albania 1990, Madagascar 1991
0	1	1	0	0	0	1	0	Malawi 1993
0	1	0	1	0	0	1	0	Kyrgyzstan 2005
0	1	1	1	0	0	1	0	Serbia 2000
1	0	0	1	1	0	1	0	South Korea 1987

8.2 Solution terms for the outcome military repression

Table A6: Sufficient conditions for military repression – conservative solution

Model: repression = f (preferential, unity, spoils, violation, conscription)			
	Raw Coverage	Unique Coverage	Consistency
spoils*unity*~preferential*conscription	0.273	0.273	1
spoils*unity*preferential*~conscription	0.273	0.273	1
spoils*preferential*violation*conscription	0.364	0.364	1
Solution coverage: 0.909			
Solution consistency: 1			

Note: ~ signifies the absence of a condition ("no/not"); * implies a logical "and".

Tables A7 & A8: Sufficient conditions for military repression (most parsimonious solution)

Model 1: spoils*unity + spoils*preferential*conscription → repression

Model: repression = f (preferential, unity, spoils, violation, conscription)			
	Raw Coverage	Unique Coverage	Consistency
spoils*unity	0.636	0.545	1
spoils*preferential*conscription	0.364	0.273	1
Solution coverage: 0.909			
Solution consistency: 1			

Model 2: spoils*unity + preferential*violation*conscription → repression

Model: repression = f (preferential, unity, spoils, violation, conscription)			
	Raw Coverage	Unique Coverage	Consistency
spoils*unity	0.636	0.545	1
preferential*violation*conscription	0.364	0.273	1
Solution coverage: 0.909			
Solution consistency: 1			

Table A9: Sufficient conditions for military repression – intermediate solution

Model: repression = f (preferential, unity, spoils, violation, conscription)			
	Raw Coverage	Unique Coverage	Consistency
unity*spoils	0.636	0.545	1
preferential*spoils*violation*conscription	0.364	0.273	1
Solution coverage: 0.909			
Solution consistency: 1			

Note: ~ signifies the absence of a condition ("no/not"); * implies a logical "and".

Table A10: Sufficient conditions for military repression – enhanced intermediate solution

Model: repression = f (preferential, unity, spoils, violation, conscription)			
	Raw Coverage	Unique Coverage	Consistency
unity*spoils	0.636	0.545	1
preferential*spoils*violation*conscription	0.364	0.273	1
Solution coverage: 0.909			
Solution consistency: 1			

Note: ~ signifies the absence of a condition ("no/not"); * implies a logical "and"; the enhanced intermediate solution is identical to the standard intermediate solution.

Table A11: Truth table for the absence of military repression of mass protests in autocracies

Spoils	Preferential	Unity	Conscription	Violation	Outcome (~Repression)	N	Consistency	Cases
0	0	1	1	0	1	4	1	East Germany 2011, Czechoslovakia 1989, Romania 1989, Tunisia 2011
1	0	0	0	1	1	2	1	Bangladesh 1990, Philippines 1986
0	0	0	1	0	1	2	1	Albania 1990, Madagascar 1991
0	1	1	0	0	1	1	1	Malawi 1993
0	1	0	1	0	1	1	1	Kyrgyzstan 2005
0	1	1	1	0	1	1	1	Serbia 2000
1	0	0	1	1	1	1	1	South Korea 1987
1	1	0	0	1	0	2	0.5	Nigeria 1993, Indonesia 1998
1	1	0	1	1	0	3	0	Mali 1991, Libya 2011, Yemen 2011
1	1	1	0	1	0	2	0	Burma 1988, Myanmar 2007
1	0	1	1	1	0	2	0	Iran 2009, Thailand 1992
1	1	1	0	0	0	1	0	Bahrain 2011
1	0	1	1	0	0	1	0	China 1989
1	1	1	1	1	0	1	0	Syria 2011

8.3 Solution terms for the absence of military repression

Table A12: Sufficient conditions for the absence of repression – conservative solution

Model: ~ repression = f (preferential, unity, spoils, violation, conscription)			
	Raw Coverage	Unique Coverage	Consistency
~spoils*~violation*conscription	0.615	0.538	1
~spoils*unity*preferential*~violation	0.154	0.077	1
spoils*~preferential*~unity*violation	0.231	0.231	1
Solution coverage: 0.923			
Solution consistency: 1			

Note: ~ signifies the absence of a condition ("no/not"); * implies a logical "and".

Table A13: Sufficient conditions for the absence of repression – intermediate solution

Model: ~ repression = f (preferential, unity, spoils, violation, conscription)			
	Raw Coverage	Unique Coverage	Consistency
~ spoils*~ violation	0.692	0.538	1
~ preferential*~ unity	0.385	0.231	1
Solution coverage: 0.923			
Solution consistency: 1			

Note: ~ signifies the absence of a condition ("no/not"); * implies a logical "and".

8.4 Robustness: including condition personalist regime

Table A14: Necessity analysis for outcome military repression

Condition	Consistency	Coverage	RoN
personalist	0.182	0.286	0.773
~personalist	0.818	0.529	0.467

Note: ~ is used to denote the absence of a condition (logical "NO/NOT"); RoN refers to the Relevance of Necessity measure

Tables A15 & A16: Sufficient conditions for military repression (most parsimonious solution)

Model 1: spoils*unity + spoils*preferential*conscription → repression

Model: repression = f (preferential, unity, spoils, violation, conscription, personalist)			
	Raw Coverage	Unique Coverage	Consistency
spoils*unity	0.636	0.545	1
spoils*preferential*conscription	0.364	0.273	1
Solution coverage: 0.909			
Solution consistency: 1			

Note: ~ signifies the absence of a condition ("no/not"); * implies a logical "and".

Model 2: spoils*unity + preferential*violation*conscription → repression

Model: repression = f (preferential, unity, spoils, violation, conscription, personalist)			
	Raw Coverage	Unique Coverage	Consistency
spoils*unity	0.636	0.545	1
preferential*violation*conscription	0.364	0.273	1
Solution coverage: 0.909			
Solution consistency: 1			

Note: ~ signifies the absence of a condition ("no/not"); * implies a logical "and".

Table A17: Necessity analysis for the absence of military repression

Condition	Consistency	Coverage	RoN
personalist	0.385	0.714	0.895
~personalist	0.615	0.471	0.438

Note: ~ is used to denote the absence of a condition (logical "NO/NOT"); RoN refers to the Relevance of Necessity measure.

Table A18: Sufficient conditions for the absence of repression – parsimonious solution

Model: repression = f (preferential, unity, spoils, violation, conscription, personalist)			
	Raw Coverage	Unique Coverage	Consistency
~ spoils	0.692	0.538	1
~ spoils*~unity	0.385	0.231	1
Solution coverage: 0.923			
Solution consistency: 1			

Note: ~ signifies the absence of a condition ("no/not"); * implies a logical "and".

Table A19: Sufficient conditions for military repression (enhanced most parsimonious solution)

Model: repression = f (preferential, unity, spoils, violation, conscription, personalist)			
	Raw Coverage	Unique Coverage	Consistency
spoils*unity	0.636	0.545	1
spoils*preferential*conscription	0.364	0.273	1
Solution coverage: 0.909			
Solution consistency: 1			

Note: ~ signifies the absence of a condition ("no/not"); * implies a logical "and".

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VI. Paper 5

Militaries' roles in political regimes: introducing the PMR data set

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Abstract

Have militaries become tired of interfering in politics? The declining number of military regimes and military coups implies a decrease in the influence of armed forces on political regimes. Yet, case and area studies underline that militaries still exert considerable influence on politics all over the world. This research note addresses this apparent misfit between quantitative data and qualitative studies by introducing a new measurement of armed forces' roles in political regimes. Based on previous research, we develop a systematic measure to differentiate between two dimensions of military interference in political regimes: the military ruler and the military supporter indices. Our Political Roles of the Military (PRM) Data Set contains information on 120 democratic and autocratic regimes and a total of 138 regime spells for the period 1999–2012. The data set offers a whole range of indicators that will enable scholars to carry out causal-analytical studies on different forms and degrees of military influence on policy outcomes, economic performance, or the likelihood of regimes successfully facing and surviving political crises. Empirically, our data illustrate that militaries remain powerful actors in many regimes but tend to use more discreet and concealed channels to influence politics.

Key words

Civil-military relations; military influence; military ruler; military supporter

1. The crux of measuring military influence

Across all world regions and regime types – both autocratic and democratic – militaries remain potentially highly influential political actors. For example, military[1] support was decisive for the survival of Arab autocrats during the Arab uprisings in 2010–2011 (Barany 2011; Nepstad 2013); Myanmar's armed forces may have officially transferred power to a civilian government in 2011 but still retain considerable political influence (Croissant and Kamerling 2013); and the suspension of Brazilian President Dilma Rousseff in 2016 was not merely a plot by the opposition but, reportedly, backed by the country's top military leaders, who promised to keep ensuing protests in check (Fischermann 2016; Usborne 2016). Yet, data sets on military coups and military regimes draw a completely different picture: in the post-1980s period, the number of military regimes and coups has drastically declined (Geddes, Wright, and Frantz 2014; Powell and Thyne 2011). Militaries, so it seems, have become less influential and are tired of meddling with politics. This apparent misfit between quantitative data and qualitative studies highlights two gaps in current research. Filling both of these gaps requires the generation of a data set on military influence in autocracies and democracies alike, with inter-regional coverage and suitable for large-N comparative studies. We address these lacunae by introducing a new measurement of armed forces' roles in political regimes and a data set on Political Roles of the Military.

A first limitation of contemporary studies of military influence is a strong regional and methodological bias. Our knowledge of military interventions in and impact on politics is mainly based on studies of Latin America; there is little. research on military influence in sub-Saharan Africa and the Middle East and North Africa (MENA) regions and even less for Asian and European regimes. Methodologically, we find a precedence of intra-regional small-N designs, whereas systematic inter-regional comparisons, large-N quantitative approaches, and methodological innovations like

[1] In many countries, there exist a wide range of state and non-state security actors, some even acting as direct counterbalance to the military (Quinlivan 1999). Following Croissant and Kuehn (2015, 259), we mean by military 'all segments of the state-organised and uniformed armed services that share three defining criteria: (1) they possess the monopoly over weapons of war; (2) their primary purpose is the defence of the nation-state and its citizens against external military threats; and (3) they are legalised as instruments of the state'. All coding in the data set is based on this definition. Thus, sources need to mention direct involvement of the 'military', 'army', 'soldiers', or the 'armed forces' for us to code military influence. Mere mention of 'security forces' or 'security agents' is not considered in our coding.

Qualitative Comparative Analysis (Croissant and Kuehn 2015; Kuehn et al. 2016) are rare. Thus, both the generalisability and explanatory power of studies on military influence are limited. Second, coup and regime-type data sets are widely used to assess military interference in politics. Yet, measuring military influence by coups (or attempts) falsely implies that, in their absence, the armed forces are under perfect political control and have little influence on political decisions. Instead, the absence of coups might be the result of there being little incentive to stage a coup for a military that already enjoys considerable influence over political authorities. Only militaries that fear a loss of influence in bargaining with a dictator or are striving for more concessions or to enlarge their share of the spoils have incentives to intervene in the political process and assume power for themselves (Svolik 2012). This 'fallacy of coup-ism' (Croissant et al. 2010) turns a blind eye to subtle and concealed forms of military interference. Political regime data sets (Cheibub, Gandhi, and Vreeland 2010; Geddes, Wright, and Frantz 2014; Magaloni, Min, and Chu 2013; Wahman, Teorell, and Hadenius 2013), conversely, often determine regime type by distinguishing between military and political leadership (Croissant and Kuehn 2015). This dichotomous differentiation between military and non-military regimes, however, cannot capture more nuanced patterns of political-military relations in which military elites neither head the government nor exercise political power directly but still maintain a tight grip on political authorities (Cook 2007; Finer 1985). Furthermore, approaches to conceptualising military influence as different models of political-military relations (Nordlinger 1977; Perlmutter 1981) or as a continuum of military decision-making power over policy domains (Croissant et al. 2010) require meticulous data generation and are hence hardly applicable in large-N comparative (quantitative) analyses. Thus, analyses that go beyond the country-level data on the extent of military influence are badly needed.

The construction of our data set, Political Roles of the Military (PRM), was driven by two research questions: (1) How can we conceptualise different forms of military influence in authoritarian and democratic regimes? (2) How can we identify those forms of military interference that fall into the grey zone between 'direct' or open military rule (military regimes) and 'full' or complete civilian control of the military? This research note has three stages: First, we modify and extend Basedau and Elischer's (2013) concepts of *ruling* and *supporting militaries*. Based on their framework, we develop a measure which systematically differentiates between two dimensions of military interference, and we operationalise it in a number of

measurable indicators. Second, we introduce our data set, which is based on the country sample of the Bertelsmann Transformation Index or BTI (Bertelsmann Stiftung 2016) and comprises 1,546 observations, for eight original variables, in 120 democratic and authoritarian regimes, for the years 1999–2012.[2] Third, we conclude by discussing the potential applicability of our data.

2. Conceptualisation and data set construction

Basedau and Elischer (2013) argue that the drastic decrease in the number of military coups in sub-Saharan Africa since the 1980s does not imply an equivalent decline in the influence of the region's militaries. Rather, these developments signal a behavioural change in African armed forces, which have assumed new roles and use more discreet channels to exert influence on the political decision-making process (ibid., 358). To capture these new forms of military influence in sub-Saharan Africa, Basedau and Elischer propose a two-dimensional concept: *ruling* and *supporting militaries*.

2.1 Ruling militaries

Ruling militaries result from either a military coup or a civil war. Following a takeover, coup leaders or rebels assume leading positions and overtly or discreetly dominate the ruling coalition as well as the political process. Due to the dominance of the armed forces over the polity, the democratic logic of elections – if they are even held – is ultimately turned ad absurdum (ibid., 360).

2.2 Supporting militaries

Political leaders are likely to grant the armed forces concessions and privileges if the military is indispensable for a regime's survival. Military and political leadership form a symbiotic relationship in which the *supporting military* provides repression and assistance for the regime and receives privileges and autonomy in return, such as veto-power to shape policies to its will and impunity for acts that might otherwise subject them to criminal prosecution (ibid., 361). Two points must be emphasised. First, the categories of *ruling* and *supporting militaries* do not constitute a regime

[2] Following the most recent publication of the BTI (Bertelsmann Stiftung 2016), we plan to extend the time-span of the data set to 2014.

typology but are measures of military influence – characterised by the military's functions and privileges – across regime types. Second, *ruling* and *supporting militaries* signal highly defective control over the armed forces. While *ruling militaries* are bound to autocracies, since they undermine democratic institutions and processes completely, *supporting militaries* can be found in both autocratic and democratic regimes.[3]

2.3 Variables and operationalisation

Basedau and Elischer's approach successfully overcomes the flawed assessment of military influence by military regimes and coups. Nonetheless, their study has some conceptual shortcomings and is empirically limited to sub-Saharan Africa. To address these shortcomings, we modify their approach and extend the geographical coverage to provide a world-wide data set on military influence (Table 1).

Following Basedau and Elischer, we measure military influence using two independent, aggregated indices, *military ruler* and *military supporter* (Figure 1). Yet, unlike Basedau and Elischer, who only provide data for sub-Saharan countries for the period 2000–2010 with unknown time intervals, we gather our data on a yearly basis and cover a time period of 13 years, 1999–2012. Our research sample is based on the biannually published BTI, containing information on 129 transformation states in Africa, Asia, post-communist Europe, Latin America, and MENA as well as the post-Soviet countries of Eurasia with a population of at least two million people. Using the BTI offers both empirical and theoretical advantages. Empirically, we stay close to Basedau and Elischer's original approach, as they employ the BTI as one of their most important data sources. In addition, the BTI provides detailed and publicly available country reports on political and economic development, increasing data transparency. Theoretically, militaries in transformation states – states that have lately transitioned from autocracy to democracy or where such a transition has not (yet) taken place – often play a central role; establishing political control over the armed forces is crucial for the consolidation of young democracies (Merkel 2010). Consolidated liberal democracies, in contrast, enjoy full civilian control over their armed forces and are thus not expected to generate valuable information on military influence.

[3] Note that democratic regimes with military *supporters* must be considered highly defective (Merkel et al. 2003).

Table 1: Operationalisation of military influence

	Basedau and Elischer (2013)	Political Roles of the Military data set
Regional focus	Sub-Saharan Africa	Transformation states (BTI sample)
Data generation	unknown intervals, 2000–2010	yearly, 1999–2012
Military ruler (*mi_ruler*)		
Military origin	(1) Regime originates from military coup or military victory in a civil war; ensuing elections, if any, are neither free nor fair (0) Any other origin	(1) Regime originates from a military intervention or military victory in a civil war; ensuing elections, if any, are neither free nor fair (0) Any other origin or military origin occurred more than 25 years ago
References	FH, BTI, secondary sources	FH, BTI, USHRR, Polity IV, Powell and Thyne (2011)
Political leader	(1) Political leader is an active or retired member of the military or former rebel leader (0) Political leader is neither an active / retired member of the military nor a former rebel leader	(1) Political leader is an active member of the military or a former rebel leader (0.8) Political leader is a retired member of the military (0) Political leader is neither an active/retired member of the military nor a former rebel leader
References	BTI, FH, online research on government homepages, USHRR	BTI, FH, DPI, Polity IV, USHRR, secondary sources
Minister of defence (MOD)	(1) MOD is an active or retired member of the military or former rebel leader, or the term of MOD with a military background lasts at least three quarters of the research period (0) MOD is neither an active nor retired member of the military nor former rebel leader, or the term of MOD with a military background was shorter than one quarter of the research period	(1) MOD is an active member of the military (0) MOD is no active member of the military or there is no MOD
References	DPI and research on government homepages, if data not available	DPI, secondary sources

Table 1: (continued)

Military supporter (*mi_support*)		
Veto-power	(1) Military is explicitly mentioned as a veto-player or the effective power to govern is restricted due to military influence (0) Military is not explicitly mentioned as a veto-player or the effective power to govern is not restricted by the military	(1) Military is explicitly mentioned as a veto-player or the effective power to govern is restricted due to military influence (0) Military is not explicitly mentioned as a veto-player or the effective power to govern is not restricted by the military
References	BTI, Afrika-Jahrbücher (until 2003), Africa Yearbooks, secondary sources	BTI
Repressive agent	(1) Military is employed to put down protests (0) No indication for military involvement in putting down protests	(1) Military is internally employed as a repressive agent. This includes all de facto internal employment of the military to deter political dissent (0) Military is not internally employed as a repressive agent
References	FH, USHRR	FH, USHRR, BTI
Impunity	(1) No legal prosecution of military involvement in corruption and other illegal activities (0) Legal prosecution of corruptive practices and illegal activities by members of the military or; or the military is not involved in corruption or illegal activities	(1) Military is involved in illegal activities and there is no indication of legal prosecution and conviction of members of the military, or prosecution and conviction are politically motivated or disproportional to the number and severity of crimes committed (0) Military is not involved in illegal activities; or legal prosecution and conviction are appropriate
References	USHRR	USHRR

Our yearly measurement allows for a more fine-grained analysis than Basedau and Elischer's dichotomous categories. To capture gradual differences in military influence, we build two ordinal indices: the *military ruler* index and the *military supporter* index. The *military ruler* index reflects the military's *ruling* characteristics: it depicts dependencies and links between the military, on the one hand, and the regime and its ruling elite, on the other. The *military supporter* index measures the military's role in deterring opposition and the concessions provided by the political leadership in return.

Figure 1: Conceptualising military influence in two indices

The *military ruler* index (*mi_ruler*) comprises three variables: military origin (*mi_origin*), political leader (*mi_leader*), and minister of defence (*mi_mod*). Military origin measures whether a regime is established through a military coup or a civil war, and whether ensuing elections either do not take place or are neither free nor competitive as defined by Polity IV.[48] We reset *mi_origin* to 'not military' if more than 25 years have passed since the military origin of the ruling elite.[49] The variables political leader and minister of defence measure the link between the regime's political leadership and the armed forces.[50] The *military supporter* index (*mi_support*) focuses on the military's role in internal repression and its political and legal privileges and exemptions. We consider the military to be a repressive agent (*mi_repress*) if it is internally deployed against political protests and/or separatists, or uses pre-emptive repression to deter potential political dissent. The armed forces possess veto-power (*mi_veto*) if they hinder the political decision-makers' effective power to

[48] This is the case if Polity IV variable 'executive recruitment '(EXREC) has a value lower than 7. We cross-check contradictory or unclear cases with Freedom House country reports.

[49] A temporarily unrestricted coding leads to counter-intuitive results. Consider the case of China: since the Chinese civil war in 1949, China has never held free and fair elections, which, following the original approach, would demand a coding as a military regime origin. Yet, we can hardly argue that the current relationship between military and political leadership reflects the situation of 1949 (Li 2007, 2010).

[50] Rebel leaders are coded as 'military', based on the assumption that victorious guerrilla movements will form the regime's new military (Wahman, Teorell, and Hadenius 2013).

govern or are an anti-democratic actor. We code impunity of the armed forces (*mi_impun*) if criminal acts of members of the military do not elicit criminal prosecution and conviction. We base our coding of these variables on the Database of Political Institutions or DPI (Beck et al. 2001), Freedom House (FH) Reports (Freedom House 1999–2013), the BTI Country Reports, and the US Department of State Human Rights Reports, or USHRR (US Department of State 2000–2013); we employ additional secondary sources where information was missing.[51]

2.4 Data aggregation: identifying supporting and ruling militaries

The yearly data are coded dichotomously (0/1), 1 indicating military influence.[52] The aggregation of our indices is conducted in three steps.[53] First, we identify regime spells based on Magaloni et al's Autocracies of the World data set, which covers our entire sample, and calculate the proportion of years for which we find military influence for each indicator. This reduces variation in yearly data that might falsely imply a sudden change of military influence. A military that is regularly deployed in internal repression, for example, might have taken pre-emptive measures to crush opposition strength, as in Thailand in 2010, thereby discouraging the opposition from engaging in acts that might lead to open confrontation with the armed forces in ensuing years.

Second, based on the proportional data, each of the six variables of military influence – origin, leader, minister of defence, veto-power, repression, and impunity – receives a score on a four-point scale ranging from 0 to 3:

(0) Proportion of years coded 1 < 25 per cent of years of spell.
(1) Proportion of years coded 1 > 25 per cent and < 50 per cent of years of spell.
(2) Proportion of years coded 1 > 50 per cent and < 75 per cent of years of spell.
(3) Proportion of years coded 1> 75 per cent of years of spell.

Third, we use these ordinal indices to construct the *military ruler* and the *military supporter* indices, based on Basedau and Elischer's theoretical framework. Because the mere existence of a regime leader or defence minister with a military background

[51] Detailed documentation of sources is part of the codebook.
[52] Political leader is the only exception to this rule. Here, we grant a score of 0.8 for retired members of the armed forces (see Table 1).
[53] We provide a detailed documentation of the aggregation process in the codebook.

cannot in itself prove the entanglement of the ruling elite and the armed forces (consider Susilo Bambang Yudhoyono in Indonesia, or Fidel Ramos in the Philippines), for a regime to be judged as having a *ruling* military, they argue, the regime must have had a military origin in addition to either a military regime leader or minister of defence (2013, 382). For the identification of *supporting* militaries, the authors demand at least two of the three indicators to be present. This relationship of the indicators can best be translated by Boolean algebra.

The *military ruler* index is constructed by the formula:

mi_ruler = *mi_origin* AND (*mi_leader* OR *mi_mod*)

The *military supporter* index is the result of:

mi_support = (*mi_veto* AND *mi_repress*) OR (*mi_veto* AND *mi_impun*) OR (*mi_repress* AND *mi_impun*)

Both indices range from 0 to 3: values higher than 0 can only be achieved if the conceptual demands – e.g. military origin and military regime leader or defence minister – are met; higher values indicate greater degrees of military influence – the value of both indices depends on the number of years in which military influence was detected as well as on the number of criteria met.[54]

3. Introducing the data set

The resulting *PRM* data set contains information on 120 countries and 138 regime spells for 1999–2012 (see Table 1 in codebook). The regime spells are evenly distributed across world regions, ranging from 15 in post-Soviet Eurasia to 27 in Asia and Oceania (Figure 2).[55]

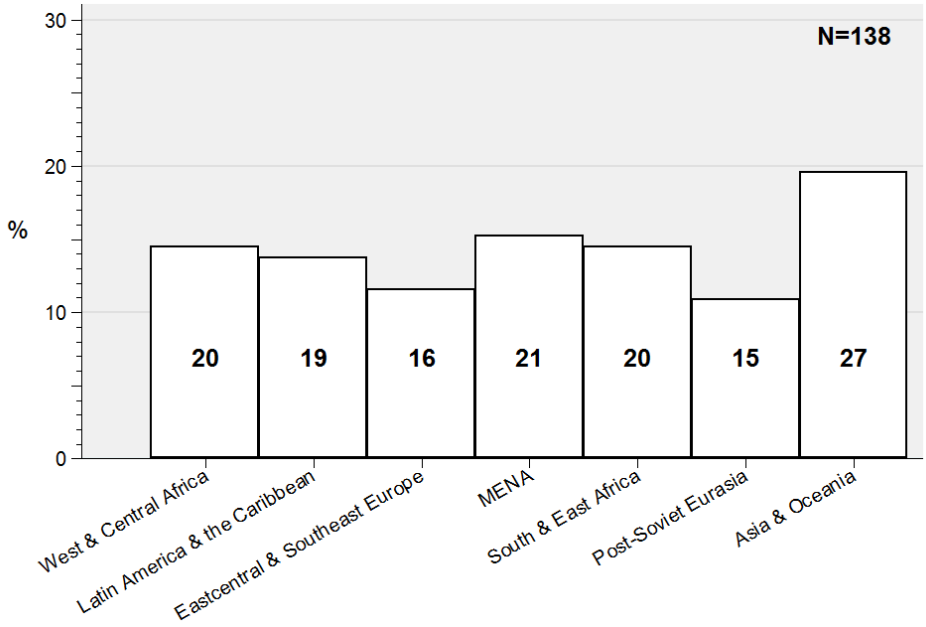
Looking at the two dimensions of military influence, we find militaries with supporting attributes to be more common than militaries with ruling characteristics (Figure 3): 40.58 percent (56) of all spells score a value above 0 on the *military supporter* index, i.e. militaries in these regime spells are – to some degree – agents of internal repression, act as veto-players, and/or enjoy impunity. In 24 regime spells (17.39 percent), the ruling coalition has ties to the armed forces; the political elite

[54] Our published data set comprises all indicators for military influence, yearly data, and aggregated indices. We provide the rules for index construction as a Stata do-file.

[55] Note that the number of regime spells is equally dependent on the number of countries per region as well as the stability of regimes.

owes its access to political power to the military, and high-ranking members – that is, the regime leader or defence minister – have direct links to the armed forces.

Figure 2: Regional distribution of regime spells



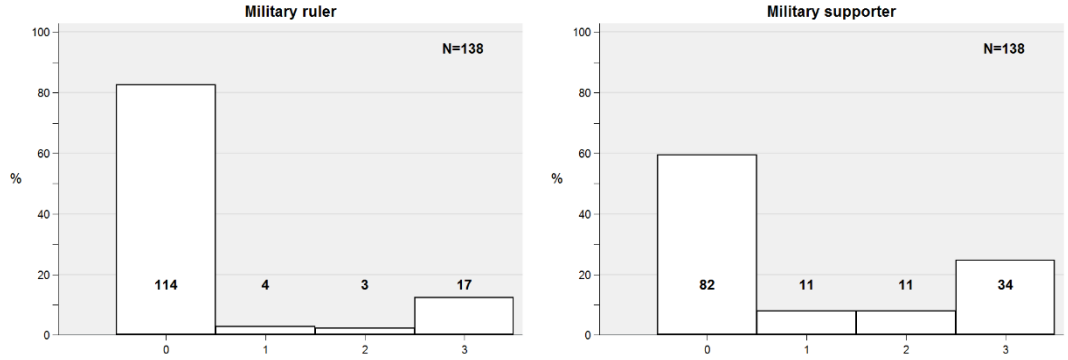
The distribution of influential militaries differs widely across world regions (Table 2). Our data set identifies no influential militaries in East-Central and South-East Europe. In Latin America and the Caribbean, we find no militaries with *ruling* attributes but seven regime spells with militaries showing *supporting* qualities: most prominently in Colombia (1999–2012) and Venezuela (2002–2012); each receives a score of 3. West and Central Africa is among the regions with the highest number of regime spells with influential armed forces, on both the *ruling* and the *supporting* dimension. We find the highest number of regime spells with *supporting* militaries in MENA (12), ten of these receive a score of 3 – among these are Egypt (1999–2011), Libya (1999–2010), and Turkey (1999–2012). South and East Africa shows very high numbers of both types of military influence, including Burundi (1999–2002), Eritrea (1999–2012), and Rwanda (1999–2012).

The armed forces of Post-Soviet Eurasia play a rather marginal role in the *ruling* (2) as well as the *supporting* dimension (1). The spells with militaries with *ruling* attributes stem from a military coup (Azerbaijan 1999–2012[56]) and civil war (Tajikistan

[56] Following the military coup of 1993, Heydar Aliyev (civilian) became president, and ensuing elections were marred by irregularities and are not considered free and fair; all MODs in the period 1999–2012 were military.

1999–2012), in which ensuing elections were neither free nor fair. The armed forces of Russia (1999–2012) enjoy impunity, exercised internal repression from 1999 to 2004, and are considered to have been veto-actors since 2006. Only two regime spells in Asia and Oceania have a *ruling* military: Myanmar (1999–2011) and Pakistan (1999–2007). In contrast, we find one of the highest accumulations of armed forces with *supporting* characteristics (12); examples are Indonesia (1999–2012) and Laos (1999–2012).

Figure 3: Distribution of military ruler and military supporter



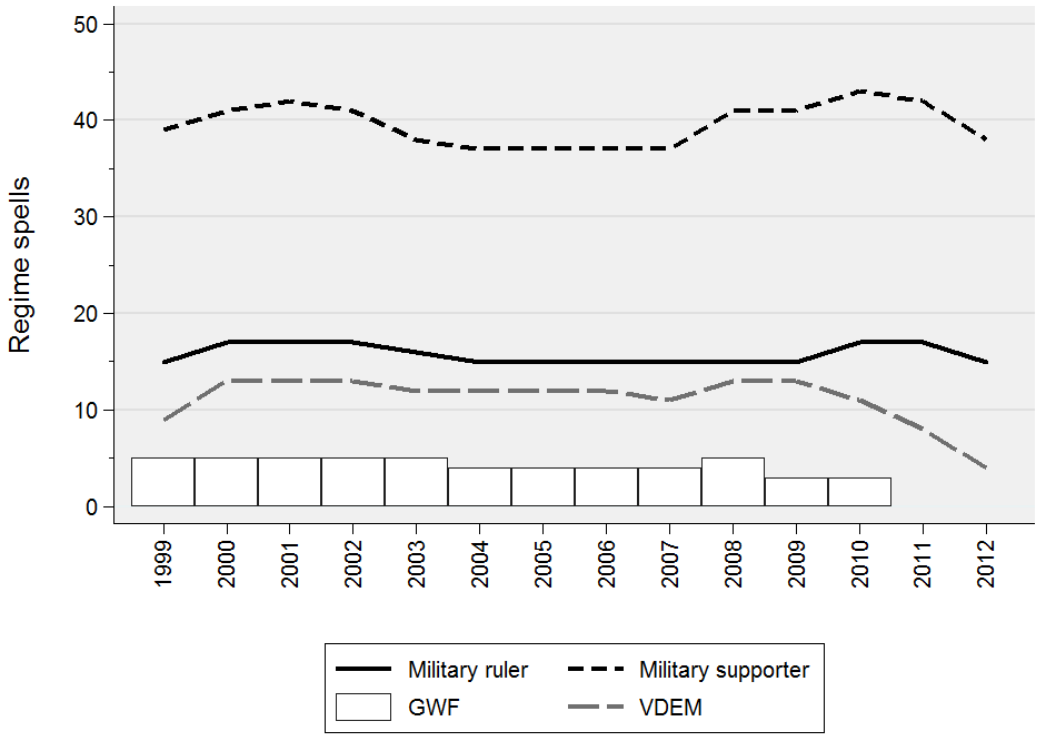
These findings correspond to single-case and area studies: While literature on Latin America identifies a change in the traditionally extensive role of the armed forces (Mares and Martinéz 2014; Pérez-Liñán and Polga-Hecimovich 2016), studies on sub-Saharan Africa postulate continuing interference in politics by military actors (Harkness 2016; Ouédrago 2014). The low level of military influence in Eastern and South-Eastern Europe as well as post-Soviet Eurasia mirrors the traditionally tight civilian control of the armed forces in these regimes, in which internal coercive agencies are responsible for repression rather than armies (Barany 2012; Born et al. 2006; Fluri and Cibotaru 2008; Marat 2009; Rivera and Rivera 2014; Sehring and Stefes 2010). Our data suggest that Asian militaries seldom dominate politics but regularly repress opposition in return for privileges. This is particularly common in civilian but militarised dictatorships, e.g. Laos (Freeman 2006). Our data also support findings on Arab political-military relations: MENA's former 'praetorian militaries' (Perlmutter 1974) transformed from open military rulers to crucial providers of regime support (Cook 2007; Rubin 2002; Springborg 2016).

Table 2: Military influence across world regions

	Military ruler					Military supporter				
BTI regions	0	1	2	3	Total	0	1	2	3	Total
East-Central & Southeast Europe	16	0	0	0	16	16	0	0	0	16
	100.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	100.0%
Latin America & the Caribbean	19	0	0	0	19	12	5	0	2	19
	100.0%	0.0%	0.0%	0.0%	100.0%	63.2%	26.3%	0.0%	10.5%	100.0%
West & Central Africa	11	2	3	4	20	7	3	6	4	20
	55.0%	10.0%	15.0%	20.0%	100.0%	35.0%	15.0%	30.0%	20.0%	100.0%
MENA	17	1	0	3	21	9	0	2	10	21
	81.0%	4.8%	0.0%	14.3%	100.0%	42.9%	0.0%	9.5%	47.6%	100.0%
South & East Africa	13	1	0	6	20	9	1	2	8	20
	65.0%	5.0%	0.0%	30.0%	100.0%	45.0%	5.0%	10.0%	40.0%	100.0%
Post-Soviet Eurasia	13	0	0	2	15	14	0	1	0	15
	86.7%	0.0%	0.0%	13.3%	100.0%	93.3%	0.0%	6.7%	0.0%	100.0%
Asia & Oceania	25	0	0	2	27	15	2	0	10	27
	92.6%	0.0%	0.0%	7.4%	100.0%	55.6%	7.4%	0.0%	37.0%	100.0%
Total	114	4	3	17	138	82	11	11	34	138
	82.61%	2.90%	2.17%	12.32%	100.0%	59.42%	7.97%	7.97%	24.64%	100.0%

Literature thus supports the empirical plausibility of our indices but do they provide additional information to common regime typologies? To answer this question, we compare our indices to Geddes et al.'s (2014) Autocratic Regimes data set (GWF, arguably the best measure of military regimes (Croissant and Kuehn 2015). For this comparison, we consider all hybrid military regimes identified by Geddes et al.[57] Additionally, we compare our data to the Varieties of Democracy data set (VDEM; see Coppedge et al. 2016). We code the VDEM measure as the number of countries in which the military 'would be likely to succeed in removing the head of state' and/or 'the head of government' and/or 'the head of state customarily seeks approval (from the military) prior to making important decisions on domestic policy'.

Figure 4: Military influence vs. military regimes



Based on the GWF data set, we find a constant decline in the numbers of military regimes and military hybrids in the regime spells of our sample (Figure 4), from five in 1999 – Algeria, Burundi, Myanmar, Nigeria, and Rwanda – to three in 2010 – Algeria, Myanmar, and Rwanda. The VDEM data attribute the armed forces of nine[58]

[57] These are 'all military', 'indirect military', 'military–personal', 'party–military', and 'party–personal-military' regimes (Geddes, Wright, and Frantz 2014).

[58] Angola, Bangladesh, Central African Republic, Egypt, Guatemala, Ivory Coast, Mali, Pakistan, and Turkey.

countries in1999 considerable veto-power and/or dependence of the political elite. This number remains more or less constant over time; in 2010 it stands at 11.[59]
In contrast, our index of *military ruler* identifies 15 regime spells with a coding of 1 or higher in 1999. Instead of a decline, the number of *ruling* militaries remains rather constant and even goes up to 17 in 2000–2002 and 2010/2011. We detect *supporting* militaries in 37–42 regime spells per year, peaking in the periods 2000–2002 and 2008–2011. These findings indicate, first, that our indices capture more discreet modes of military influence than counting direct/indirect military regimes and thus identify considerably more spells with powerful armed forces than do regime typologies.[60] Second, unlike regime-type data, our indices do not show a constant decline in military influence, which complements findings of single-case and area studies on the still highly relevant role of militaries.

4. Conclusion

Political Roles of the Military (*PRM*) is an inter-regional, large-N data set that overcomes the fallacy of coup-ism and goes beyond the identification of military regimes. Up to now, researchers applying large-N cross-regional studies have had to fall back on coup data and regime typologies to measure military interference in politics. These indicators, however, do not adequately depict the contemporary empirical roles of armed forces, which often lie between direct military rule and full civilian control. By depicting military influence as two ordinal indices, military ruler and supporter, we offer the necessary tools to assess the effects of different modes and varying intensities of military interference.

Methodologically, our data set not only enables researchers to carry out descriptive comparative analyses on the distribution of military influence between certain countries, across regions, or globally; it will also facilitate causal-analytical studies on military impact on policy outcomes. The *military ruler* index is suitable for testing theoretical arguments that refer to the military's functions in ruling the country and its integration into the executive. The *military supporter* index allows researchers

[59] Angola, Bangladesh, Egypt, Guinea, Ivory Coast, Mali, Mauritania, Myanmar, Pakistan, Syria, and Thailand.
[60] The concept of military ruler resembles what Geddes and her co-authors dubbed 'military strongman rule'. This kind of military rule 'refers to the subset of dictatorships in which power is concentrated in the hands of a single military officer' (Geddes, Wright, and Frantz 2014, 152).

to analyse the armed forces' contribution to regime persistence and failure, and privileges enjoyed by members of the military. Thus, our indices will advance future research on the questions of how different forms and intensities of military influence shape domestic policies, impact a regime's external agenda and conflict behaviour, or affect the proclivity of a regime to face and overcome threats to its political survival (see Croissant, Eschenauer, and Kamerling 2016). Furthermore, by providing the disaggregated data of our indices, we offer a whole range of indicators that scholars are invited to use and to combine according to their research interests. Especially, the indicators constituting the *military supporter* index – military veto-power, impunity, and internal repression – have great potential for generating innovative theoretical and empirical insights when used individually: for example, looking into the effects of military impunity on economic performance, or how military veto-power moderates legislative outcomes. However, since most of our empirical sources only cover the years after 1999, the coverage of our sample is limited to the period 1999–2012.

Empirically, our data set illustrates that the declining number of military regimes and coups does not imply decreasing military influence on political regimes. In regional and global comparisons, we demonstrated that militaries remain powerful actors and show identify militaries with *ruling* and *supporting* characteristics in many political regimes. While the declining number of coups and military regimes signals a decline of the most obvious and blatant acts of military interference in politics, our data suggest that armed forces in the twenty-first century use more discreet channels to exert influence and steer politics according to their will. To depict these new modes of armed forces' influence, research on political-military relations needs more fine-grained tools and measurement methods. Our extension of Basedau and Elischer's work can serve as a contribution to a new line of research on political-military relations that will seek to detect and analyse new roles and channels of influence employed by contemporary armed forces.

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6. Code book

6.1 Identification variables

codealp	3-letter country code
ccodecow	Country code correlates of war
country	Country name

References: BTI.

year	Year
countryyear	Country-year
bti_region	BTI region

World regions as coded by the Bertelsmann Transformation Index (BTI).

(1) East-Central and Southeast Europe
(2) Latin America and the Caribbean
(3) West and Central Africa
(4) Middle East and North Africa
(5) South and East Africa
(6) Post-Soviet Eurasia
(7) Asia and Oceania

References: BTI.

6.2 Political roles of the military

r_spell Regime spells

Regime spells are based on the “Autocracies of the World” data set by Magaloni et al. (2013).
Time Series: N=1546
Cross Section: N=138
References: Magaloni et al. (2013).

r_start Regime spell start

First year of a regime spell in our data set. This variable does not consider the actual beginning of a regime prior to our research period (1999-2012).
Time Series: N=1546
Cross Section: N=138
References: Magaloni et al. (2013).

r_end Regime spell end

Last year of a regime spell in our data set. This variable does not consider the actual end of a regime past our research period (1999-2012).
Time Series: N=1546
Cross Section: N=138
References: Magaloni et al. (2013).

raw_origin_y Regime origin

Year of military origin; that is, a military takeover or a civil war, and ensuing elections, if any, were according to Polity IV neither free nor fair.
Time Series: N=1546
Cross Section: N/A
References: Freedom House, BTI, USHRR, Polity IV, Powell/Thyne 2011.

raw_origin Regime origin, yearly

Yearly measure whether a regime originates from a military background; that is, a mili-tary takeover or a civil war, and ensuing elections, if any, were according to Polity IV neither free nor fair. Assuming that the effect of a military origin diminishes after one generation we code the origin of regime spells as non-military if the regime constituting event occurred more than 25 years ago. Data is generated for 01 January of each year.
(0) no military origin
(1) military origin
Time Series: N=1546
Cross Section: N/A
References: Freedom House, BTI, USHRR, Polity IV, Powell/Thyne 2011.

mi_origin Regime origin score

Military origin score aggregated across regime spells.
(0) Mean value of raw_origin per regime spell <0.25
(1) Mean value of raw_origin per regime spell >=0.25 and <0.5
(2) Mean value of raw_origin per regime spell >=0.5 and <0.75
(3) Mean value of raw_origin per regime spell >=0.75
Time Series: N=1546
Cross Section: N=138

raw_leader Political leader, yearly

Yearly measure on the regime leader's connection to the armed forces. Data is generat-ed for 01 January of each year and coded as follows.
(0) no active member of the military/rebel leader
(0.8) retired member of the military
(1) active member of the military or rebel leader
Time Series: N=1546
Cross Section: N/A
References: DPI, Freedom House, BTI, Polity IV USHRR, other secondary sources.

mi_leader Political leader score

Political leader score aggregated across regime spells.
(0) Mean value of raw_leader per regime spell <0.25
(1) Mean value of raw_leader per regime spell >=0.25 and <0.5
(2) Mean value of raw_leader per regime spell >=0.5 and <0.75
(3) Mean value of raw_leader per regime spell >=0.75
Time Series: N=1546
Cross Section: N=138

raw_mod Minister of defence, yearly

Yearly measure of the minister of defence's connection to the armed forces.
(0) no active member of the military or simply no minister of defence
(1) active member of the military
Time Series: N=1546
Cross Section: N/A
References: DPI, other secondary sources.

mi_mod *Minister of defence score*

Minister of defence score aggregated across regime spells.
(0) Mean value of raw_mod per regime spell <0.25
(1) Mean value of raw_mod per regime spell >=0.25 and <0.5
(2) Mean value of raw_mod per regime spell >=0.5 and <0.75
(3) Mean value of raw_mod per regime spell >=0.75
Time Series: N=1546
Cross Section: N=138

raw_veto Military veto-power, yearly

Yearly measure of the military's veto-powers. This measure is based on BTI questions 2.2, effective power to govern, and 16.2, anti-democratic actors (BTI 2003-2014).
(0) military not identified as veto-player
(1) military identified as veto-player
Time Series: N=1546
Cross Section: N/A
References: BTI.

mi_veto Military veto-power score

Military veto-power score aggregated across regime spells.
(0) Mean value of raw_veto per regime spell <0.25
(1) Mean value of raw_veto per regime spell >=0.25 and <0.5
(2) Mean value of raw_veto per regime spell >=0.5 and <0.75

(3) Mean value of raw_veto per regime spell >=0.75
Time Series: N=1546
Cross Section: N=138

raw_repress Military repression, yearly

Yearly measure of internal military deployment against opposition; this includes all de facto internal employment of the military to deter political dissent.
(0) military not deployed internally
(1) military deployed internally
Time Series: N=1546
Cross Section: N/A
References: Freedom House, BTI, USHRR.

mi_repress Military repression score

Military internal repression score aggregated across regime spells.
(0) Mean value of raw_repress per regime spell <0.25
(1) Mean value of raw_repress per regime spell >=0.25 and <0.5
(2) Mean value of raw_repress per regime spell >=0.5 and <0.75
(3) Mean value of raw_repress per regime spell >=0.75
Time Series: N=1546
Cross Section: N=138

raw_impun Military impunity, yearly

Yearly measure of military impunity. The military enjoys impunity if members of the armed forces engage in illegal activities and there are no reports on prosecution and conviction, or prosecution and conviction are politically motivated, or de facto prosecu-tion and conviction must be considered highly disproportional to the number and severity of crimes committed.
(0) no military impunity
(1) military impunity
Time Series: N=1546
Cross Section: N/A
References: USHRR.

mi_impun Military impunity score

Military impunity score aggregated across regime spells.
(0) Mean value of raw_impun per regime spell <0.25
(1) Mean value of raw_impun per regime spell >=0.25 and <0.5
(2) Mean value of raw_impun per regime spell >=0.5 and <0.75
(3) Mean value of raw_impun per regime spell >=0.75
Time Series: N=1546
Cross Section: N=138

mi_mruler Military ruler index

The military ruler index ranges from 0 to 3 and reflects the military's *ruling* characteristics by depicting dependencies and links between the military, on the one hand, and the regime and its ruling elite, on the other hand. Following Basedau and Elischer's (2013) concept, military origin (*mi_origin*) is a necessary condition for ruling militaries; additionally, either the regime leader (*mi_leader*) or the minister of defence (*mi_mod*) need to have direct links to the armed forces. The index scores are generated with Boolean algebra. Values higher than 0 indicate a military with ruling characteristics:

mi_origin AND *(mi_leader* OR *mi_mod)*

Time Series: N=1546
Cross Section: N=138

mi_msupport Military supporter index

The military supporter index ranges from 0 to 3 and measures the extent to which the military assists the political leadership and receives rewards in return. Following Basedau and Elischer (2013), a military is considered a *supporter* if two of the following conditions are fulfilled: the military is a veto-player (*mi_veto*), the military is used as a repressive agent (*mi_repress*), the military enjoys impunity (*mi_impun*). The index scores are generated with Boolean algebra. Values higher than 0 indicate a military with supporting characteristics.

(mi_veto AND *mi_repress)* OR *(mi_veto* AND *mi_impunity)* OR *(mi_repress* AND *mi_impunity)*

Time Series: N=1546
Cross Section: N=138

6.3 Coding examples

Data generation and aggregation: Burkina Faso

Step (1): Identify regimes spells and calculate proportion of years for with military influence for each indicator

- *Regime spell:* Following Magaloni et al. 2013, the regime spell runs from 1990 until the end of the research period
  - › Burkina Faso Spell 1: 1999–2012
- *mil_origin:* Coup by Captain Blaise Compaoré in 1987. Compaoré's presidential elections were neither free nor fair (Polity IV 2010).
  - › *mil_origin* coded 1 for years 1999–2012
- *mil_leader:* DPI coding "military executive"; Compaoré remains president for entire research period.
  - › *mil_leader* coded 1 for years 1999–2012
- *mil_mod:* DPI codes minister of defence as „non-military"
  - › *mil_mod* coded 0 for years 1999–2012
- *mil_veto:* BTI country reports (2003ff.) mention military as veto-player for entire research period.
  - › *mil_veto* coded 1 for years 1999–2012
- *mil_repress:* USHRR report repression by police and gendarmes; military is generally not involved in internal repression. Following violent demonstrations in July 2010 "army personnel" were deployed to disperse the protests (USHRR 2011).
  - › *mil_repress* coded 0 for years 1999–2009 and 2011–2012
  - › *mil_repress* coded 1 for 2010
- *mil_impun:* USHRR reports explicitly mention human rights abuses and no prosecution by members of the military for years 2001, 2003, 2005–2011. "Corruption and military impunity" mentioned for years 2009–2011.
  - › *mil_impun* coded 0 for years 1999, 2000, 2002, 2004, 2012
  - › *mil_impun* coded 1 for years 2001, 2003, 2005–2011

Step (2): Score on each regime spell on a four-point scale ranging from 0 to 3

(0) Proportion of years coded 1 < 25 per cent of years of spell
(1) Proportion of years coded 1 > 25 per cent and < 50 per cent of years of spell

(2) Proportion of years coded 1 > 50 per cent and < 75 per cent of years of spell
(3) Proportion of years coded 1 > 75 per cent of years of spell

- *mil_origin* coded 1 for years 1999–2012
  - 100 per cent of years with *mil_origin*=1 → **Score 3**
- *mil_leader* coded 1 for years 1999–2012
  - 100 per cent of years with *mil_leader*=1 → **Score 3**
- *mil_mod* coded 0 for years 1999–2012
  - 0 per cent of years with *mil_mod*=1 → **Score 0**
- *mil_veto* coded 1 for years 1999–2012
  - 100 per cent of years with *mil_veto*=1 → **Score 3**
- *mil_repress* coded 0 for years 1999–2009 and 2011–2012; coded 1 for 2010
  - 7 per cent of years with *mil_repress*=1 → **Score 0**
- *mil_impun* coded 1 for years 2001, 2003, 2005–2011; 0 for years 1999, 2000, 2002, 2004, 2012
  - 64 per cent of years with *mil_impun*=1 → **Score 2**

Step (3): Military ruler and military supporter indices constructed based on these ordinal indices following Basedau and Elischer's theoretical framework

- *Theoretical framework:* Because the mere existence of a regime leader or minister of defence with a military background alone cannot show true entanglement of the ruling elite and the armed forces (consider Susilo Bambang Yudhoyono in Indonesia, elected president in 2004 and 2009, or Fidel Ramos in the Philippines, elected president from 1992–1998), Basedau and Elischer demand a military origin in addition to either a military regime leader or minister of de-fence (2013, 382).
  - *mil_ruler* = *mil_origin* AND (*mil_leader* OR *mil_mod*)
- Burkina Faso (1999–2012): *mil_origin*=3; *mil_leader*=3; *mil_mod*=0
  - *mil_ruler* = 3 AND (3 OR 0) = 3
- *Theoretical concept:* For the identification of *supporting* militaries, the Basedau and Elischer demand at least two of the three indicators to be present.
  - *mil_support* = (*mil_veto* AND *mil_repress*) OR (*mil_veto* AND *mil_impun*) OR (*mil_repress* AND *mil_impun*)
- Burkina Faso (1999–2012): *mil_veto*=3; *mil_repress*=0; *mil_impun*=2
  - *mil_support* = (3 AND 0) OR (3 AND 2) OR (0 OR 2) = 0 OR 2 OR 2 = 2

Data aggregation and comparability

Military ruler scores

MIL_RULER = 3

- Myanmar (1999–2011): *mil_origin*=3; *mil_leader*=3; *mil_mod*=3
  - *mil_ruler* = 3 AND (3 OR 3) = 3
- Pakistan (1999–2007): *mil_origin*=3; *mil_leader*=3; *mil_mod*=0
  - *mil_ruler* = 3 AND (3 OR 0) = 3

MIL_RULER = 2

- Mauritania (2008–2012): *mil_origin*=3; *mil_leader*=2; *mil_mod*=0
  - *mil_ruler* = 3 AND (2 OR 0) = 2
- Niger (2000–2008): *mil_origin*=2; *mil_leader*=3; *mil_mod*=0
  - *mil_ruler* = 2 AND (3 OR 0) = 2

- Togo (1999-2012): *mil_origin*=2; *mil_leader*=1; *mil_mod*=3
  - *mil_ruler* = 2 AND (1 OR 3) = 2

MIL_RULER = 1

- Madagascar (2009–2012): *mil_origin*=3; *mil_leader*=0; *mil_mod*=1
  - *mil_ruler* = 3 AND (0 OR 1) = 1
- Yemen (1999–2011): *mil_origin*=1; *mil_leader*=3; *mil_mod*=1
  - *mil_ruler* = 1 AND (3 OR 1) = 1

MIL_RULER = 0

- Russia (1999–2012): *mil_origin*=0; *mil_leader*=0; *mil_mod*=1
  - *mil_ruler* = 0 AND (0 OR 1) = 0
- Nigeria (1999–2012): *mil_origin*=0; *mil_leader*=2; *mil_mod*=1
  - *mil_ruler* = 0 AND (2 OR 1) = 0
- North Korea (1999–2012): *mil_origin*=0; *mil_leader*=0; *mil_mod*=3
  - *mil_ruler* = 0 AND (0 OR 3) = 0
- Thailand (1999–2005): *mil_origin*=0; *mil_leader*=0; *mil_mod*=0
  - *mil_ruler* = 0 AND (0 OR 0) = 0

Military supporter scores

MIL_SUPPORTER = 3

- Algeria (1999–2012): *mil_veto*=3; *mil_repress*=3; *mil_impun*=2
  - *mil_support* = (3 AND 3) OR (3 AND 2) OR (3 AND 2) = 3 OR 2 OR 2 = 3
- Colombia (1999–2012): *mil_veto*=0; *mil_repress*=3; *mil_impun*=3
  - *mil_support* = (0 AND 3) OR (0 AND 3) OR (3 AND 3) = 0 OR 0 OR 3 = 3
- Laos (1999–2012): *mil_veto*=3; *mil_repress*=0; *mil_impun*=3
  - *mil_support* = (3 AND 0) OR (3 AND 3) OR (0 AND 3) = 0 OR 3 OR 0 = 3

MIL_SUPPORTER = 2

- Iraq (2008–2012): *mil_veto*=0; *mil_repress*=3; *mil_impun*=2
  - *mil_support* = (0 AND 3) OR (0 AND 2) OR (3 AND 2) = 0 OR 2 OR 2 = 2
- Russia (1999–2012): *mil_veto*=2; *mil_repress*=1; *mil_impun*=3
  - *mil_support* = (2 AND 1) OR (2 AND 3) OR (1 AND 3) = 1 OR 2 OR 1 = 2
- Yemen (1999–2011): *mil_veto=2*; *mil_repress*=3; *mil_impun*=0
  - *mil_support* = (2 AND 3) OR (2 AND 0) OR (3 AND 0) = 2 OR 0 OR 0 = 2

MIL_SUPPORTER = 1

- Bangladesh (1999–2012): *mil_veto*=0; *mil_repress*=1; *mil_impun*=2
  - *mil_support* = (0 AND 1) OR (0 AND 2) OR (1 AND 2) = 0 OR 0 OR 1 = 1
- Brazil (1999–2012): *mil_veto*=1; *mil_repress*=0; *mil_impun*=3
  - *mil_support* = (1 AND 0) OR (1 AND 3) OR (0 AND 3) = 0 OR 1 OR 0 = 1
- Peru (2001-2012): *mil_veto*=0; *mil_repress*=1; *mil_impun*=3
  - *mil_support* = (0 AND 1) OR (0 AND 3) OR (1 AND 3) = 0 OR 0 OR 1 = 1

MIL_SUPPORTER = 0

- India (1999–2012): *mil_veto*=0; *mil_repress*=3; *mil_impun*=0
  - *mil_support* = (0 AND 3) OR (0 AND 0) OR (3 AND 0) = 0 OR 0 OR 0 = 0
- Kazakhstan (1999–2012): *mil_veto*=0; *mil_repress*=0; *mil_impun*=1
  - *mil_support* = (0 AND 0) OR (0 AND 1) OR (0 AND 1) = 0 OR 0 OR 0 = 0

6.4 Sample selection

Table A1: Full research sample

crspell	*r_start*	*r_end*	*rs_durmax*
Afghanistan	1999	2001	3
Albania	1999	2012	14
Algeria	1999	2012	14
Angola	1999	2012	14
Argentina	1999	2012	14
Armenia	1999	2012	14
Azerbaijan	1999	2012	14
Bahrain	1999	2012	14
Bangladesh	1999	2012	14
Belarus	1999	2012	14
Benin	1999	2012	14
Bhutan	1999	2007	9
Bhutan	2008	2012	5
Bolivia	1999	2012	14
Botswana	1999	2012	14
Brazil	1999	2012	14
Bulgaria	1999	2012	14
Burkina Faso	1999	2012	14
Burundi	1999	2002	4
Burundi	2003	2012	10
Cambodia	1999	2012	14
Cameroon	1999	2012	14
CAR	1999	2002	4
Chad	1999	2012	12
Chile	1999	2012	14
China	1999	2012	14
Colombia	1999	2012	14
Congo, Rep.	2006	2012	7
Croatia	1999	2012	14
Cuba	1999	2012	14
Czech Rep.	1999	2012	14
Dominican Republic	1999	2012	14
Ecuador	2002	2012	11
Egypt	1999	2011	13
El Salvador	1999	2012	14
Eritrea	1999	2012	14
Estonia	1999	2012	14
Ethiopia	1999	2012	14
Georgia	1999	2003	5
Georgia	2004	2012	9

crspell	*r_start*	*r_end*	*rs_durmax*
Ghana	2001	2012	12
Guatemala	1999	2012	14
Guinea	1999	2007	9
Guinea	2010	2012	3
Honduras	1999	2012	14
Hungary	1999	2012	14
India	1999	2012	14
Indonesia	1999	2012	14
Iran	1999	2012	14
Iraq	1999	2002	4
Iraq	2008	2012	5
Ivory Coast	1999	2012	9
Jamaica	1999	2012	14
Jordan	1999	2012	14
Kazakhstan	1999	2012	14
Kenya	2006	2012	7
Kuwait	2005	2012	8
Kyrgyzstan	1999	2009	11
Kyrgyzstan	2010	2012	3
Laos	1999	2012	14
Latvia	1999	2012	14
Lebanon	1999	2012	14
Liberia	1999	2003	5
Liberia	2006	2012	7
Libya	1999	2010	12
Lithuania	1999	2012	14
Macedonia	1999	2012	14
Madagascar	1999	2008	10
Madagascar	2009	2012	4
Malawi	1999	2012	14
Malaysia	1999	2012	14
Mali	1999	2011	13
Mauritania	2008	2012	5
Mexico	1999	2012	14
Moldova	1999	2012	14
Mongolia	1999	2012	12
Montenegro	2007	2012	6
Morocco	1999	2012	14
Mozambique	1999	2012	14
Myanmar	1999	2011	13
Namibia	1999	2012	14
Nepal	1999	2001	3
Nepal	2002	2005	4

crspell	*r_start*	*r_end*	*rs_durmax*
Nepal	2006	2012	7
Nicaragua	1999	2012	14
Niger	2000	2008	9
Nigeria	1999	2012	14
North Korea	1999	2012	14
Oman	2006	2012	7
Pakistan	1999	2007	9
Pakistan	2008	2012	5
Papua New Guinea	1999	2012	14
Paraguay	1999	2012	14
Peru	2001	2012	12
Philippines	1999	2012	14
Poland	1999	2012	14
Qatar	2008	2012	5
Romania	1999	2012	14
Russia	1999	2012	14
Rwanda	1999	2012	14
Saudi Arabia	1999	2012	14
Senegal	2000	2012	13
Serbia	2007	2012	6
Serbia / Montenegro	2000	2006	7
Sierra Leone	1999	2001	3
Sierra Leone	2002	2012	11
Singapore	1999	2012	14
Slovakia	1999	2012	14
Slovenia	1999	2012	14
South Africa	1999	2012	14
South Korea	1999	2012	14
Sri Lanka	1999	2009	11
Sri Lanka	2010	2012	3
Sudan	2000	2009	10
Sudan	2010	2012	3
Syria	1999	2011	13
Taiwan	1999	2012	14
Tajikistan	1999	2012	14
Tanzania	1999	2012	14
Thailand	1999	2005	7
Thailand	2008	2012	5
Togo	1999	2012	14
Tunisia	1999	2012	14
Turkey	1999	2012	14
Turkmenistan	1999	2012	14
Uganda	1999	2005	7

crspell	*r_start*	*r_end*	*rs_durmax*
Uganda	2006	2012	7
Ukraine	1999	2012	14
United Arab Emirates	2003	2012	10
Uruguay	1999	2012	14
Uzbekistan	1999	2012	14
Venezuela	1999	2001	3
Venezuela	2002	2012	11
Vietnam	1999	2012	14
Yemen	1999	2011	13
Zambia	1999	2007	9
Zambia	2008	2012	5
Zimbabwe	1999	2012	14

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