Auxiliary Force Structure:

Paramilitary Forces and Pro-Government Militias*

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Abstract

Governments often supplement the regular military with *paramilitaries* and *pro-government militias* (PGMs). However, it is unclear what determines states' selection of these *auxiliary forces*, and our understanding of how auxiliary force structures develop remains limited. The crucial difference between the two auxiliary types is their embeddedness in official structures. Paramilitaries are organized under the government to support/replace the regular military, while PGMs exist outside the state apparatus. Within a principal-agent framework, we argue that a state's investment in a particular auxiliary force structure is shaped by available resources and capacity, accountability/deniability, and domestic threats. Our results based on quantitative analysis in 1981-2007 find that (1) state capacity is crucial for sustaining paramilitaries, but not PGMs, (2) PGMs, unlike paramilitaries, are more common in states involved in civil conflict, and (3) although both paramilitaries and PGMs are associated with regime instability, there is no significant difference between them in that context.

Keywords: Auxiliary Forces, Paramilitaries, Pro-Government Militias, Security-Force Structure, Competing Risks Analysis

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1 Introduction

Why do governments employ different types of security forces? To address threats either inside or outside a country, states can supplement the *regular* military (e.g., army, navy, and air force) with different forms of *auxiliary* forces including *paramilitary units* and *militias* (see, e.g., Lyall and Wilson III, 2009; Sechser and Saunders, 2010; Carey, Colaresi and Mitchell, 2016, 2015; Pilster, Böhmelt and Tago, 2016). However, why and how states use different forms of auxiliaries is less well understood (see Jentzsch, Kalyvas and Schubiger, 2015). Consider France and Sudan, for example: both states maintain auxiliary forces, but it is unclear which strategic considerations led the Sudanese authorities to rely on the Janjaweed militia, rather than a paramilitary Gendarmerie as in France. This research seeks to shed light on this as we disaggregate countries' auxiliary force structures and examine the motivations, which lead states to establish and support either paramilitary forces or pro-government militias (PGMs).

We understand paramilitaries as militarized security units, which are trained and organized under the central government to support or replace the regular military (e.g., IISS, 1975-2015; Janowitz, 1988). On the other hand, we define PGMs as armed groups that have a link to the executive (either informally or semi-officially) and some level of organization, but they exist outside the regular security apparatus (e.g., Carey, Mitchell and Lowe, 2013). We, therefore, concur with the treatment of PGMs in, e.g., Carey, Mitchell and Lowe (2013) and juxtapose this with paramilitaries as a separate auxiliary force type. The key difference between these two distinct forms of auxiliaries stems from their embeddedness in state structures. First, paramilitaries tend to be established by the incumbent, and they have a clear and official association with the regime (yet outside the regular command-and-control chain of the military). PGMs, on the other hand, are mobilized by the government rather "spontaneously" or they actively form themselves. In both scenarios, though, PGMs support the regime, albeit while maintaining a rather loose informal, or at best semi-official, connection to it. Second, paramilitaries often replace or balance the official armed forces, thus performing rather regular security functions (although irregular functions are common as well). PGMs, in contrast, cannot (independently) assume any regular function, but pursue a wider range of irregular duties. Finally, and derived from these points, the government has a stronger control of paramilitaries due to their closer connection to the executive. Conversely, PGMs have a greater level of autonomy because of the semi-official or informal status.

Table 1 highlights the common characteristics and differences between these two types.[1] The French National Gendarmerie is one example of a paramilitary force, as it has a clearly defined and formal role for national security, undertaking official tasks with military equipment. However, it operates outside the regular command-and-control channel of the military, and is thus distinct from the regular forces. On the other hand, the Sudanese Janjaweed are a PGM, as they are only loosely and informally linked to the government, operate with relative autonomy, and perform irregular tasks such as intimidation. Figure 1 gives a more general overview of what states made use of what kinds of auxiliary forces in 1981-2007, and

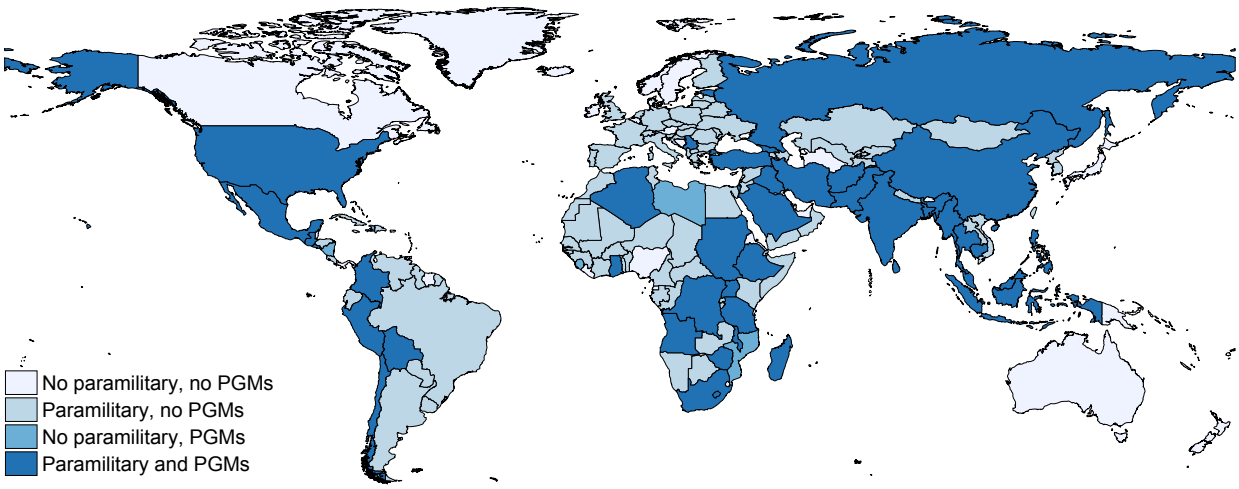
[1] The next section provides detailed definitions of these auxiliary force types.

which nations did not build an auxiliary security structure at all. A large share of countries (N=68) relied on regular forces only, i.e., only the classical, official branches of the military existed in 1981-2007 (or no forces at all). Clearly, however, paramilitary units and PGMs are not a rare phenomenon, but frequently found in states' security force portfolios. While 90 states invested in at least some paramilitary structure, only five (Mozambique, Haiti, Sierra Leone, Nicaragua, and Libya) relied on PGMs exclusively without largely (i.e., 50 percent or more of the time period in our data) having any paramilitary forces. Finally, 46 nations established both paramilitary forces and militias between 1981 and 2007.

Table 1: Auxiliary Security Forces: Paramilitaries and PGMs

	Paramilitary Forces	Pro-Government Militias
Government Link	Official	Semi-official, informal
Functions	Regular and irregular activities	Rather irregular activities
Autonomy from Government	Low	High
Example	National Gendarmerie, France	Janjaweed, Sudan

Figure 1: Dominant Form of Auxiliary Security Forces, 1981-2007



Note: The data used for this graph are described in the research design. A country belongs to any of the four categories if it had the respective characteristic in 50 percent or more of the country-years in our data.

The arguments typically brought forward to explain the existence of either type of a state's auxiliary force focus on greed-based explanations, larger violent cleavages, or systemic-level structural influences such as economic globalization (Carey, Colaresi and Mitchell, 2016, 2015; Pilster and Böhmelt, 2012; Raleigh, 2016; Carey and Mitchell, 2016). A *joint* analysis, addressing both theoretical and empirical aspects in a comprehensive way and that additionally goes beyond linking the establishment of auxiliary forces exclusively to a conflict environment, is missing, however.[2] We extend existing work in applying a principal-agent framework (e.g., Dixit, Grossman and Helpman, 1997; Hawkins et al., 2006; Laffont and Martimort, 2009) to explain the composition of a country's auxiliary forces. To this end, we see the state as the principal that, due to a domestic security threat for example, may consider delegating security tasks and power to: (1)

[2]Raleigh (2016, p.295), for example, states that the literature hardly accounts for auxiliary forces "outside failed state environments."

paramilitary agents that are closely connected to the state apparatus, easier to control, but more expensive and the state can normally not deny accountability for their actions; and/or (2) PGM agents that operate with greater autonomy, which makes it more challenging to control them and they are more likely to act against state interests, but cheaper and easier to disavow.[3]

We argue that a state's choice between the two forms of auxiliary forces is shaped by the resources and capacity available, accountability/deniability, and domestic threats. We ultimately derive three observable implications that relate auxiliary forces to (1) state capacity, (2) regime instability, and (3) civil conflict. That is, we expect that state capacity is somewhat necessary for a state to exert the level of control required to maintain a paramilitary force, but not a crucial requirement for building the more autonomous PGMs; second, PGMs, unlike paramilitaries, are an attractive security option for politically unstable regimes and states involved in civil conflict as they facilitate the undertaking (and disavowing) of extreme violence; and, lastly, these relationships also influence whether we see *both* types of auxiliaries established at the same time. Using competing risks analysis on time-series cross-section data of a global sample in 1981-2007, the results emphasize that there are crucial differences between the establishment of paramilitary forces and PGMs. We report robust evidence for our hypotheses on state capacity and civil conflict. However, although both paramilitaries and PGMs are strongly associated with regime instability (primarily, democratization), there does not seem to be a difference between them in that context. Finally, those countries characterized by some level of domestic turmoil, i.e., regime instability or civil conflict, are more likely to establish both types of auxiliaries.

This study makes central contributions to scholars' and policymakers' understanding of auxiliary forces and force structures. From a scholastic perspective, we address the conceptual confusion surrounding auxiliary armed forces. Much of the previous literature falsely treats paramilitaries and militias alike, or restricts analysis by focusing on one form of auxiliary groups only. Instead, we clearly distinguish between the two and provide the first joint theoretical framework on how they evolve. Second, we contribute to a long tradition of political scientists, sociologists, economists, and historians in articulating the conditions under which states are willing to concede their monopoly over the legitimate use of force (see also Mann, 1988; Tilly, 1992; Linz, 2000; Weber, 2013; Carey and Mitchell, 2016). Both forms of auxiliaries operate outside the regular military command-and-control structure that traditionally monopolizes a state's "legitimate" force (Mann, 1988; Tilly, 1992; Linz, 2000; Geddes, 1999; Carey and Mitchell, 2016), thus potentially undermining the executive's authority (Hughes and Tripodi, 2009) and its monopoly of violence (Weber, 2013). We show why states are sometimes willing to delegate power to auxiliary agents, although a centralized force and a power monopoly can be critical determinants of stability, the establishment of the rule of law, or a prosperous economy (Acemoglu and Robinson, 2012; Carey and Mitchell, 2016). In particular, we are one of the first to show why auxiliary forces do not exist only in weak or failing states, but are frequently present in or created by developed countries as well (see also Tilly, 1992; Kaldor, 2006; Campbell and Brenner, 2002).

[3]Of course, states can also choose to manage the challenge directly using regular forces. As we contend below, nonetheless, regular forces are often ill-equipped to manage domestic security challenges.

Third, recent work has shown that auxiliary forces, depending on their type, exert important and often negative influences in many diverse security-related policy areas and lead to specific outcomes in substantive ways, including regime survival, coups d'état, human rights violations, one-sided violence, civil-war intensity, or insurgent fragmentation (e.g., Carey, Colaresi and Mitchell, 2016; Jentzsch, Kalyvas and Schubiger, 2015; Carey, Colaresi and Mitchell, 2015; Powell, 2012; Roessler, 2011; Pilster and Böhmelt, 2011, 2012; Böhmelt and Pilster, 2015). On one hand, the largest portion of the literature on auxiliary forces to date deals with coup-proofing (see, e.g., Quinlivan, 1999; Roessler, 2011; Pilster and Böhmelt, 2011, 2012; Böhmelt and Pilster, 2015). The argument that we develop in the following is broader in nature and, hence, builds on Carey, Colaresi and Mitchell (2016) who show that governments have multiple incentives to form armed groups with a recognized link to the state beyond coup-proofing as such. Our work directly contributes to broadening and widening the debate, thus going "beyond coup-proofing" (Carey, Colaresi and Mitchell, 2016). On the other hand, developing interventions to prevent or limit some of the negative effects of auxiliaries requires a deeper understanding of the conditions that give rise to groups in the first place – and this applies to both paramilitaries and PGMs. Finally, from a policy perspective, our work should inform decision-makers, public institutions, or think tanks by clarifying how resources might be spent in more effective ways to manage the possible threats of auxiliary forces or what security implications – domestically and internationally – states with a specific auxiliary force structure face. Again, while there are studies focusing explicitly or implicitly on either type (e.g., Carey, Colaresi and Mitchell, 2016, 2015; Pilster and Böhmelt, 2012), to the best of our knowledge, we present the first analysis that distinguishes between and examines the emergence of paramilitary forces and pro-government militias in a joint theoretical and empirical framework.

2 Auxiliary Security Forces

Auxiliaries are armed groups somewhat aligned with the state to perform specific security roles, but they are not part of the regular (i.e., army, navy, and air force) military's command-and-control chain. Auxiliary forces seem "more flexible" (see Quinlivan, 1999; Böhmelt, Ruggeri and Pilster, 2016) than the regular military as they can be quickly mobilized and adapted to match specific (primarily domestic) threats, and they are frequently composed in a way that ensures greater compliance with a leader or the regime as such (e.g., composed entirely of ethnic kin). In contrast, regular forces are less adaptable, they tend to comprise individuals from different societal segments, and they are bound by training and operating procedures that are based on the less flexible regular command-and-control chain. Unlike the regular forces, auxiliaries can also be disbanded more quickly (e.g., once a threat is overcome) (e.g., Ahram, 2014, 2011*a*,*b*).[4]

In general, the structure of a country's security force is the result of its ruling regime's strategic considerations to address specific security needs. International-level threats usually shape the structure of the regular

[4]In practice, however, auxiliaries are often sustained by a state after an immediate threat has passed. In this case, as we discuss below, the threat of a renewed security challenge is frequently used to legitimize the continuation of an auxiliary group's presence. Armed groups may also persist even after they have withdrawn their support for the state or the latter withdraws the support for the group; then, however, if an auxiliary continues to exist against the will of the regime, it is no longer considered a paramilitary or PGM per our definition that requires a connection to the regime.

armed forces, while especially domestic challenges determine when and how auxiliary units are formed and deployed (see Lyall and Wilson III, 2009; Sechser and Saunders, 2010; Pilster, Böhmelt and Tago, 2016). Correspondingly, auxiliary forces are strongly associated with and likely to emerge out of a domestic threat to the incumbent (Carey, Mitchell and Lowe, 2013; Quinlivan, 1999; Belkin and Schofer, 2003; Pilster and Böhmelt, 2012).[5] Auxiliary forces are thus often put in place due to their supposed effectiveness in addressing domestic threats that regular security units might only be inadequately able to deal with (Kalyvas and Balcells, 2010). While the regular military should, in principle, be capable of defeating weaker irregular insurgents (Farrel, 2005), it often struggles to overcome these due to its training and equipment that are only suitable for conventional warfare (Mearsheimer, 1983; Farrel, 2005; Kalyvas, 2006; Lyall and Wilson III, 2009; Quackenbush and Murdie, 2015).[6]

For example, regular troops could face difficulties in establishing a permanent presence within contested communities and might not necessarily be in the position to address the problem of identifying insurgents (hidden within a domestic population) that any counterinsurgency campaign faces, since they lack the local knowledge of the marginalized population that has given rise to the rebel movement in the first place (Byman, 2007; Celeski, 2009; Kalyvas, 2006; Lyall, 2010; Galula, 2006; Kilcullen, 2010; Trinquier, 2006; Pilster, Böhmelt and Tago, 2016). Intelligence problems are compounded by troop rotation, which further undermines the development of any local intelligence capability (Janowitz, 1964). This can lead to counterproductive civilian targeting either through the application of conventional counter-force measures, attempts to punish communities in which insurgents are potentially housed, or a breakdown in military discipline (Lyall, 2009; Humphreys and Weinstein, 2006; Leites and Wolf, 1970). Auxiliary forces can help overcome these and related challenges faced by the regular forces. The way in which this is achieved varies with the type of auxiliary units, and we focus on the most common forms of auxiliary forces in the following: paramilitaries and PGMs.

2.1 Paramilitaries

We understand paramilitaries as militarized security units, equipped with (light) military weapons and/or military vehicles, trained and organized under the central government to support or replace regular military forces (IISS, 1975-2015; Janowitz, 1988, p.28). Paramilitaries are then always at least partially militarized and operate as auxiliary forces in place of, as a supplement to, or as a balance against regular military units (Quinlivan, 1999; Belkin and Schofer, 2003; Pilster and Böhmelt, 2011, 2012).[7] And they are closely associated with the regime, as the executive normally retains operational control over them.

[5] This is not the only explanation, though. It is also worth noting that the creation of auxiliary forces occurs rather frequently (see Figure 1), but there are several negative implications associated with this (see also Roessler, 2011; De Bruin, 2014). For instance, states would ideally keep the monopoly of power with a centralized command-and-control structure, although both PGMs and paramilitary forces cut into this (Gandhi and Przeworski, 2007; Eck, 2015). Moreover, the creation of paramilitary units reduces military effectiveness in interstate wars (Pilster and Böhmelt, 2011). Having said that, Carey, Colaresi and Mitchell (2016) outline several benefits for a regime, beyond coup-proofing, that are associated with the creation of auxiliary forces. We elaborate on these advantages and disadvantages in the following.

[6] Using the regular police to maintain domestic order could be an alternative to auxiliary forces. Regular police forces are a central part of the security apparatus and, thus, allow the executive to maintain the state's force monopoly. However, police units are usually lightly armed, encouraged to use minimal force, and trained to specialize in areas such as criminal justice and forensics rather than advanced irregular warfare (Pilster, Böhmelt and Tago, 2016).

[7] To this end, any security outfits that have a civilian component are not considered theoretically or empirically.

In detail, despite their status outside the regular military, paramilitaries are part of the state organization and closely approximate the regular forces in equipment and training. Most paramilitaries are specialist forces supposed to perform a particular domestic security function. In France, for example, gendarmerie paramilitary units are geared toward riot control, counterterrorism, and hostage rescue; the regular armed forces lack these skills. Other examples include the Israeli Border Police, the Italian Carabinieri, and the Venezuelan National Guard. These paramilitaries offer regimes a more robust force than the regular police and are configured more effectively than the regular military to address internal challenges. Paramilitaries can also be mobilized more quickly than the regular forces (see Carey, Colaresi and Mitchell, 2016) and, due to more flexibility (see Quinlivan, 1999; Böhmelt, Ruggeri and Pilster, 2016), they may not only support, but also replace the regular military, thereby acting as a restraint on the latter (see Pilster, Böhmelt and Tago, 2016; Janowitz, 1988).

Most paramilitary units in the data we use (Pilster and Böhmelt, 2011, 2012; IISS, 1975-2015) pertain to presidential guards (e.g., Uganda, Zaire, or Belarus) or specialized police units that have equipment similar to those of the regular armed forces, although they are not part of or organized by them (e.g., France or Italy). This, next to being under the control of the central government (yet outside the regular command-and-control chain), illustrates the clear link to the regime and, hence, that the government is held accountable for paramilitary organizations' actions. Put differently, the close association with paramilitaries allows the state to exert direct control over them, but it also means that governments are accountable for, e.g., extreme and illegal forms of violence undertaken by their paramilitaries. As paramilitaries are typically better equipped than other auxiliaries (and sometimes than the regular forces, too), they have the capacity to undertake large-scale atrocities (e.g., Colombia). However, it is more challenging for the state to deny complicity in these abuses than with other auxiliary forces. For instance, during the Iraqi Ba'athist period, Saddam Hussein established a security structure parallel to the regular forces as a coup-proofing instrument (Quinlivan, 1999; Cordesman, 1993). One paramilitary unit, the *Fedayeen Saddam*, comprised 30,000-40,000 of the most loyal regime supporters and took over responsibilities for border patrol, enforcing curfews, or the personal protection of Saddam (Otterman, 2003). Fedayeen Saddam soldiers also brutally suppressed dissenters, and relied on intimidation to strengthen the resolve of army commanders and to prevent desertion in the regular military. Yet, the regime was held accountable for all these actions (Lumb, 2003). As a result, states may want to consider using other auxiliaries (i.e., PGMs) when they might want to plausibly deny a connection to violence.[8]

2.2 Pro-Government Militias

PGMs are organized armed groups that are aligned informally, or at best semi-officially, with the government (Carey, Mitchell and Lowe, 2013). In the words of Schneckener (2007, p.25), they are "irregular combat units that usually act on behalf of, or are at least tolerated by, a given regime." In most cases, PGMs are

[8] A robustness check in the appendix also supports this claim: we show that human rights abuses are strongly associated with the presence of PGMs, but are not significantly linked to paramilitaries.

mobilized by an actor from within the governing regime. Occasionally, though, PGMs also form autonomously in response to local threats, only to later be coopted into joining the government cause. In this way, states are not always responsible for building militias, and they only become pro-government once they align with the ruling regime. That said, the "pro-government position" implies that these militias receive explicit or implicit assistance from the state, and/or support the ruler in turn.[9] That said, neither are PGMs part of the regular armed forces nor, unlike paramilitaries, aligned with any official structure or component of the state's security apparatus or its executive. This allows them to operate with greater autonomy.

PGMs rarely offer any military specialization and tend to be less well equipped and trained than paramilitaries or the regular forces. Hence, PGMs are cheaper in terms of mobilization, and only require minimal training, equipment, and bureaucratic control (if any) for operation (Carey, Colaresi and Mitchell, 2015; Wood and Waterman, 1991). This does not mean that PGMs are always weak, however, as leaders sometimes provide quite significant amounts of arms and training, for example, and they have maintained some oversight over these groups in some occasions (e.g., *rondas campesinas* in Peru). That said, even well-armed semi-official PGMs operate outside official state structures, and they lack the professionalism, training, and equipment provided to regular and paramilitary forces. These characteristics make PGMs a cost-efficient alternative for state leaders to engage insurgents (Carey, Colaresi and Mitchell, 2015; Eck, 2015; Carey and Mitchell, 2016; Carey, Mitchell and Lowe, 2013; Rosenau, 2008; Wood and Waterman, 1991), and, due to the loose affiliation with the government, they can then deny any responsibility for their PGMs' actions more easily. To illustrate this, the former Iraqi Primer Minister, Nouri al-Maliki, appealed to civilian militias to fill the security void (De Bruin, 2014; Alexander, 2014) when facing the Daesh (Islamic State – IS) insurgency. The mobilization of PGMs, in fact, helped to effectively fight IS advances and stabilize the situation.

However, once a state mobilizes PGMs, their future actions and loyalties are difficult to control (Carey, Colaresi and Mitchell, 2015; Mitchell, 2009). Militias are generally only loosely affiliated with the ruler, mobilized on the basis of social networks, financial incentives, and ethnic or religious ties (Wood, 2008; Eck, 2015). The greater autonomy granted to PGMs increases the risk that they independently engage in behavior that is unfavorable to the government. The principal-agent literature (e.g., Dixit, Grossman and Helpman, 1997; Hawkins et al., 2006; Laffont and Martimort, 2009) calls this "agency slack" in the form of "slippage." State principals' weak control of PGM agents may then lead to an increase in, for instance, one-sided attacks against civilians (Mitchell, Carey and Butler, 2014; Barter, 2013; Koonings and Kruijt, 2004; Kaldor, 2006; Bates, 2008; Ahram, 2011*b*) due to more autonomy, i.e., "the range of potential independent action available to an agent" after the principal has delegated the power (Hawkins et al., 2006, p.9). In fact, the mobilized Iraqi militias eventually used their newly gained power to pursue own interests, inflaming sectarian conflict and widely engaging in human-rights abuses that were not necessarily in accordance with state interests

[9]Note, however, that groups' loyalties can change over time and actions can also be driven by a group's own motivation. Therefore, we only focus on those militias that either have been created directly or are tolerated by the government, while groups changing their "pro-government position" drop out of the data. We further exclude militias that do not have any link to the regime at all. Still, Raleigh (2016, p.288) and Carey and Mitchell (2016, p.9), for example, give an overview of what other types of militias, next to PGMs, may exist.

(Amnesty International, 2014).

Civilian targeting can, nevertheless, also be an intended function of PGMs. Indiscriminate violence and large-scale civilian targeting are counterinsurgency strategies that governments may adopt in the absence of viable alternatives (Lyall, 2009). In the modern era of international scrutiny and accountability, there are constraints on the actions that official state agents can perform (Campbell and Brenner, 2002). Attacks on political opponents, unarmed groups, or non-supportive civilians may well damage a state's reputation and, for example, threaten aid provided or provoke intervention conducted by third parties (Mitchell, Carey and Butler, 2014; Carey, Colaresi and Mitchell, 2015, 2016). However, PGMs, as they are not officially linked to the government, offer incumbents the means to off-load "dirty work;" in turn, rulers may plausibly deny extreme methods that were used by PGMs (Ahram, 2014; Campbell and Brenner, 2002). To illustrate this, consider Indonesian death squads operating in Aceh killed armed secessionists, civilian sympathizers, and journalists in 2000. While the PGMs involved in these activities largely comprised off-duty security agents, their informal connection with the state allowed the regime to avoid assuming any responsibility.

Having said that, militias can also improve conditions for the civilian population. PGMs, such as civilian defense militias[10] in Guatemala (1981-1996), might actually target insurgents selectively, thereby reducing leaders' incentives for making use of indiscriminate violence (Clayton and Thomson, 2014; Lyall, 2010). Recruiting civilians in counterinsurgent roles can also foster support from the population, hence preventing civilians from joining the opposition (Carey, Colaresi and Mitchell, 2015, p.7). Eventually, the civilian character of some PGMs can help the state in the collection of local information during times of domestic turmoil, which might then contribute to solving the identification problem – although the state gives up its monopoly of force to some extent (Eck, 2015; Koonings and Kruijt, 2004; Ahram, 2011*b*; Carey, Colaresi and Mitchell, 2015).

Paramilitaries and PGMs, therefore, represent two distinct forms of auxiliary forces. Both can be considered auxiliaries as they usually operate in response to specific internal threats, and they remain outside the state's regular and permanent security force as well as command-and-control chain. When a threat (or the perception of a threat) persists, both paramilitaries and PGMs can become long-standing features in a country's security sector, while they are quickly disbanded on other occasions (e.g., Ahram, 2014, 2011*a*,*b*).[11]

3 Determining the Composition of the Auxiliary Forces

It still remains unclear, however, which factors give rise to what kind of composition of the auxiliary forces. To identify the conditions that motivate states to mobilize paramilitaries and/or PGMs, we build on a principal-agent framework (e.g., Dixit, Grossman and Helpman, 1997; Hawkins et al., 2006; Laffont and Martimort, 2009). To this end, we focus on situations in which the government as the principal considers the option

[10] That is, militias that undertake defensive duties within the community from which they were recruited.

[11] It also means that, in principle, groups can transition from PGMs to paramilitaries and vice versa. However, as we set out below, the conditions that give rise to the different forms of auxiliaries are quite distinct, meaning that this type of transition is relatively rare. We also return to this issue in the appendix.

of delegating some of its power to an agent: paramilitaries and/or PGMs. In the words of Hawkins et al. (2006, p.9), "delegation is a conditional grant of authority from a *principal* to an *agent* that empowers the latter to act on behalf of the former." Ideally, the principal would like to maintain complete control over the security forces. This is often expensive both financially and politically, though, as the regular military costs more to maintain and to operate, and it lacks a number of advantages that auxiliaries have when addressing domestic threats. Therefore, auxiliary forces become an option, regimes are forced to balance the desire for control over security forces with the financial and political benefits (and costs) of different auxiliary agents, and power is delegated to the latter with a view toward achieving what the principal wants, while minimizing the risk of agency slack.

Against this background and in the context of this principal-agent framework, our arguments focus on the following pillars. First, paramilitaries most closely approximate the regular forces and have a strong association with the regime. This allows the state to exert greater control over paramilitaries, although it also implies that a relatively comprehensive bureaucratic apparatus and notable financial resources are required to sustain such a parallel military structure. Second, the closer connection with paramilitaries also increases states' accountability for their actions, which makes them less well suited to undertake extreme actions that the government might want to deny later. In contrast, PGMs operate with greater autonomy due to the looser association with the regime. A principal can, therefore, more plausibly deny connection to their actions and, in the first place, mobilize a PGM more quickly and cheaply as much training or equipment are hardly required. The most important costs, however, stem from a significant reduction in control: for example, the risk that actions undermining (and sometimes directly opposing) state control are undertaken is higher for PGMs. In light of this, we derive three testable implications for the structure of a state's auxiliary force structure pertaining to (1) state capacity, (2) regime instability, and (3) civil conflict.

3.1 State Capacity

First, we expect state capacity to shape a state's decision to develop different types of auxiliary forces. Paramilitaries' close association with the regime means that they require a country's bureaucratic apparatus to function and be maintained, while it offers the executive an additional security force parallel to the regular forces, but still under official control. In contrast, weaker regimes that lack the capacity to incorporate additional security forces into a more complex security structure are less likely to favor paramilitaries. In other words, the principal then simply lacks the means for building, maintaining, and controlling the agent, and thus is likely to look for other options than paramilitary forces. Paramilitaries and PGMs do indeed have different resource and bureaucratic needs. Although paramilitaries are not part of the regular armed forces, they still are official state security organizations that require significant financial and administrative resources for mobilization and maintenance (Dowdle, 2007; Carey, Colaresi and Mitchell, 2016). Paramilitaries supplement regular forces, with expertise in areas including counterterrorism and irregular war, or counterbalance the threat to rulers posed by the regular military. Paramilitaries, therefore, require an investment in the security

sector, on top of the baseline costs associated with the regular forces.

While state capacity can be an abstract concept at times (see also Hendrix, 2010), we focus on those state-capacity parts pertaining to the bureaucratic apparatus and financial capacity. Principals with a comparatively larger bureaucratic apparatus and financial capacity[12] are most likely to be able to maintain, control, and sustain paramilitaries. In addition, states with a relatively large bureaucratic quality are unlikely to favor PGMs in the first place as they operate autonomously and outside of their direct purview. A greater loss of control and oversight given by more autonomy granted to PGMs is simply not necessary if a strong bureaucratic apparatus is available. Conversely, the financial and bureaucratic burden of paramilitary agents is a strong impediment to weak principals that lack the resources required for this auxiliary force (see also Bates, 2008).

Weaker regimes often lack the financial and organizational capacity to deploy a paramilitary force. Those weaker principals are then almost forced to turn to PGMs and, thus, sacrifice some degree of operational control in return for needed military support. Militias rarely receive any formal training or preparation[13] State support for PGMs tends to be more limited and is usually restricted to the provision of weapons or minimal re-numeration. Financial resources and a large bureaucratic apparatus are not required by or associated with PGMs, and the relatively low capacity that militias need for formation or support makes them ideal for weak principals in need of efficient means for maintaining or restoring domestic control. For example, PGMs have been used as a cheap means of supplementing military force in countries ranging from Haiti to Nicaragua and the Democratic Republic of Congo. As Raleigh (2016, p.285) argues "elites create militias to dominate local politics in response to absent or limited government control," i.e., the state is more likely to establish PGMs if it lacks the resources to maintain control of its territory through more official means (see also Schneckener, 2007; Bates, 2008). Moreover, when states lack the capacity to monopolize control of their territory, they are also more likely to tolerate militias that support their cause. That is, PGMs are usually recruited by the regime, although it can also be the case that groups are coopted into aligning with the state when the regime is so weak in terms of capabilities that it simply have to accept the presence of unpredictable armed groups that align with the government at least temporarily. In both cases, i.e., establishing or tolerating a PGM, the act of alignment is an indication of a weak regime being compelled to concede control in return for a low-cost fighting force. Eventually, this can create a self-sustaining situation in which PGMs are formed to support a weak state, but through their presence continually undermine the strength of that regime.

In light of this discussion, we expect a strong relationship between state capacity – in particular the bureaucratic apparatus and financial capacity – and the configuration of the auxiliary force structure. State capacity creates incentives as well as the opportunity to keep closer control over security forces, and is an

[12] For an overview of state capacity and its relation to bureaucratic strength, see Hendrix (2010, p.274): "[t]he emphasis on bureaucratic and administrative capacity [...] holds that state capacity is characterized by professionalization of the state bureaucracy."

[13] However, PGMs can include former and off-duty members of the regular forces and, as indicated above, on rare occasions receive significant support and oversight from the government, albeit not as much as paramilitary units.

important requirement for maintaining and sustaining paramilitaries as such. Weaker regimes have fewer incentives to create paramilitary forces and simply lack the means to actually do so. Ultimately, the only type of auxiliary force such a regime can make use of are PGMs. Similar to Carey and Mitchell (2016, p.14), delegating power to PGMs is then a strategic choice stemming from state-principal's inability to invest in and maintain anything else. This leads to the formulation of our first set of hypotheses:

Hypothesis 1a (State Capacity Hypothesis – Paramilitaries): The higher a country's state capacity, the more likely it is that paramilitary forces do exist (compared to PGMs).

Hypothesis 1b (State Capacity Hypothesis – PGMs): Conversely, the lower a country's state capacity, the higher the likelihood that PGMs do exist (compared to paramilitaries).

3.2 Regime Stability

Second, we argue that regime stability influences the composition of the auxiliary sector.[14] In principle, regimes characterized by institutional instability, i.e., changes toward either democracy or autocracy, are more likely to face internal challenges to their authority. Due to the potentially higher effectiveness of auxiliaries as compared to regular forces in managing internal threats, regime instability should then motivate leaders to strengthen either paramilitary forces or PGMs. Raleigh (2016) takes this rationale further when contending that it becomes increasingly more likely to observe a fragmentation of the security sector and, hence, the establishment of auxiliary forces during times of regime instability: political turmoil fuels "competition and fragmentation within regimes and between opponents" (Raleigh, 2016, p.284). As additionally emphasized by Raleigh (2016, p.285-287; 291ff), it is particularly democratization that is associated with these outcomes, not changes toward autocracy.[15]

Building on this logic, we argue that when political leaders fight against their opponents for influence in times of political turmoil, particularly during periods of democratization, they are more likely to delegate power to auxiliary agents in order to compete more effectively themselves. Auxiliary forces can be employed by elites "to alter the political landscape, increase power for patrons, protect supportive communities, and hinder opponents" (Raleigh, 2016, p.283). In this way, auxiliary forces become an instrument for political elites to gain support, as the latter are more willing to give up some sovereignty and power in order to compete more effectively politically (see also Reno, 1998; Chabal and Daloz, 1999; Mueller, 2008). That said, the trigger in the first place is regime instability, especially democratization (Raleigh, 2016, p.285-287; 291ff).

Although both PGMs and paramilitaries are then, in principle, able to address a domestic challenge and to increase support for their political patrons during political turmoil, they are not equally able to credibly demonstrate a commitment to reform. While unstable regimes frequently have the incentive to suppress domestic challenges, they prefer not to be associated with such action as this might harm their support

[14] We focus on *country* stability in the following section when discussing civil conflict.

[15] Also note that "periods of contestation extend well past elections" (Raleigh, 2016, p.291), i.e., elections as such may be unrelated to regime instability and auxiliary forces.

domestically and abroad (see, e.g., Staniland, 2015). That is, they need to credibly signal to domestic and international constituencies that a commitment to reform is given (see, e.g., Mansfield and Pevehouse, 2006, 2008, p.274). If this is not guaranteed, support from domestic and foreign constituencies in the form of financial or other material assistance becomes less likely (see also Mitchell, Carey and Butler, 2014; Carey, Colaresi and Mitchell, 2015, 2016). Conrad, Hill and Moore (2016), among others, refer here to "plausible deniability," i.e., governments' techniques to conceal their suppression of the opposition by, e.g., using agents of violence that do not hold the regime accountable for their actions (see also Ron, 1997; Campbell and Brenner, 2002; Alvarez, 2006; Branch and Cheeseman, 2009; Conrad et al., 2014; Conrad and Ritter, 2013; Carey and Mitchell, 2016). Since PGM agents are more loosely affiliated with government principals than paramilitaries, we argue accordingly that this allows the regime more plausibly deny responsibility for PGMs' actions (see Mitchell, Carey and Butler, 2014; Carey, Colaresi and Mitchell, 2015, 2016; Bates, 2008). Put differently, in conditions of political instability, we expect PGMs to be the security agent of choice, as the state principal is likely to be more willing to sacrifice a level of control over and to grant more autonomy for the security force in return for the capacity to target opponents in a matter that can later be denied. For example, Haiti experienced extremely unstable governance throughout the late 1980s and early 1990s. During this time, successive regimes relied on PGMs – including *Ton Ton Macoutes* and *FRAPH* – to support the leadership by targeting political opponents and potential challengers using extreme (and often deniable) violence. In sum, unstable (particularly, democratizing) regimes are more likely than stable ones to make use of PGMs.

Paramilitary forces, on the other hand, are ill-equipped to ensure plausible deniability as they are directly part of a state's security apparatus (although not part of the command-and-control channel of the regular military). They are, therefore, less well suited for periods of political upheaval in which the state requires a means to distance itself from violence used to protect or advance its agenda. Similarly, as paramilitaries take time and resources to develop and maintain, they are more likely to function during periods of relative stability, in which the leadership enjoys the political and economic space to enhance and diversify their military force (or does not invest in any auxiliary forces at all then). For instance, prior to his removal as President of Egypt, Hosni Mubarak saw a long period of institutional stability. During that time, Mubarak diversified his military by creating paramilitaries including the National Guard and Central Security Force – not PGMs. Our second set of hypotheses on times of political instability then focuses on the needs for a swift (and often deniable) response, which PGMs are better suited for:

Hypothesis 2a (Instability Hypothesis – PGMs): The higher the degree of regime instability, particularly democratization, the more likely it is that PGMs do exist (than paramilitaries).

Hypothesis 2b (Instability Hypothesis – Paramilitaries): Conversely, it is more likely to see paramilitary forces (than PGMs) with lower degrees of regime instability and times without democratization.

3.3 Civil Conflict

Third, domestic security threats are one of the main factors shaping states' decisions to use auxiliary forces. In light of this, therefore, parts of the argumentation leading to the previous hypotheses inform our discussion here. Civil conflict, in which one or more than one rebel group fights against the government to gain concessions on territory, power, or influence (Gleditsch et al., 2002), is arguably the most severe domestic threat. Paramilitaries and PGMs are usually more suitable than the regular military to address civil conflict as they are better equipped and trained to solve the identification problem (Kalyvas, 2006; Galula, 2006; Lyall and Wilson III, 2009; Kilcullen, 2010; Trinquier, 2006; Pilster, Böhmelt and Tago, 2016).

However, particularly during large-scale domestic unrest such as civil violence and civil war, financial resources are scarce and spending is limited. This implies that governments have to carefully select what type of auxiliary force they might want to invest in and support. When subscribing to this mechanism, and when having to choose between paramilitary forces and PGMs, it is *ceteris paribus* more likely that regimes establish PGMs instead of paramilitary organizations. Paramilitaries require more financial resources and administrative effort for creation and maintenance than PGMs. In turn, as they are less well trained and equipped, PGMs can be mobilized more quickly and cheaply (Ahram, 2014; Carey and Mitchell, 2016). And, in fact, as argued earlier, some PGMs might even arise independent of governmental action and are merely supported by the state without causing much fiscal drag. This makes PGMs arguably a promising and certainly cost-efficient tool to respond to civil conflict (Clayton and Thomson, 2014). Consider here both Syria and Iraq, in which state leaders have responded to domestic challenges by mobilizing and sustaining significant PGM forces.

In addition, due to the limited degree of accountability (see also Ron, 1997; Campbell and Brenner, 2002; Alvarez, 2006; Branch and Cheeseman, 2009; Conrad et al., 2014; Conrad and Ritter, 2013; Conrad, Hill and Moore, 2016; Carey and Mitchell, 2016), governments can make use of PGMs and their frequently brutal techniques for oppression, which may be necessary to defeat an insurgency, but can more plausibly deny involvement (e.g., Mitchell, Carey and Butler, 2014; Carey, Colaresi and Mitchell, 2015, 2016). Hence, although both types of auxiliary forces are, in principle, able to respond to an insurgency more effectively than the regular military,[16] we contend that PGMs are likely to be cheaper and potentially equally as effective as paramilitary forces, while the former's action can be more easily denied. This discussion leads to our third set of hypotheses:

Hypothesis 3a (Civil Conflict Hypothesis – PGMs): Civil conflict in a country is more likely to facilitate the establishment of PGMs than paramilitaries.

Hypothesis 3b (Civil Conflict Hypothesis – Paramilitaries): Civil conflict in a country is unlikely to have an effect on paramilitary organizations.

[16] Thus, the scenario of using both types is also possible.

Before coming to the empirical analysis, note that the discussion so far mostly focused on identifying the circumstances for using *either* paramilitaries *or* PGMs. However, several states' auxiliary force portfolios comprise *both* types of units, and several country-years are not characterized by any auxiliary force at all. When should we expect to observe the existence of both auxiliary groups at the same time? On the surface, the underlying theoretical mechanisms point to opposite directions for the creation of paramilitaries and PGMs in the case of most explanatory factors we discussed. We thus may lack a clear theoretical expectation for the presence of both types of auxiliaries, as the opposing effects could simply cancel each other out.

On the other hand, paramilitaries and PGMs are strategic responses to internal threats, and there are both costs and benefits associated with either PGMs or paramilitaries. As set out above, paramilitaries are more costly for creation and maintenance, but carry less risk due to the control the state has over them. Conversely, PGMs are most likely to be observed in cases in which incumbent options are limited, meaning that paramilitaries are unlikely to be a viable option then. For example, as argued before, state capacity increases the likelihood that a regime opts for paramilitary forces, but having fewer bureaucratic resources prevents the executive from employing them. Hence, low state capacity and periods of instability can make the use of PGMs more likely, but also act as a serious impediment to the use of paramilitaries.

The implication is that leaders with access to paramilitary forces can still turn to PGMs at a *higher level of escalation* when the threat to the state is extremely high.[17] The greater the threat to the state, the more likely it is that rulers will be willing to use all available means to effectively address a domestic challenge (assuming that the required resources are available for this). For example, in Malawi in 2000, the government security forces, including paramilitaries, failed to quell a movement pushing for democratic reforms and enhanced human rights. In response, the state mobilized and sustained the *Young Democrats*, who took the lead in disrupting opposition rallies and targeting enemies of the regime for the next five years. Due to the theoretical ambiguity and the non-directional nature of our expectation, we do not formulate a specific hypothesis for the "joint incidence" of paramilitary forces and PGMs or circumstances where auxiliaries do not exist at all. We still seek to empirically examine this in the following, nonetheless, as we expect that the *escalation of domestic threats* may play an important role.

4 Research Design

4.1 Data Set, Dependent Variable, and Methodology

Using the country-year as the unit of analysis, we constructed a time-series cross-section data set containing all countries between 1981 and 2007. The data availability for our dependent and explanatory variables determines this period under study. First, we created a nominal variable that captures the different structural types of auxiliary force structures: (0) no auxiliary forces, i.e., only the "traditional branches" of the military

[17] We are aware of the corresponding endogeneity concerns, not only here but also with regard to the other hypotheses (see also Raleigh, 2016; Carey and Mitchell, 2016, p.14). We return to this issue in the next section and the appendix.

exist (or no military at all), (1) paramilitary forces exist next to the regular military, (2) PGMs exist next to the regular military, and (3) both paramilitaries and PGMs exist next to the regular military. The data for this variable are based on two sources. Pilster and Böhmelt (2011, 2012), who compiled their data using the Military Balance (IISS, 1975-2015), provide the information on whether there was at least one paramilitary organization in a given country-year, while Carey, Mitchell and Lowe (2013) compiled data on militant groups loosely affiliated with the government.[18] Using the two different data sets, we constructed the nominal item *Auxiliary Force Structure*. Out of the 4,060 observations in our data (before accounting for missing values on some of our explanatory items), 836 country-years comprise only regular military forces (if at all) (20.59 percent), 1,868 country-years have at least one paramilitary organization besides their regular forces (46.01 percent), 159 country-years do not have a paramilitary organization, but a PGM next to the regular military (3.92 percent), and 1,197 country-years are based on both paramilitaries and PGMs (29.48 percent).[19]

Modeling this dependent variable requires a competing risks framework, i.e., different, nominal outcomes "compete" for being "selected." We decided to employ multinomial regression models to this end, which rely on several assumptions for our findings to be credible. We discuss and justify these assumptions in detail in the following. First, multinomial regression only provides a valid estimation strategy for a competing risks framework if the underlying duration data are discrete, since discrete time-series cross-section data are identical to event history data. This is given in our setup. Second, as we do not assume that we can ignore temporal autocorrelation, we need to control for temporal dependencies by modeling the baseline hazard. We do so by modifying the approach in Beck, Katz and Tucker (1998) and incorporating three different variables for autocorrelation: (1) the time elapsed since at least one paramilitary organization existed in a country, (2) the time elapsed since at least one PGM existed in a country, and (3) the time elapsed since a country had both paramilitary and PGM forces. Note that our results presented below are qualitatively identical to alternative models that include year dummies instead of the three temporal variables discussed here. Since either type of our auxiliary forces might have been present in a country before the beginning of our study period, we follow Carter and Signorino (2013) and coded the time counter for the observations associated with left-censored durations based on the actual dates a paramilitary organization or PGM enters the data by Pilster and Böhmelt (2011, 2012) or Carey, Mitchell and Lowe (2013).

Third, the multinomial logit model is based on the independence of irrelevant alternatives (IIA) assumption. As Cheng and Long (2007) summarize, IIA assumes that adding or omitting of (additional) outcome

[18] According to this "Pro-Government Militias Database" (PGMD), a militia is given when (1) it is identified as pro-government or sponsored by the government, (2) is identified as not being part of the regular security forces, (3) is armed, and (4) has some level of organization. Note that while this treatment is in line with our definition of PGMs introduced above, it differs from how we conceptualize paramilitaries, particularly due to the tie between the group and the government, which is not fully acknowledged in a formal way in terms of PGMs. That is, Carey, Mitchell and Lowe (2013, p.251) distinguish between informal and semi-official PGMs. While the former are usually clandestine and, thus, not recognized at all by the executive (although being supported by it), the latter have a somewhat semi-official status in that they are more closely affiliated with the incumbent than informal militias, but less strongly than paramilitaries. Moreover, Carey, Mitchell and Lowe (2013) specifically exclude pro-government militias that take on official state functions. As emphasized by Carey, Mitchell and Lowe (2013, p.251), "the term 'paramilitary' refers to regular forces, or police units with some military status, which are not included in the PGM dataset." Hence, the coding rules for PGMs and paramilitaries are, in fact, different. We also return to this issue in the appendix.

[19] The appendix lists the country-years and their coding in detail.

categories does not affect the relative odds associated with the predictors in the other, remaining categories. On substantive grounds, this means that, for example, when a state has to choose whether to invest in paramilitary forces or PGMs, the odds of choosing the former over the latter should not depend on whether our third alternative (the existence of both paramilitaries and PGMs) is present or absent. While there are reasons to argue theoretically for or against the validity of the IIA assumption in our setup, we examined it more systematically via the Hausman and McFadden (1984) test. However, the test statistics do not provide evidence that the assumption is violated. In light of the concerns about this test and others, however (see Cheng and Long, 2007), we also manually omitted one category after another and re-estimated the model again to see whether the coefficients substantially differ across estimations. As this is not the case, we have no reason the question the validity of the IIA assumption in our context. Fourth, endogeneity might affect our results (see also Raleigh, 2016; Carey and Mitchell, 2016). For example, it may well be that auxiliary forces are those that actually induce a higher level of escalation, which would imply reverse causation (Raleigh, 2016). Similarly, Carey and Mitchell (2016, p.14f) state that there is "an endogenous relationship between PGMs and state failure. PGMs can be both a contributor to and consequence of state weakness and state failure" (see also Carey, Mitchell and Lowe, 2013). Carey, Colaresi and Mitchell (2015) use fixed effects for regions or years for dealing with this problem. In fact, fixed effects control for omitted variable bias and unobserved heterogeneity, as they address the unobserved variables that may lead to "self-selection" into, e.g., failed states, civil conflict, or weak state capacity. In the appendix, we present models that include fixed effects for years and countries, and the results in these estimations are virtually identical to those we discuss below.

Finally, with regard to our main explanatory variables and the controls we select for our model, post-treatment bias might be an issue, i.e., controlling for the consequences of treatment (one of our main explanatory variables), which then biases the overall effect of the determinants of a state's auxiliary force structure we want to focus on (see King and Zeng, 2006). For addressing this concern, one should only choose controls that "(1) influence the dependent variable conditional on treatment, (2) are correlated with the treatment variable, and (3) are causally prior to treatment" (Gilligan and Sergenti, 2008, p.105). All of our control variables are based on earlier research (e.g., Powell, 2012; Böhmelt and Pilster, 2015; Böhmelt, Ruggeri and Pilster, 2016; Carey, Colaresi and Mitchell, 2015), so we believe that it is fair to assume that all of these three requirements are met. Hence, the controls should in fact be incorporated in the model. However, if these requirements are not given, post-treatment bias could affect our results. We thus also estimated a model that omits all control variables completely except for the items on temporal autocorrelation (see Clarke, 2005). Our core findings remain unchanged in this "constrained" model, though. In the appendix, we discuss a series of robustness checks that examine additional assumptions and alternative determinants.

4.2 Explanatory Variables

We consider the following explanatory variables for our hypotheses and a set of controls in light of recent research on paramilitary organizations and PGMs (e.g., Powell, 2012; Böhmelt and Pilster, 2015; Böhmelt, Ruggeri and Pilster, 2016; Carey, Colaresi and Mitchell, 2015).[20] First, we include data on a country's bureaucratic quality, taking the indicator from the Political Risk Services Group's (PRSG) International Country Risk Guide. This variable is measured continuously between 0 and 4 and uses expert assessments. According to the PRSG, "high points are given to countries where the bureaucracy has the strength and expertise to govern without drastic changes in policy or interruptions in government services. In these low-risk countries, the bureaucracy tends to be somewhat autonomous from political pressure and to have an established mechanism for recruitment and training. Countries that lack the cushioning effect of a strong bureaucracy receive low points because a change in government tends to be traumatic in terms of policy formulation and day-to-day administrative functions." Due to the skewed distribution of the original item, we add 1 to its values and then calculate the natural logarithm. We contend that this bureaucratic-quality variable is a suitable proxy for state capacity as it strongly resembles what we argue when claiming that only states with a comparatively larger bureaucratic apparatus and financial capacity are likely to be able to sustain paramilitaries (compared to PGMs).[21]

Second, following Raleigh (2016, p.296) and her notion that it is particularly democratization that is associated with instability, we create a variable using data from the Polity IV Project (Marshall and Jaggers, 2013) to capture regime (in-) stability: this variable, which we call *Regime Consistency*, compares lagged with current annual scores of the *polity2* item. A value of 0 stands for regime stability (i.e., no change in the *polity2* score compared to the last year). Negative values pertain to regime movement towards more autocratic forms of government, while positive values signify regime changes toward democracy, i.e., democratization. With this operationalization, we are able to distinguish between instability in times of movement toward higher levels of autocracy or democracy. We also considered the absolute value of our first-difference measure, which would then address regime instability more generally. However, on one hand, we would lose the ability to distinguish between movements toward autocracy or democracy and, on the other hand, our results remain virtually identical to the ones reported below when using the absolute values.[22]

Internal threats such as insurgencies frequently induce a stronger involvement of the military in domestic affairs (Staniland, 2014; Pilster and Böhmelt, 2012, p.363). We expect that PGMs are more likely to be associated with civil conflict. To this end, we follow Carey, Colaresi and Mitchell (2015, pp.857-859) who include variables for (1) civil violence and (2) civil war. The former is defined as any domestic-level conflict

[20] Our main variables seek to address the hypotheses above. The remaining explanatory variables ("controls") basically follow previous work (e.g., Powell, 2012; Böhmelt and Pilster, 2015; Böhmelt, Ruggeri and Pilster, 2016; Carey, Colaresi and Mitchell, 2015). Having said that, historical factors may play a crucial role in shaping the structure of the security-force sector as well (e.g., Ahram, 2014, 2011*a*,*b*; Osorio, Schubiger and Weintraub, 2016). We return to this issue in the appendix by looking at the influence of colonial powers.

[21] In the appendix, we replace bureaucratic quality by the more general GDP per capita proxy for state capacity. This follows, e.g., Fearon and Laitin (2003), who claim that GDP per capita is a general "proxy for the military, administrative, and bureaucratic capacity of the state" (Hendrix, 2010, p.274).

[22] In light of the results discussed below, this implies that our findings for *Regime Consistency* are indeed driven by movements toward democracy, i.e., democratization.

with more than 25 annual battle-related deaths; the latter only receives a value of 1 if the 1,000 battle-deaths threshold is crossed (0 otherwise). Both variables are based on the UCDP/PRIO Armed Conflict Data (Gleditsch et al., 2002). Incorporating these two variables pertains to our test of the third set of hypotheses. That said, Carey, Colaresi and Mitchell (2015, pp.857-859) also suggest using several dichotomous variables based on Banks (2001), which address the onset of at least one (1) strike, (2) riot, (3) demonstration, and (4) guerrilla attack, respectively, in a given country-year. We include these binary variables, too, but as controls for other, less intense forms of domestic unrest.

Coming to the remaining control variables, Carey, Colaresi and Mitchell (2015, pp.857-859) examine the effects of three binary items for regime type that are also based on the Polity IV Project's (Marshall and Jaggers, 2013) *polity2* variable, i.e., *Strong Democracy*, *Strong Autocracy*, and *Weak Democracy*: "[s]trong autocracies are coded as countries that score -7 or lower [...], [w]eak democracies are coded as countries that score between 1 and 6 on that scale. Strong democracies are coded as countries with the score 7 or above." We incorporate these variables in our models and use *Weak Autocracy* (ranging between -6 and 0) as the baseline. All our models additionally consider *Distance to Democracy (ln)*. This variable controls for the monitoring costs of the international community and measures the distance (in kilometers) between each state and the nearest democratic country. The item is log-transformed, but the value of 0 is assigned if the state under study or a neighbor is a democracy. In essence, this variable captures the rationale that it is more difficult to detect PGMs in the first place if they are too distant from democracies (Carey, Colaresi and Mitchell, 2015, pp.857-859).

Another aspect of what Carey, Colaresi and Mitchell (2015) call "accountability determinants" pertains to a country's foreign-aid dependence from either democracies or authoritarian regimes. In detail, Carey, Colaresi and Mitchell (2015, pp.857-859) compiled data on the purchasing-price parity adjusted value of foreign aid sent from what is defined as a *Strong Democracy* above. The final variable *Aid Dependence Democracies (ln)* is the logged value of the total sum of aid received from democracies as a proportion of the recipient's GDP. Conversely, with a specification that mirrors this treatment but for authoritarian regimes, we control for the foreign aid received from "strong autocratic states" as a proportion of the recipient's GDP (*Aid Dependence Autocracies (ln)*).

Finally, we incorporate items for population, the centrality of the regular armed forces, and ethnicity. That is, Fearon and Laitin (2003) suggest considering a country's total population as a source of political instability (see also Pilster and Böhmelt, 2012, p.363). The data are taken from the World Bank Development Indicators and we calculate the natural log for population to account for the variable's skewed distribution. We also model the impact of the item *Military Centrality* measuring the size of the regular land forces in relation to the population. In the words of Pilster and Böhmelt (2012, p.363), "[r]elatively large [conventional] armies are politically more central, which deters internal threats in the form of insurgencies." The last variable relates to ethnic sources of domestic conflict. We include the ethnic exclusion variable from Wimmer, Cederman and Min (2009), which captures the share of the population that is effectively excluded from executive power

in ethnically relevant countries. We use a logged version as the final variable, after adding the value of 0.5 to the data from Wimmer, Cederman and Min (2009) in order to avoid taking the log of 0.

Table 2 summarizes the descriptive statistics of the discussed variables.

Table 2: Descriptive Statistics

	Obs.	Mean	Std.Dv.	Min	Max
Auxiliary Force Structure	4,060	1.423	1.116	0.000	3.000
Bureaucratic Quality (ln)	3,012	1.053	0.452	0.000	1.609
Regime Consistency	4,179	0.169	1.720	-15.000	16.000
Civil Violence	4,042	0.188	0.391	0.000	1.000
Civil War	4,393	0.059	0.235	0.000	1.000
Population (ln)	4,417	8.931	1.687	4.993	14.077
Military Centrality	4,084	0.005	0.008	0.000	0.092
Strike	4,062	0.089	0.285	0.000	1.000
Riot	4,062	0.134	0.341	0.000	1.000
Demonstration	4,062	0.226	0.418	0.000	1.000
Guerrilla	4,062	0.118	0.391	0.000	1.000
Excluded Population (ln)	3,764	-4.326	3.426	-9.210	-0.162
Aid Dependence Democracies (ln)	3,906	-0.529	4.369	-8.517	7.495
Aid Dependence Autocracies (ln)	3,906	-7.029	3.294	-8.517	3.382
Strong Democracy	4,405	0.349	0.477	0.000	1.000
Strong Autocracy	4,401	0.235	0.424	0.000	1.000
Weak Democracy	4,401	0.138	0.345	0.000	1.000
Distance to Democracy (ln)	4,397	6.173	1.290	4.605	8.534

Note: Variables for temporal correction not shown.

5 Empirical Results

The findings pertaining to our core variables, *Bureaucratic Quality (ln)*, *Regime Consistency*, *Civil Violence*, and *Civil War*, are reported in Table 3. Since the coefficients of multinomial logit models have to be interpreted with regard to a baseline (i.e., one value of the nominal dependent variable), we report the model from Table 3 again in Table 5 with a different reference category. That is, although the underlying specifications are the same across Tables 3 and 5, Table 3 has *Auxiliary Force Structure*=0 as the baseline category (no auxiliary forces), while Table 5 has *Auxiliary Force Structure*=1 as the reference point (paramilitary forces present, PGM not present). Most crucially for the test of our hypotheses, we focus on Table 4 that reports the χ^2-test statistics and probabilities that the effects of the explanatory variables on the log odds of *Auxiliary Force Structure*=1 and *Auxiliary Force Structure*=2 are identical. For our hypotheses to be valid, we would expect differences for *Bureaucratic Quality (ln)*, *Regime Consistency*, *Civil Violence*, and *Civil War* across the two outcomes. Finally, Figures 2 (core variables) and 3 (control variables) summarize the changes in the probability to see one of the four outcomes of *Auxiliary Force Structure*, while raising a specific variable from the 5th to the 95th percentile value and holding all other variables constant at their medians.

First, Tables 3 and 5, Figure 2, and, most importantly, Table 4 highlight that there is strong support for the **State Capacity Hypotheses 1a** and **1b**. Paramilitary forces require a certain amount of administrative support and financial resources to be established, and this can usually only be given in states with sufficiently

Table 3: The Determinants of Auxiliary Force Structure – Multinomial Logit Model

Outcome:	(1) Paramilitary	(2) PGMs	(3) Both
Bureaucratic Quality (ln)	-0.428	-2.506	-1.212
	(0.701)	(0.775)***	(0.724)*
Regime Consistency	0.176	0.187	0.208
	(0.051)***	(0.067)***	(0.055)***
Civil Violence	-0.278	1.308	1.491
	(0.595)	(0.666)**	(0.676)**
Civil War	12.045	14.932	12.825
	(1.268)***	(0.970)***	(0.869)***
Population (ln)	0.510	0.551	1.173
	(0.218)**	(0.252)**	(0.273)***
Military Centrality	104.384	41.210	140.010
	(24.808)***	(34.529)	(25.715)***
Strike	0.553	0.500	0.294
	(0.368)	(0.552)	(0.436)
Riot	-0.428	-0.298	-0.273
	(0.309)	(0.357)	(0.297)
Demonstration	0.146	-0.049	0.433
	(0.339)	(0.382)	(0.339)
Guerrilla	-0.616	-1.980	-0.109
	(0.595)	(0.862)**	(0.494)
Excluded Population (ln)	-0.012	-0.264	-0.007
	(0.065)	(0.092)***	(0.075)
Aid Dependence Democracies (ln)	0.107	0.006	0.165
	(0.061)*	(0.079)	(0.065)**
Aid Dependence Autocracies (ln)	0.047	-0.084	-0.011
	(0.055)	(0.069)	(0.055)
Strong Democracy	2.162	1.983	2.745
	(0.832)***	(1.079)*	(1.069)***
Strong Autocracy	1.244	-0.214	1.732
	(0.714)*	(1.023)	(0.804)**
Weak Democracy	-0.615	-0.337	-0.802
	(0.594)	(0.839)	(0.721)
Distance to Democracy (ln)	0.718	1.006	1.225
	(0.344)**	(0.462)**	(0.373)***
Obs.			2,547
Pseudo Log Likelihood			-1,248.546
Prob $> \chi^2$			0.000

$*p < 0.10, **p < 0.05, ***p < 0.01$

Standard errors clustered on country in parentheses.

Constants and temporal controls included, but omitted from presentation.

Baseline category is *Auxiliary Force Structure*=0.

high state capacity. In contrast, PGMs do not require a strong state or bureaucratic apparatus. It is thus less likely to have PGMs as compared to paramilitary forces with high bureaucratic quality according to the negative and significant coefficient in the second column of Table 5 and the significant χ^2-test statistic (12.43) in Table 4. The negative absolute first difference estimates, which are presented in Figure 2, associated with PGMs and both types of auxiliaries in the case of *Bureaucratic Quality (ln)* further support this. When raising *Bureaucratic Quality (ln)* from the 5th to the 95th percentile value, the probability of having at least one PGM decreases by about 6.9 percentage points. Interestingly, we observe a significant and negative estimate of the bureaucratic quality variable in the last column of either Table 3 or Table 5 as well as in Figure 2 (first difference estimates): when combining paramilitaries and PGMs, the negative effect as identified for "PGMs only" prevails; in other words, although we lack information on the number of auxiliary units across types, it seems likely that this result is indeed driven by militias, particularly since the estimate of the absolute first difference is insignificant for paramilitary forces. Having said that, since clear and distinguishable effects exist when directly comparing paramilitaries and PGMs (Tables 4 and 5), we find support for the **State Capacity Hypotheses 1a** and **1b**.

Tables 3 and 5, Figure 2, and, particularly, Table 4 do not find much support for our hypotheses regarding regime instability – although a constantly positive and statistically significant effect is given in Table 3 that has "no auxiliary forces" as its baseline. In more detail, it was our expectation that particularly unstable regimes are associated with PGMs instead of paramilitaries, since political leaders may want to compete more effectively politically in those circumstances: PGMs can be established more quickly, with fewer resources, and leaders may find it easier to deny responsibility than in the case of paramilitaries. In short, we therefore expected a difference between paramilitary forces and PGMs. The coefficients of *Regime Consistency* in Table 3 are consistently positive and statistically significant, highlighting that the corresponding scenarios differ from *Auxiliary Force Structure*=0 as the baseline category (no auxiliary forces). However, Table 5 and, most importantly, Table 4 suggest that statistical differences between the types of auxiliary forces are unlikely to exist. The χ^2-test statistic in the latter table approaches 0 and is statistically insignificant as a result. *Regime Consistency* is, hence, positively associated with *any* type or combination of auxiliaries, i.e., it is mainly transitions to democracy that lead to paramilitary forces, PGMs, and both when compared to the reference category of "no auxiliaries." One explanation for not finding a statistically significant difference between PGMs and paramilitaries might be that our theory focuses on plausible deniability, but not efficacy of these groups in confronting the specific kinds of threats that a regime faces. For example, if a threat emerges from within the regime (e.g., a coup), PGMs are likely to be ineffective in confronting that threat, while paramilitaries should be more helpful. If this mechanism applies, next to our claim on plausible deniability, the effects cancel each other out, which leads to the outcome that we do not observe much of a statistically significant difference in terms of paramilitary forces and PGMs here. This is only an ad-hoc explanation, though, and we conclude that we have not found evidence supporting **Hypotheses 2a** and **2b**.

Table 4: Significant Differences across Main Alternatives ((1) and (2)) of *Auxiliary Force Structure*

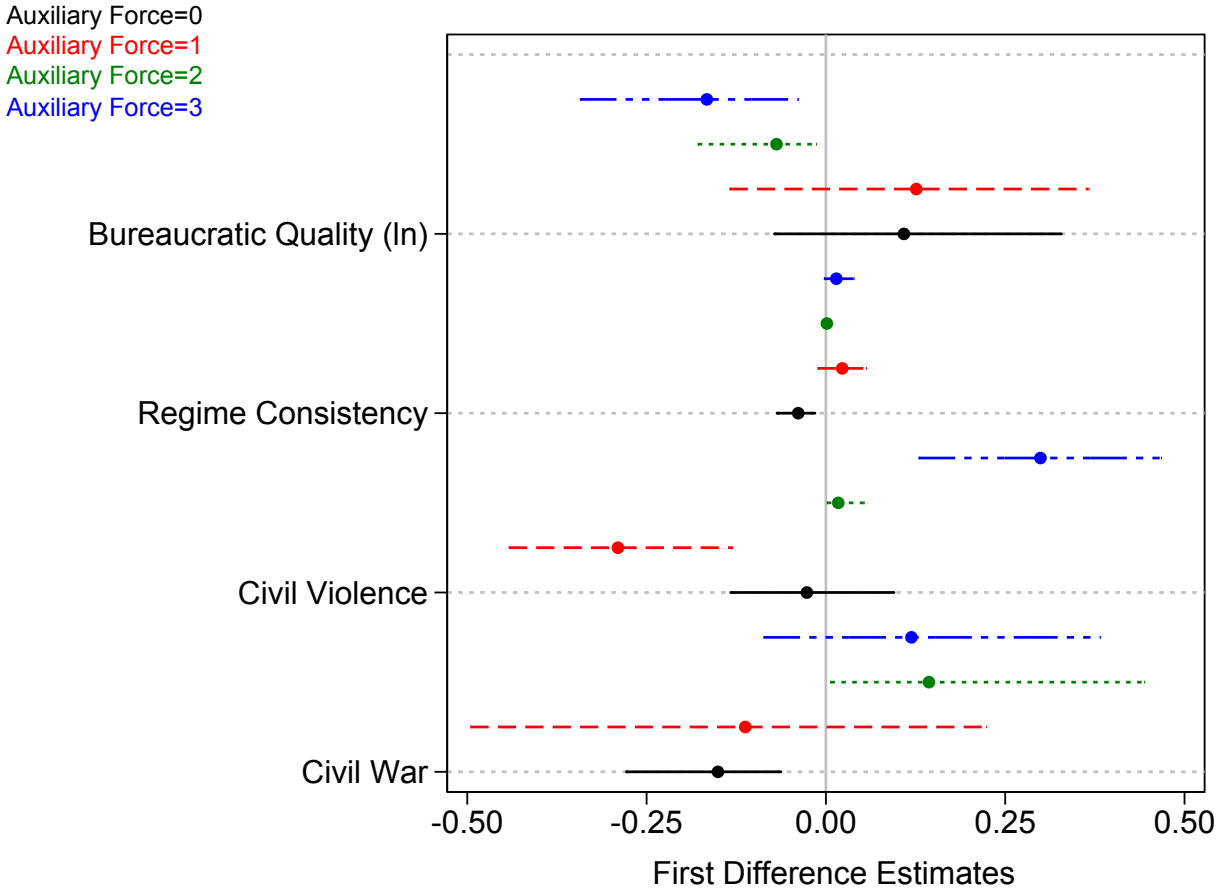
Coeff. for (1) – Coeff. for (2)=0	χ^2	Prob > χ^2
Bureaucratic Quality (ln)	12.43	0.00
Regime Consistency	0.01	0.91
Civil Violence	10.19	0.00
Civil War	3.95	0.05
Population (ln)	0.03	0.86
Military Centrality	8.41	0.00
Strike	0.01	0.92
Riot	0.08	0.78
Demonstration	0.24	0.63
Guerrilla	2.88	0.09
Excluded Population (ln)	9.07	0.00
Aid Dependence Democracies (ln)	2.13	0.14
Aid Dependence Autocracies (ln)	4.20	0.04
Strong Democracy	0.03	0.87
Strong Autocracy	2.02	0.16
Weak Democracy	0.14	0.70
Distance to Democracy (ln)	0.35	0.55

Note: Variables for temporal correction not shown.

Third, our expectations as expressed in the **Civil Conflict Hypotheses** are largely valid. However, the overall effects seem to vary slightly across the items *Civil Violence* and *Civil War*. On one hand, paramilitary forces are basically not – or negatively – associated with civil conflict. That is, Figure 2 demonstrates that *Civil War* exerts a statistically insignificant impact, while we estimate a negative first difference for *Civil Violence*, i.e., the presence of "paramilitary forces only" is actually less likely in such a context. On the other hand, our main expectation was that PGMs are *more likely* than paramilitaries to exist in civil conflict settings, and Table 5 as well as, first and foremost, Table 4 provide evidence for this in terms of *Civil Violence* and *Civil War*. For example, the probability that the effect of *Civil Violence* on the log odds of paramilitary forces and PGMs is identical is at less than 0.1 percent (prob > χ^2: 0.00). This difference does exist for *Civil War* as well, albeit weaker (prob > χ^2: 0.05). PGMs are then more likely than paramilitaries to exist in the context of a civil conflict (i.e., civil violence and civil war). Adding or dropping any of the covariates does not affect this finding, which also mirrors what Carey, Colaresi and Mitchell (2015) find when focusing on PGMs only. In substantive terms, when increasing *Civil Violence* from the 5th to the 95th percentile value, the probability of having at least one paramilitary unit decreases by about 29 percentage points; the probability of having at least one PGM, however, increases by ca. 2 percentage points (statistically significant, Figure 2), and these estimates are statistically different from each other (Table 4). To establish the link to our theory, we thus obtain empirical support for our **Civil Conflict Hypotheses 3a** and **3b**.

Moreover, the combined effect of PGMs and paramilitaries (last column of Tables 3 and 5, Figure 2) is, in fact, positive with regard to *Civil Violence*: raising that variable from the 5th to the 95th percentile value, the probability that a country has paramilitary units and PGMs at the same time increases by more than 30 percentage points; in addition, raising *Civil War* from the 5th to the 95th percentile value, the probability that a country has paramilitary units and PGMs at the same time increases by more than 12

Figure 2: First Difference Estimates – Main Explanatory Variables (Model 1: Tables 3 and 5)



Note: Simulated estimates are based on 1,000 draws from a multivariate normal distribution; horizontal lines pertain to 90 percent confidence intervals; vertical dashed line signifies first difference effect of 0; effects calculated while all other variables held constant at their median.

percentage points (although not statistically significant). Our interpretation of this is twofold. First, the argument on the escalation of domestic unrest is in line with the observation that, when looking at *Civil Violence* and *Civil War*, respectively, the point estimates for *Auxiliary Force Structure*=3 are larger than most of the other possible values of *Auxiliary Force Structure*. Second, the usefulness of any auxiliary force may be influenced by the nature of the dispute in a more complex way than anticipated. Both paramilitaries and PGMs primarily address irregular forms of conflict in which the material capabilities of the actors are asymmetric. However, if civil conflict escalates into *symmetric* or *conventional* style domestic warfare, the comparative advantage of irregular troops diminishes, as the training and equipment of the regular forces makes them better suited for this form of war. And this could explain the statistically insignificant findings for *Civil War* we largely observe for any form of auxiliary force. This conclusion basically mirrors Pilster and Böhmelt (2011) who study the fractionalization of the armed forces by the creation of paramilitary forces and examine its impact on states' military effectiveness in conventional wars. In line with our argument, states that invest in paramilitary forces do considerably worse in winning "traditional" battles than states without these auxiliary forces.[23]

[23] We do not know of any study that examines how states' chances to win conventional wars and their reliance on PGMs are related. This seems to us an important issue worth examining in future research.

Table 5: The Determinants of Auxiliary Force Structure – Multinomial Logit Model

Outcome:	(0) No Aux. Forces	(2) PGMs	(3) Both
Bureaucratic Quality (ln)	0.428	-2.078	-0.784
	(0.701)	(0.589)***	(0.381)**
Regime Consistency	-0.176	0.011	0.032
	(0.051)***	(0.094)	(0.046)
Civil Violence	0.278	1.587	1.769
	(0.595)	(0.497)***	(0.405)***
Civil War	-12.045	2.887	0.780
	(1.269)***	(1.454)**	(1.111)
Population (ln)	-0.510	0.040	0.662
	(0.218)**	(0.231)	(0.190)***
Military Centrality	-104.384	-63.174	35.625
	(24.808)***	(21.788)***	(10.656)***
Strike	-0.553	-0.053	-0.259
	(0.368)	(0.533)	(0.357)
Riot	0.428	0.129	0.155
	(0.309)	(0.452)	(0.193)
Demonstration	-0.146	-0.195	0.287
	(0.339)	(0.401)	(0.201)
Guerrilla	0.616	-1.363	0.508
	(0.595)	(0.804)*	(0.369)
Excluded Population (ln)	0.012	-0.252	0.005
	(0.065)	(0.084)***	(0.051)
Aid Dependence Democracies (ln)	-0.107	-0.101	0.059
	(0.061)*	(0.069)	(0.049)
Aid Dependence Autocracies (ln)	-0.047	-0.132	-0.048
	(0.055)	(0.064)**	(0.031)
Strong Democracy	-2.162	-0.179	0.583
	(0.832)***	(1.096)	(0.797)
Strong Autocracy	-1.244	-1.458	0.488
	(0.714)*	(1.026)	(0.527)
Weak Democracy	0.615	0.277	-0.187
	(0.594)	(0.732)	(0.505)
Distance to Democracy (ln)	-0.718	0.288	0.508
	(0.344)**	(0.485)	(0.257)**
Obs.			2,547
Pseudo Log Likelihood			-1,248.546
Prob $> \chi^2$			0.000

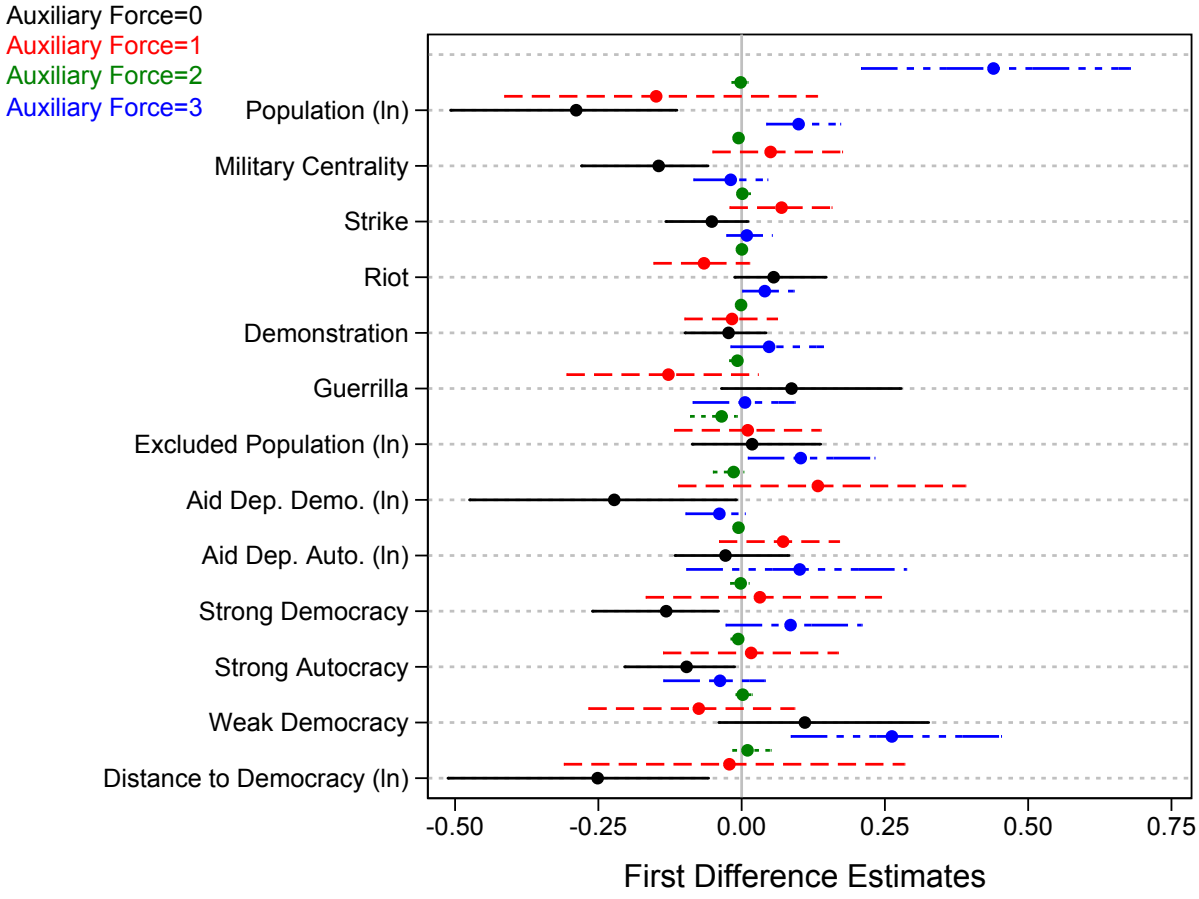
$*p < 0.10, **p < 0.05, ***p < 0.01$

Standard errors clustered on country in parentheses.

Constants and temporal controls included, but omitted from presentation.

Baseline category is *Auxiliary Force Structure*=1.

Figure 3: First Difference Estimates – Control Variables (Model 1: Tables 3 and 5)



Note: Simulated estimates are based on 1,000 draws from a multivariate normal distribution; horizontal lines pertain to 90 percent confidence intervals; vertical dashed line signifies first difference effect of 0; effects calculated while all other variables held constant at their median.

In terms of our controls, most of these variables are in line with the results in earlier research. We briefly discuss only the consistently significant findings, focusing on Table 3 and Figure 3. First, we find that international accountability, in fact, increases the likelihood that PGMs are established (Carey, Colaresi and Mitchell, 2015). The positive impact of *Aid Dependence Democracies (ln)* in Table 3 underlines this. While the coefficient associated with *Distance to Democracy (ln)* does then not support this line of reasoning, the result for *Aid Dependence Democracies (ln)* is consistent with what Carey, Colaresi and Mitchell (2015, p.9) call the "international monitoring costs argument." Second, while our results for regime instability (discussed above) point to a positive impact on any auxiliary force, the different forms of government as such are linked to rather inconclusive findings. That is, *Weak Democracy* does not exert a statistically significant impact on the establishment of paramilitaries, PGMs, or both. *Strong Autocracy* and *Strong Democracy*, however, are mostly positively and significantly associated with auxiliaries. Similar to other findings, it is then not the case that PGMs are only a security type that can be found in autocratic regimes, but exist across all different forms of government (Carey, Colaresi and Mitchell, 2015; Carey and Mitchell, 2016).

It thus seems that political constraints exercised by *domestic* democratic political institutions might not have a significant impact. Having said that, on one hand, external factors may not necessarily provide more

constraints either. Aid from democracies, for example, is – as in Carey, Colaresi and Mitchell (2015) – insignificant or positively signed, although we do find evidence that proximity to democracies (*Distance to Democracy (ln)*) has a negative impact on the creation of auxiliary forces. Arguably, distance alone may capture different things, but it may be plausibly linked to an external constraining effect. On the other hand, our results may be affected by regime type as traditionally measured not capturing adequately the forces at work. That is, current debates in the field focus on whether our measures of democracy may actually be accurate enough to capture specific theoretical concepts. To this end, scholars argue for more precise and disaggregated variables. Bogaards (2012), for example, contends that there is a lot of uncertainty about how to exactly code binary operationalizations of traditional democracy scores, while Sanín, Buitrago and González (2013) discuss the (implicit) assumptions behind aggregated democracy scores and demonstrate the inaccuracy of them (see also Vreeland, 2008). Similarly, Gleditsch and Ruggeri (2010) outline a number of problems with measures of democracy as proxies for political opportunity structures (see also Hegre, 2014), and Bell (2016) and Hill Jr (2016) show that focusing on disaggregated, sub-components of democracy may reveal new findings in the context of coups and human rights, respectively.

Third, strikes, riots, or demonstrations are not more likely to be associated with paramilitaries or PGMs (Tables 3-5, Figure 3). As an exception in the context of these low-level domestic unrest variables, shown in Table 3, guerrilla warfare makes it less likely that PGMs evolve (compared to "no auxiliary forces"). As expected, moreover, larger populations are generally more likely to be associated with more auxiliary forces. The positive effect of *Population (ln)* in Table 3 emphasizes this, and it is also the case that the results in Table 4 do not suggest any statistically significant difference across auxiliary forces in terms of this variable's impact. Furthermore, while the effect of *Excluded Population (ln)* differs across PGMs and paramilitaries, we find that there is a negative impact on the establishment of PGMs, somewhat surprisingly (Figure 3). That said, this effect is rather small in substance as the likelihood of having a PGM decreases by only 3.5 percentage points when increasing *Excluded Population (ln)* from the 5th to the 95th percentile value. Lastly, although we do not report the coefficients of the temporal correction controls in the tables, there is considerable evidence for serial correlation. In terms of all different specifications of the auxiliary forces, the results suggest that the likelihood of either paramilitary forces, PGMs, or both is highest immediately after such a specific auxiliary force composition has been established, but then declines over time. This also mirrors the findings in, e.g., Carey, Colaresi and Mitchell (2016, p.9).

The appendix presents a series of additional analyses that further increase the confidence in the validity of our results. These robustness checks focus on assumptions underlying our model and other rationales behind and determinants of the data-generating process. Space limitations prevent us from discussing these analyses in depth here, but we briefly summarize the arguably most important ones in the following. First, we control for additional determinants of auxiliary force structure that may also affect our main explanatory variables. These additional covariates include a Cold War variable, an item on former colonial powers, state repression, or a spatial lag capturing the influence of regional neighbors' force structures. Second, we incorporated

fixed effects for years and countries in order to address potential endogeneity concerns. Third, we changed the operationalization of some of our main explanatory variables. Fourth, we compared the organizations included in the paramilitary and PGM data sets and, after having identified and removed duplicate cases, re-estimated the main model. Finally, we test for a simultaneous relationship between paramilitary forces and PGMs. All these additional estimations are summarized in the appendix and provide further support for our theory.

6 Conclusion

The structure of auxiliary security forces varies considerably in composition across countries. We disaggregated this sector along paramilitary and PGM forces, and examined whether specific factors have diverse impacts on these unit types or their joint presence. Building on a principal-agent framework (e.g., Dixit, Grossman and Helpman, 1997; Hawkins et al., 2006; Laffont and Martimort, 2009), our theory highlighted that auxiliary forces are usually employed for domestic-level, insurgency-type threats to the survival of the government, and that paramilitary forces require more resources as well as make the incumbent more accountable for their actions than PGMs. We derived a series of implications pertaining to state capacity, regime instability, and civil conflict in light of these claims. For testing our hypotheses quantitatively, we relied on competing risks analysis. Our findings and several additional robustness checks in the appendix suggest (1) that PGMs do indeed require less state capacity than paramilitary forces, (2) that although both paramilitaries and PGMs are strongly associated with regime instability, there does not seem to be a difference between them in that context, and (3) that a higher level of civil conflict, i.e., civil violence or civil war, is more likely to be associated with PGMs than paramilitaries.

We thus obtained support for the **State Capacity Hypotheses** and the **Civil Conflict Hypotheses**. This emphasizes that there is an underlying and diverse set of activities PGMs and paramilitaries are used for, which is what we sought to address with this article. While our research constitutes the first study that has uncovered the mechanisms of this phenomenon as well as the first work that jointly addresses PGMs and paramilitaries in a systematic fashion, our research has also important implications for the understanding of how states structure their auxiliary security forces, domestic state-sponsored violence as well as contentious politics and political violence, and civil-military relations in general (e.g., Lyall and Wilson III, 2009; Sechser and Saunders, 2010; Powell, 2012).

Several avenues for further research do exist. On one hand, the need to disaggregate conflict types has been re-stated by our work. We also believe that our research strongly suggests that disaggregation of paramilitary forces and PGMs, respectively, is necessary to progress in this field. Not all types of paramilitary forces are created equal, and they differ in their skills and capabilities to address insurgency warfare. Similarly, not all PGMs are the same and there are crucial differences among units. A more disaggregated perspective, which some research has began to provide (e.g., Raleigh, 2016; Carey and Mitchell, 2016), must be informed by

additional data collection efforts, and we believe this will substantially enhance our knowledge about states' auxiliary security forces. On the other hand, this article points toward the conclusion that different escalation stages exist across paramilitary and PGM employment. We do need, however, more qualitative work that not only examines our claims in more depth, but also sheds more light on the governmental decision-making process leading to the rise of paramilitary troops and PGMs.

Finally, in the empirics presented above, we do not examine explicitly "conditional effects" capturing interactive relationships between the determinants of a state's auxiliary force structure, and rather focused on their "additive" impact instead. We plan on investigating these conditional relationships more thoroughly in a future study, although we conducted some preliminary analyses (in the appendix), which consider that the state capacity argument might be more strongly pronounced in states facing active insurgencies.[24] However, other interactive relationships may be given and we seek to address this in future work. For example, given some structural risks to regime cohesion or dominance, e.g., autocratic rule, regimes choose to invest in paramilitaries when stability is given. Conversely, if structural risks are coupled with instability, then PGMs are selected.

We conclude by highlighting that we disaggregated auxiliary forces into paramilitary units and PGMs, thus contributing to the conceptual clarity in the field. As outlined above, important policy implications and avenues for future research can be derived from this research, which identified crucial drivers of states' auxiliary force structure, and their impact is both statistically significant and substantive in size.

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[24]Recall, however, that Raleigh (2016, p.295) emphasizes that the literature hardly accounts for auxiliary forces "outside failed state environments" – and we sought to contribute addressing this by not limiting our study to, e.g., states involved in insurgencies.

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