To Escalate, or Not to Escalate? Private Military and Security Companies and Conflict Severity

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The existing literature is unclear about whether private military and security companies (PMSCs) are a cause of increased conflict severity, or rather are simply hired within more severe conflicts. We argue that PMSCs do increase conflict severity, yet this is the result of an escalation strategy by states to regain territory from rebels. If contracted, PMSCs either substitute for host nation forces, or free up such conventional forces to engage in offensive operations. In both cases the conflict severity increases substantially. This argument is tested with OLS regression using data from 30 weak states from 1990 to 2007.

Conventional wisdom holds that civil wars are fought between governments and a violent non-state actor – such as insurgents, militias or rebel groups. What has often been neglected in the civil war literature is, however, the participation of commercial actors participating in civil wars. This is surprising as mercenaries were present in a third of all civil wars in the 20th century.[1] While they might have been frequently present during the Cold War their influence on the battlefield was rather limited and the scholarly literature mostly neglected them.[2] However, since the 1990, the phenomenon has undergone a significant qualitative shift. The rather disorganized mercenary groups of the 1960 and 70s developed into corporate force providers - Private Military and Security Companies (PMSCs) – in the 1990s. These new corporate actors were able to deploy on a much larger and more professional scale than their mercenary predecessors offering a broad range of force and force related services, and transnationally competing for customers and contracts.[3] The growing importance of these commercial military actors also spurred new scholarship shedding light on issues such as the control over the use of force, accountability and state oversight, or military effectiveness.[4] However, so far only limited insight into how PMSCs shape conflict dynamics has been generated. Indeed, scholars have investigated PMSC interventions in individual case studies, e.g. in Croatia, Sierra Leone, Afghanistan and Iraq, yet until recently, systematic large-N studies of PMSCs on civil war were rare.[5] This article aims to contribute to the debate on PMSCs and conflict dynamics through a large-N investigation. More specifically, the article *seeks to answer the question of whether PMSC intervention in civil war has an independent effect on conflict severity.*

PMSC presence can be understood as one variety of third-party intervention into civil war, and as such may alter power relations between the government and rebels. The literature has already investigated the relationship between third party interventions and conflict severity, e.g. UN interventions or state interventions.[6] However, the presence of PMSCs in conflicts differs from those of other third-party interventions. While states and the UN are able to decide to intervene without the consent of a party to the conflict, PMSCs always require an invitation, i.e. a contractual relationship with a party to the conflict. This raises a specific problem for the investigation of PMSCs interventions: the problem of endogeneity. PMSCs might be contracted most frequently by governments embroiled in a high intensity conflict as they have the highest demand for military services. Those facing a low intensity uprising are in less need of support and may refrain from contracting. Likewise,

PMSCs are profit driven actors and might be drawn into the most intense conflicts as these promise the highest profit.[7] However, in contrast, higher conflict severity may also be a consequence of PMSCs involvement. Some in the literature attribute conflict severity to the ruthlessness of PMSCs, while others argue it is due to their combat effectiveness.[8]

This article will put forward the argument that PMSCs intervention does independently increase conflict severity. To be more specific, severe conflict arises to the extent that the state faces severe security threats from rebels and has the capacity to counteract these threats through coercive strategies. We conceptualize the state as a coercive organization claiming the monopoly of force over a certain territory.[9] If faced by a challenger, the ideal-typical state will seek to escalate to conflict and reestablish its control over the territory.[10] However, the rulers of weak states may be constrained in their ability to escalate even when facing rebels of modest military strength. Hiring PMSCs is a means by which even a weak state with limited capacities and resources can gain an advantage over rebels and pursue an escalation strategy.[11] Nonetheless, the establishment of a contract between a state and a PMSC requires a 'double coincidence of wants'[12]: a state must wish to hire a PMSC and a PMSC must be willing to offer their services to that state. We argue that severe threats and constrained political-military resources encourage states to hire PMSCs, whilst the decisions of PMSCs are driven by the profit-motive. Despite the possibility of endogeneity, we argue that armed PMSCs increase the severity of conflict when they are contracted by states.

After developing our theoretical framework, we conduct a statistical analysis in order to test our hypotheses about the conditions for PMSC contracting in weak states and its effect on conflict severity.

Theoretical considerations

Civil war research has often focussed on the motivation of actors, epitomized by the greed and grievance debate, while others have explained civil war onset in terms of opportunities for rebellion within weak states.[13] The division between the debates is rather idealized and most scholars blend opportunity and motivational approaches to some extent. Cioffi-Revilla and Starr formalize this perspective and argue that 'opportunity' is one necessary element to explain political behaviour, yet it needs to be complemented by an additional element: 'willingness'.[14] Opportunity is often thought of in terms of structure, the enabling and

constraining factors that affect an actor's behaviour. Willingness is the actor's intent to purse a certain action. Within Coiffi-Revilla and Starr's approach, different factors may be substitutable alternatives.[15] For instance, a traveller can choose between the train and a car to reach a destination. Both means of transportation provide an opportunity to make a journey and are perfectly substitutable. We approach the issue of conflict severity in a similar way, arguing that severe conflict should be analysed as the result of key actors within a conflict possessing the willingness and opportunity to escalate the conflict.

For the investigation at hand, the opportunity-willingness approach encourages a focus on specific actors which are assumed to have agency. Structural factors shape outcomes only through their influence on decision-making. In civil war research most frequently insurgents and the government are discussed as agents.[16] Other actors have been included to a lesser extent. For instance, Ricardo de Sousa has included external interveners, while Senden Akcinaroglu and Elizabeth Radziszewski integrated PMSCs into their account.[17] This article will focus on PMSCs and the governments of weak states. Although we recognise that rebels are also strategic actors, in this paper we primarily focus on their influence on the decision-making of states and PMSCs. A disagreement within the literature exists about whether PMSCs are merely the tools of their customers, or whether they can be considered to be independent actors.[18] We take the view that PMSCs possess some degree of discretion about which states they contract with, which conflicts they involve themselves with and how they operate in conflict zones. We first theorise the opportunities and willingness for weak states to escalate conflict before turning to the opportunity structure of PMSCs.

Weak States and the Conditions for Escalation

In this article we conceptualize the state as a coercive autonomous organization claiming the monopoly of force over a certain territory.[19] Accordingly, as a coercive agent, the state will seek to eliminate any internal rivals and establish control.[20] States are motivated to oppose any violent challenger and to assert their monopoly of force.[21] However, governments in weak states have to carefully assess where to commit their resources. Governments might therefore be less willing to escalate when its survival is not directly at stake. If insurgencies are confined to remote areas and the rebels are not encroaching on major population centres, the government may be content with just containing the threat. However, if the insurgency poses an increasing risk to the major population centres, the government is more it is willing

to escalate the conflict. *Hypotheses 1* summarizes this relationship: *The less geographically contained an insurgency is the greater the intensity of the conflict.*

State survival and maintenance of territorial integrity are certainly important motivations in explaining the willingness of a government to escalate a conflict, yet they are not the only considerations. Natural resources are crucial in explaining civil war dynamics. Although resources are not necessary, they have been hypothesized to affect the onset of civil war, state strength and conflict duration.[22] The highly influential 'greed and grievance' debate linked the presence of natural resources to rebel motivation. Grievance related motivations, such as inequality or ethnic fractionalization, are considered to be less significant because rebellions are rather greed-driven attempts to loot and plunder.[23] Natural resources are an important prize to capture and promise material gains.[24] The government on the other hand seeks keep a hold on natural resources, especially if it uses resource rents to buy off supporters, potential opposition and the security forces.[25] Hence, *Hypotheses 2* suggests: *The more the government relies on natural resources, the more it is more willing to escalate the conflict.*

However, the ability to control territory, govern a population and deploy security forces varies among states (and over time) depending on their capacity. State capacity also has implications for the opportunities for rebellion in a given society. A strong state might constrain the options of would-be rebels, while a weak state creates a window of opportunity for rebels to challenge the state.[26] This underscores the importance of opportunity structure in civil war onset, yet state capacity has also implications for civil war dynamics such as conflict severity.

At times, the literature hints at this relationship. For instance, Charles Tilly argues that states evolved from 'wasps to locomotives', able to mobilise vastly greater social power than their predecessors.[27] States grew into locomotives by increasing their ability to extract significant resources from their society and fund high quality security forces. This provides the state with the ability to escalate fighting and engage in increasingly total wars.[28] State capacity has been investigated in relation to conflict severity, from which we derive *Hypothesis 3: the severity of civil conflict is associated with greater state and military capacity.*[29]

However, the argument here is that the power of contestants *relative* to one another is more important. Power ratios have been extensively discussed in the conflict literature, yet

they have rarely been employed in explaining conflict severity.[30] Power ratios are significant within our theoretical framework because they affect both the opportunity and the willingness to escalate a conflict. The greater the relative strength of the rebels, the greater the threat posed to the state, but the less likely it is that the state will have the capacity to oppose them. Particular power ratios between rebels and the governments of weak states may therefore be associated with different levels of conflict.

First, it may be that the government in a weak state still enjoys a power advantage over the insurgents. If the insurgent realizes the government cannot be defeated, it retreats into hiding and operates in a clandestine guerrilla-style fashion.[31] However, while the government is strong enough to contain the insurgency and organize a defense, it has only limited ability to escalate the conflict. Conflict severity is expected to be moderate. Second, the two parties may be at power parity and able to engage in a conventional civil war, with the rebel group posing a significant threat to the government.[32] Although the forces of both sides may not be highly sophisticated, either actor is able to escalate the conflict and inflict significant damage. If neither side can gain a decisive advantage, the government and the rebels are locked in a hurting stalemate.[33] Conflict severity should be at a high level. Third, rebels may be stronger than the state, achieving rapid victories that trigger the disintegration of central authority amid the desertion of soldiers and the collapse of state institutions. Such phases of civil conflict may be dramatic yet produce fewer battlefield deaths because of the inability of the state to resist the rebels. Fourth, a situation in which no organised actor possesses a preponderance of power can emerge in collapsed states. In contrast to weak states, the government does not command any noteworthy state security forces anymore or any ability to engage in larger military operations, yet neither does the opponent. Stathis Kalyvas described this kind of warfare as symmetric non-conventional warfare, i.e. militias, criminal gangs or warlords facing each other, employing hit and run tactics.[34] Conflict severity is expected to be moderate.

Accordingly, in weak states the power ratio constrains the ability to escalate and, hence, conflict severity. *Hypotheses 4* expresses this relationship: *Among weak states, the condition of parity between rebels and state forces is associated with the most severe conflict. Where the state is much stronger than rebels, much weaker than rebels, or has collapsed, the intensity of conflict will be lower.*

So far the discussion has focussed on strictly generic state resources. However, the formal framework of the opportunity structure suggests that factors are substitutable. A major challenge for a weak state attempting to tip the power ratio is that '[w]ars cannot be fought without warriors', in other words they require military forces.[35] However, there may be alternatives in the government's opportunity structure which allow it to substitute for its lack of a professional armed force.

The government can seek the support of a strong outside ally. Foreign intervention on behalf of a government or military support is able to compensate for state weakness.[36] The Syrian government, for instance, is supported by Russian troops, and in Afghanistan and Iraq foreign troops and provide crucial support to the governments. The influx of resources, military expertise and even military troops increases the government's capacity and compensates for its own weakness. However, since the end of the Cold War external support for weak governments has decreased and the option is available to a lesser extent.[37]

Nonetheless since the 1990s a new option has emerged to support weak governments: the transnational market for force.[38] On the market, PMSCs offer force and force related services to those who can afford them. The services range from armed services, such as full-scale combat and security to unarmed logistics and support.[39] It is an attractive option for governments as PMSCs are quickly available and do not require reliance on an outside power or cumbersome mobilization of latent national military potential. For instance, the Nigerian government contracted a PMSC in 2015 to aid in the fight against the terrorist organization Boko Haram after it became clear that outside help from the US or UK would not be provided.[40] Contracted on behalf of a government, a PMSC is able to increase the capacity to take on an opponent almost immediately.

The support of outside actors may increase the power of a weak state versus rebels and enable it to escalate the conflict in order to establish control. However, the question remains how exactly the deployment of new and augmented forces increases conflict severity. The main arguments presented in the literature are similar for both states and PMSCs, and revolve around two main mechanisms: the intervening actors may increase severity by increasing combat effectiveness, or through mere brutality.

Discussions about state interventions focus on this distinction between increased effectiveness and the use of indiscriminate force.[41] Likewise, the debate about PMSCs has produced both arguments – the 'ruthless cowboy' and the 'effective professional'. Petersohn

suggests that PMSCs' professionalism and skill increases combat effectiveness and translates on the battlefield into increased severity.[42] This implicitly assumes that the increase in conflict severity is due to casualties suffered by rebels. However, PMSCs may themselves suffer casualties or inflict casualties on civilians.[43] Sidestepping this issue, PMSCs may increase conflict severity simply by augmenting the state's capacity to contest disputed territory. Kalyvas argues that violence is anticipated to be lower in areas in which either the state or the rebels have full control, and higher in contested territories.[44] We agree with this logic and argues that, in the context of an ongoing civil conflict, increased capabilities allow the government to escalate by contesting more territory, more forcefully. This increases the frequency of engagements with the opposing force and thus the number of casualties. Our perspective is agnostic about whether the casualties will primarily be suffered by rebels, civilians or forces allied to the state.

In sum, both foreign allies and PMSCs provide a weak government with the ability to escalate the conflict. Thus, *Hypotheses 5* suggests: *If weak states complement their own security forces with a foreign ally or PMSCs, the government gains the ability to escalate the conflict and hence conflict severity increases.*

PMSC willingness to Contract

Because hiring PMSCs provides a means to push back against rebels, the factors that provide states with the willingness to escalate conflict against rebels should also provide them with the willingness to hire PMSCs. Nonetheless, PMSCs are private entities and are not obligated to take contracts offered by states. Their willingness to become involved in conflict must also be taken into account. As a result, we conceptualise the establishment of a contract between a weak state experiencing civil conflict and a PMSC as involving a 'double coincidence of wants'. Based on a market logic of free contract, a state must be willing to hire a PMSC and a PMSC must be willing to be hired. Hypothetically, there may have been cases where states wished to hire PMSCs for security-related tasks but no private security firm was willing to take on the task. Although these 'dogs that didn't bark' are difficult to observe, examples exist. For instance, in 2001, Blue Sky security company held contracts for training security guards in Kuwait and helped NGOs to assess risks, yet it declined contracts in Iraq.[45] Better documented are cases where PMSCs have sought to market their services to governments that were uninterested in the product offered. For instance, in 2015 Erik Prince,

managing director of Frontier Resource Group and former CEO of Blackwater, proposed a well-trained contractor force to Nigeria to deal with the Boko Haram threat, yet was turned down by President Goodluck Jonathan.[46] Nonetheless, we do not have systematic data on how common such situations are. Only agreed and fulfilled contracts are readily observable. Nonetheless, we can theorise the conditions under which PMSCs will be motivated to contract with states and test these arguments empirically, as PMSC willingness is a necessary condition for a contract to be agreed.

PMSCs are profit driven corporate entities and do not provide services without compensation. Although a PMSC option can be more cost-effective than a generic military solution, because for example PMSCs do not need to be maintained during peacetime as standing armies do, contracting is still expensive.[47] The inability of weak states to extract taxes from their populations might therefore limit how far they can make use of the market for force.[48] However, taxes are only one source of funds for states. Governments can also rely on natural resources as a source of income substituting for the lack of a tax base. In the civil war literature, natural resources such as gemstones, ores or oil have been discussed extensively. Initially thought of as an incentive to engage in conflict, an additional argument has been developed suggesting that natural resources fund conflicts.[49] PMSCs have also been argued to be motivated by resources.[50] However, there is only extremely weak evidence for the direct link of PMSCs actually exploiting the resources and securing mining rights[51]. A different relationship between PMSCs and natural resources is more plausible. Weak government use the natural resources to generate hard currency to pay for PMSC services on the market for force. *Hypothesis 6* asserts that *PMSCs are more likely to be contracted when natural resources are present within the territory of a state*.

Finally, we must consider the possibility that PMSCs are more likely to be contracted in particularly high or low severity civil conflicts. PMSCs profit from providing security services in actual and potential conflict zones, it may be that financial compensation is greater in intense conflicts due to the attendant risks or that there are simply more opportunities for work in the world's conflict hotspots. PMSCs may be risk-acceptant collective actors, after all their employees have self-selected into careers that involve exposure to danger. Alternatively, as prudent profit-maximisers, PMSCs may seek to minimize cost and risk by disdaining contracts to work in the most violent warzones in favour of providing services to states experiencing minor conflicts or undergoing post-conflict reconstruction. Both lines of

argument seem plausible, implying that the level of conflict severity has a causal influence on the presence of PMSCs. However, whilst it is possible that individual PMSCs may be either risk-acceptant or risk-averse, overall the increased risk of operating in states experiencing severe conflicts should be compensated by higher payment through the market mechanism of compensating differentials.[52] Until we know more about the risk preferences of PMSCs in general and the way in which the market for force compensates firms exposing their employees to risks, we should therefore assume that the contradictory effects of risk on willingness cancel one another out. Therefore we expect put forward *Hypothesis 7: existing conflict severity does not influence the probability of PMSCs becoming involved in a civil conflict*. This is the null of the two alternative hypotheses about the effect of severity on conflict.

To summarise, we argue that when states face severe threats they seek to escalate conflicts against rebels to ensure their survival and regain territory and control over resources. However, weak states may be constrained from doing so by their limited capacity to mobilise military resources. External support and hiring PMSCs may substitute for domestic capabilities. However, PMSCs are actors in their own right and are unlikely to become involved in a conflict if it is not profitable for them to do so. Natural resources may provide a source of hard currency to pay PMSCs, whilst the existing level of a conflict provides both incentives and disincentives for PMSCs to contract with a state that we expect to cancel each other out. We anticipate that PMSC presence leads to intense conflict, rather than vice versa.

Methodological Considerations

Dependent Variable: To investigate our hypotheses, we created a cross-sectional time series dataset of weak states from 1990 to 2007. Our dataset includes 30 states for which data was gathered on the presence or absence of PMSCs by the creators of the Private Security Database.[53] The countries included are a geographically-diverse selection of states, originally chosen because they experienced at least one episode of high instability or state collapse between 1990 and 2007.

We operationalise conflict severity in terms of battlefield deaths within a country per year, using data from the Uppsala Conflict Data Program (UCDP) Georeferenced Event Dataset version 18.1.[54] Although armed conflicts have much broader humanitarian consequences, in

this study we examine severity only in terms of deaths on the battlefield. Consistent with Lacina and Petersohn, we are concerned with conflict severity rather than conflict onset or duration.[55]

Figure 1 here

Our dataset therefore includes only years for a given country in which there were at least 25 deaths in battles between state and rebel forces, consistent with the widely-used definition of an armed conflict employed by the UCDP.[56] The unit of analysis is therefore the country-in-conflict-year.

In enumerating battle deaths, we exclude battles where a third-party state fought a non-state actor within the territorial boundaries of a country. Such cases fall outside our conceptualisation of a civil war; we are interested in outside interveners only in as far as they augment the capabilities of the state they support. However, we include deaths in battles fought by an occupying power – as in these cases we argue that the occupier has taken on many of the functions of the state in the occupied country. Due to the very high positive skew of battle deaths in the dataset (10.5), we add one and take the natural logarithm of battle deaths.

Independent variables: Our primary concern is the effect of the presence of PMSCs on conflict severity. PMSCs, however, perform a wide variety of tasks in armed conflicts. Different kinds of PMSCs providing different kinds of services might have quite different effects on the severity of a conflict. The Private Security Database provides details of the sort of service PMSCs were contracted to provide by a client. We examine the association between the presence of at least one PMSC providing a specific kind of service within a country in a given year and conflict severity. We aggregate the kinds of service that PMSCs provide on the basis of the 'tip-of-the-spear' argument of Singer.[57] Armed PMSCs were coded as being present if at least one PMSC was contracted to perform combat, security and/or quasi-policing tasks in a country-year. In such cases, the state has directly delegated some aspect of the monopoly on organised violence to a PMSC. A commercial actor has therefore been tasked with carrying out some of the core functions of the state. Support PMSCs were coded as being present if at least one PMSC was contracted to provide operational support, logistics

support and/or infrastructure construction tasks. Although these activities may augment the capacities of the state and could allow the state to redirect more of its own troops to frontline combat, they do not involve the direct delegation of the right to use lethal force to commercial actors. This conceptual distinction has been validated by Petersohn's finding that frontline security activities by PMSCs are associated with greater conflict intensity, whilst support activities by PMSCs are associated with lower conflict intensity.[58]

As well as reflecting a conceptually-meaningful 'tip-of-the-spear' distinction, aggregating PMSC activities into these two categories avoids making potentially-arbitrary distinctions between tasks that may be qualitatively similar. Recorded distinctions between certain security-related PMSC activities may only be nominal. For example PMSCs contracted to provide security services during the occupation of Iraq engaged in full-scale fire-fights, blurring the distinction between security and combat services.[59] The capacity and right to wield deadly force may be a more relevant distinction than the description of a contract by PMSCs and their clients.

The selection of control variables for the analysis was guided by the recommendations of Lee Ray, who advises that control variables should measure those factors that we believe might influence *both* our independent and our dependent variables.[60] To minimise the effect of omitted variable bias on our results, it is therefore necessary to include potential confounding variables that may be associated with both the presence of PMSCs and the degree of severity of a conflict.

The presence of strong rebels may increase the potential for severe conflict, whilst facing a rebel army whose military strength matches or exceeds the forces at the state's disposal may increase the willingness of the government to hire PMSCs. Indeed, our theoretical framework leads us to anticipate that the scenario in which a state faces a rebellion that it is unable to contain or defeat with its own security forces is the most typical condition under which states will contract with PMSCs. To control for the potentially confounding role of *rebel strength*, we construct a six-point scale of rebel strength using data gathered by Cunningham, Gleditsch and Saleyhan.[61] As we anticipate that conflict may be most intense when rebel and government forces are roughly equal in strength, in line with wider findings in conflict studies on the dangers of parity, we also include the square of rebel strength in our analysis.[62]

As our theoretical framework emphasises the state's monopoly over violence, variables relating to the state's ability to govern its territory are important to control for. All states in the dataset are states that experienced some form of 'state failure' within the time period. But state weakness varied among the countries included and fluctuated over time. As noted previously, during acute episodes of state collapse, state security forces may be too disorganised to engage in conventional warfare against rebels and so conflict intensity may be lower. We classify a country as undergoing acute *state collapse* if it is coded as experiencing either of the two highest levels of instability according to the Political Instability Taskforce's MAGFAIL scale in a given year. We also include the 5-point MAGAREA scale of the *geographical extent* of a conflict from the same dataset, with the expectation that extensive conflicts will also be more severe.[63]

The political system of a state has been found to be a centrally-important factor in explaining its experience of conflict.[64] Lacina finds that conflict intensity in democracies is lower than in other regime types.[65] The citizens of democracies may be less strongly motivated to risk their lives fighting the state than the subjects of dictatorships, and democracies may avoid using maximal violence to crush rebellions. It has however been posited that states with mixed and incoherent political systems, anocracies, may experience the most conflict – although some suggest that anocracy is a proxy for state weakness and a conflict-ridden polity.[66] Furthermore rulers governing states through different political systems may differ in terms of their willingness to contract with PMSCs. For their part, PMSCs may avoid contracting with dictatorships out of human rights concerns, although we hypothesise that other factors will be more important as PMSCs are profit-driven organisations first and foremost. Drawing on the POLITY IV (2017) dataset, we use two alternative operationalisations to measure differences between the political systems of different weak states. The first operationalisation classifies states as a *democracy* if they have a Polity 2 score of 6 or higher, an *anocracy* if they have a score between -5 and 5 inclusive, and *occupied* if governed by a foreign power. The reference category is *autocracy*. The alternative operationalisation uses the full 21-point *Polity 2* scale, with -10 indicating a completely autocratic state and 10 a completely democratic state, and Polity 2 plus ten squared. Cases of occupation by a foreign power are coded as missing.

A longstanding strand of research on civil wars argues that natural resources provide the motive and opportunity for rebellion.[67] In countries rich with natural resources, the

prospect of material gains might result in rebels seeking loot and the presence of high value-to-weight resources might enable rebels to fund themselves and purchase arms. The presence of natural resource rents might also allow rulers to govern in an exclusionary fashion, by buying off key supporters such as members of the security services rather than providing public goods to the whole population. This might generate grievances that lead to rebellion. As victory in a civil conflict may have large distributional consequences, the presence of natural resources might therefore raise the stakes and increase the conflict's intensity. But the proceeds from valuable resources such as diamonds and oil may also provide a ready source of hard currency that could be used to pay PMSCs for their services. They are therefore an important potential confounder. To take into account the role of *diamonds*, we code as 1 any country with any active diamond sites and 0 otherwise, based on the Diadata dataset.[68] Following Fearon and Laitin we use World Bank data to code for *oil dependence* when oil rents made up more than 30% of GDP in a given year for a country.[69]

Outside intervention in weak states may have various effects on conflict intensity, increasing the level of violence or suppressing it. External actors, whether states or international organisations, may contract PMSCs for various security and reconstruction purposes. We used the Pickering and Kisangi dataset of *military interventions*, coding a 1 for a country in a given year if there was at least one ongoing intervention in support of the government or against rebels.[70] We use this measure in conjunction with the 21-point Polity 2 scale, as unlike our other operationalisation of regime type the scale does not include information about external occupation and intervention.

We also include a set of standard variables measuring the resources available to a state drawn from the World Bank and the Correlates of War National Material Capabilities dataset v.5.0.[71] *GDP per capita* may shape the opportunities and willingness to engage in conflict of all relevant actors. Average income may help determine the opportunity costs of rebellion. It also may be related to the capabilities of the state and influence the ability of the government to hire PMSCs.[72] Following Lacina, we include a measure of *troop quality*, dividing military expenditure by the number of troops. Better-armed and trained troops might be able to take the fight to the rebels, resulting in more severe conflict.[73] An effective, professional army might act as a substitute for commercial military actors, providing alternative opportunities for addressing a rebellion and reducing the need for a state to contract with PMSCs. *Population* is also included based on the possibility that the larger a country, the

greater potential scale of any conflict. As the size of a country is related to a state's resource base, state's governing larger populations may have more opportunity to contract with PMSCs.

Finally, we include a lag of the dependent variable in all of our models.[74] Petersohn attempted to address the issue of endogeneity and the possibility that combat-oriented PMSCs might be drawn to severe conflicts as well as increase the severity of conflicts.[75] Using descriptive statistics, he provided evidence that the conflicts that combat PMSCs joined were not especially severe before their arrival. Nonetheless, we can address the issue of endogeneity more effectively through a multivariate analysis. We include a one-year lagged measure of battle deaths plus one, logged, as one of our independent variables. This enables us to take account of temporal dependence in conflict severity, as we expect that the severity of conflict in a country will be correlated with severity in subsequent years. If the presence of PMSCs really is endogenous to the severity of a conflict then the estimate of the coefficient of the variable for PMSC presence will be biased unless we include the lag of battle deaths. Including a lagged dependent variable has the helpful benefit of controlling for unmeasured or unobservable factors that affected conflict severity in the previous year. This is the first of several ways in which we attempt to take the unbalanced time series cross-sectional structure of our dataset into account.

Analysis

<u>Conflict Severity</u>

To investigate whether conflict severity is dependent on presence of PMSCs, we first regress conflict severity on our independent variables using the ordinary least squares estimation technique. For all models, robust standard errors adjusted for clustering on country are reported, addressing potential problems of heteroscedasticity and country-specific differences in variance. Model 1 includes the core measures of a state's monopoly on organised violence. Model 2 examines the role of a country's political system. Model 3 includes variables relating to economic opportunities and natural resources as potential confounders. Model 4 is the full model, with all relevant controls. Model 5 uses the alternative measures of regime type and intervention to examine whether the results are sensitive to the way in which controls are operationalised. As occupied countries are not analysed in this

model, it also enables us to assess whether results are being driven by Iraq 2003-2007 and Afghanistan 2001-7.

The presence of armed PMSCs is statistically and substantively significant in all models. At the median level of conflict intensity, the presence of armed PMSCs is associated with twice the number of battlefield casualties[76]. The association between armed PMSCs and conflict severity does not seem to be a spurious result of confounding variables. Nor is there evidence of endogeneity, as the armed PMSCs variable remains significant despite the inclusion of the lagged number of battle deaths. The results are in line with theoretical expectations. The positive sign for rebel strength and the negative sign for its square indicates that conflict is most severe when rebel and government forces are roughly equal in military strength. Geographically extensive civil conflicts tend to involve higher battlefield casualties than those that are concentrated. State collapse is not associated with increased conflict severity, perhaps because the disintegration of states is the consequence rather than the cause of conflict. This is consistent with our argument that conflict is most intense when a relatively high-capacity state faces rebels of equal strength. Although some of the models indicate that autocracies experience more intense conflict, there are no strong differences between anocracies and democracies. A weak democracy may be as prone to intense conflict as an anocracy.

Table 1. Analysis of the Impact of PMSC Presence on Conflict Severity.					
	Model 1	Model 2	Model 3	Model 4	Model 5
Ln battle deaths t_{-1}	0.203*** (0.059)	0.269*** (0.058)	0.315*** (0.068)	0.179** (.072)	0.183** (.076)
Rebel strength	1.328*** (0.263)			1.459*** (0.309)	1.362*** (0.309)
Rebel Strength Squared	-0.251*** (0.061)			-0.282*** (0.072)	-0.255*** (0.074)
State collapse	0.206 (0.299)			0.585 0.396	0.632 (0.473)
Conflict Extent	0.349*** (0.078)			0.282*** 0.102	0.271*** (0.095)
Democracy		-0.391 (0.339)		-0.783** 0.320	
Anocracy		-0.632* (0.312)		-0.630* 0.332	
Occupation		0.293 (0.418)		0.663 0.610	
GDP pc			0.000* (0.000)	0.000 (0.000)	0.000** (0.000)
Diamonds			0.137 (0.262)	0.204 (0.296)	0.183 (0.289)
Oil Dependence			-0.103 (0.394)	-0.174 (0.236)	-0.302 (0.265)
Troop Quality				0.000 (0.000)	0.000* (0.000)
Ln population				0.141 (0.089)	0.164 (0.089)
Polity2					-0.131 (0.130)
Polity2 Squared					0.003 (0.006)
Intervention					0.169 (0.338)
Armed PMSCs	0.813*** (0.263)	0.781*** (0.255)	1.157*** (0.246)	0.666*** (0.232)	0.647** (0.262)
Supply & Logistics PMSCs	-0.562** (0.257)	-0.391 (0.255)	-0.634** (0.275)	-0.689** (.252)	-0.918*** (0.279)
Constant	2.692*** (0.390)	5.083*** (0.388)	4.116*** (0.492)	1.678* (0.068)	0.489 (1.196)
N	273	273	231	214	195
R^2	0.467	0.317	0.339	0.546	0.540

Cluster-robust standard errors in brackets. *p < .1, **p < .05, ***p < .01.

Even taking account of these dimensions of civil conflict in weak states, the presence of armed PMSCs has an independent effect on conflict severity, consistent with our argument that the number of battle deaths increases when the state upgrades its capacity to fight rebels and re-impose authority over its territory. Troop quality and GDP per capita are significant and positively associated with conflict severity, but only in a minority of model specifications.
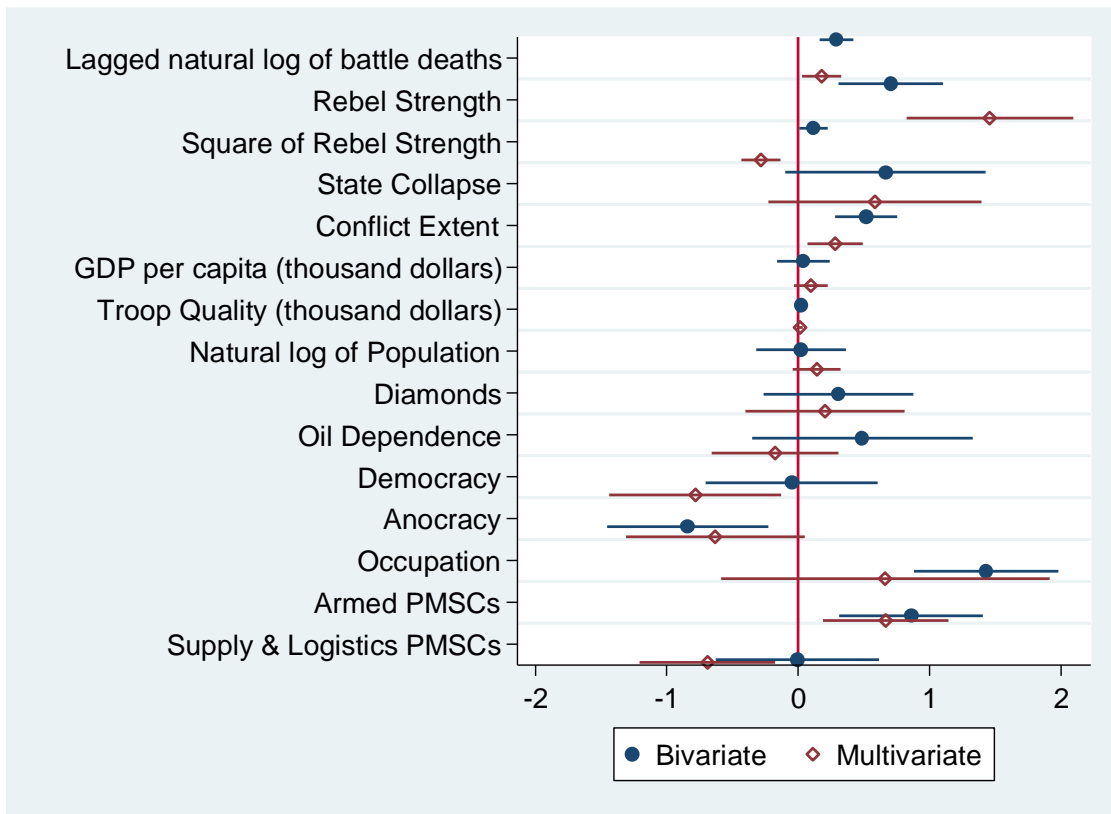
Figure 2. Coefficient plot of bivariate and multivariate effects on conflict intensity, with variables from Model 4. Markers represent estimated effects of a one-unit increase in an independent variable and lines 95% confidence intervals.

Support PMSCs are associated with lower battlefield casualties in some models. This may be because PMSCs of this type do not directly augment the offensive battlefield capabilities of a state's armed forces, indeed such PMSCs might need to be protected by troops that could otherwise engage in frontline operations. However, the support PMSCs variable does not have a bivariate association with conflict severity and, when insignificant variables are dropped in a 'trimmed' version of model 4, the support PMSCs variable loses its significance. The armed PMSC variable has a bivariate association with conflict severity and was significant across all models. The effect of support PMSCs therefore seems less consistent and more conditional than that of armed PMSCs.

It is possible that unobserved country-specific factors could influence both the severity of conflict and the independent variables we have included in our model. The idiosyncratic particulars of a country's colonial history, its political institutions or the political culture of its elites could influence both its potential for intense of armed conflict and

decisions made during the conflict, such as whether to hire PMSCs. To investigate this possibility and control for country-specific confounders, we perform two fixed-effect regressions[77], reported in table 2. These fixed-effects models estimate the effects of the independent variables on the severity of conflict for specific countries, but not the different levels of conflict among different countries. In the models, armed PMSCs remain statistically and substantively significant. The results are consistent with the argument that individual armed conflicts are more severe when PMSCs are present. Hiring PMSCs is not just a quirk of states that also experience intense civil wars. Once again, support PMSCs are associated with less intense conflict.

Table 2. Fixed-effects and Lagged Models of PMSC Impact on Conflict Severity.				
	Model 6 (Fixed-effects)	Model 7 (Fixed-effects)	Model 8 (All variables t_{-1})	Model 9 (All variables t_{-1})
Ln battle deaths t_{-1}			0.226** (0.085)	0.204** (0.084)
Rebel strength	2.106*** (0.368)	1.906*** (0.373)	0.232 (0.509)	0.221 (0.508)
Rebel Strength Squared	-0.412** (0. 099)	-0.389*** (0.102)	-0.041 (0.129)	-0.034 (0.134)
State collapse	0.191 (0.472)	0.225 (0.619)	-0.195 (0.219)	0.013 (0.271)
Conflict Extent	0.509*** (0.136)	0.567*** (0.130)	0.140 (0.089)	0.115 (0.082)
Democracy	-0.248 (0.577)		-0.147 (0.467)	
Anocracy	-0.176 (0.475)		-0.263 (0.340)	
Occupation	0.117 (0.722)		2.328*** (0.402)	
GDP pc	-0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Oil Dependence	0.570 (0.500)	0.943 (0.585)	-0.488 (0.725)	-0.377 (0.736)
Troop Quality	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
Polity2		0.0148 (0.162)		-0.200 (0.160)
Polity2 Squared		-0.002 (0.008)		0.009 (0.275)
Intervention		0.376 (0.561)		-0.295* (0.332)
Armed PMSCs	0.526** (0.253)	0.605** (0.242)	0.558* (0.298)	0.611** (0.275)
Supply & Logistics PMSCs	-0.649** (0.287)	-0.989*** (0.298)	-0.872*** (0.240)	-0.811** (0.314)
Constant	3.582*** (0.965)	2.795 (1.899)	4.678*** (1.595)	3.72** (1.400)
N	214	195	199	190
R^2	0.219	0.391	0.392	0.382

Cluster-robust standard errors in parentheses. *$p < .1$, **$p < .05$, ***$p < .01$.

To further examine the dynamics of conflict intensity, state strength and PMSC presence, we reanalyse our two full models with all variables lagged. Notably, this alters the significance of many of our independent variables. Rebel strength is no longer significant. This is perhaps not surprising: rebels do not fight when they are not present, what matters is their contemporaneous presence. The effect of their presence in a previous year on the subsequent year may be accounted for by the effect of the level of conflict severity in the previous year on the subsequent year. Nonetheless, the presence of PMSCs in a previous year *does* seem to be associated with more intense conflict in a subsequent year, at the p<0.1 level

of significance in one model and at the p<0.05 level of significance in the other. It is not clear why PMSC presence in the previous year is significant but rebel strength is not, especially as we should expect armed PMSCs at the 'tip of the spear' to have an immediate rather than enduring effect, given that one of their distinguishing features is their ability to respond rapidly to threats at short notice.[78] Nonetheless, this challenges the argument that PMSC presence is a consequence of severe conflict. Consistent with the other models the lagged presence of support PMSCs is associated with less severe conflict.

To check whether our results are sensitive to the choice of link function, we ran negative binomial regression using the independent variables from our main models using the untransformed count of battlefield deaths as the dependent variable. The results were very similar. Due to the notable presence of PMSCs and violent conflicts in Africa during the 1990s, we re-ran the main models with a variable coding for whether a country is on the African continent. It was not significant and results did not change. We also considered the possibility that there is a trend towards more frequent involvement of PMSCs in conflict zones and a separate trend towards increased conflict severity, which could produce a spurious correlation. Including a variable for time to take account of this possibility did not alter the results.

The analysis presented in this section has corroborated the finding in past studies that PMSCs have a substantive effect on conflict severity in weak states, using a much more extensive set of controls and taking into account the cross-sectional time series structure of the relevant data. The level of conflict in the previous year is not a confounder and taking it into account does not negate the association between PMSC presence and conflict intensity. The presence of armed PMSCs seems to precede rather than antecede severe conflict, the effect of PMSCs on conflict severity is somewhat significant even when lagged. The effect that they have on conflict does appear to be derivative of other factors such as the presence of rebels, state strength, regime type, the presence of natural resources, or the idiosyncratic features of particular countries. PMSCs have a significant, independent effect on the dynamics of armed conflicts. When weak states face security threats, armed PMSCs give them the opportunity to fight for their survival, increasing conflict intensity.

The Presence of Armed PMSCs

If PMSCs can alter the conflict dynamics of conflicts when they contract with states, what factors lead states to hire PMSCs and what conflicts do PMSCs choose to involve themselves in? In this section we change our dependent variable to the presence of armed PMSCs in order to evaluate our hypotheses about when PMSCs and states will contract with one another. By including a lagged measure of conflict severity in our previous models, we have already disconfirmed the claim that the PMSC-conflict severity association is driven by the level of conflict in the previous year. But we now examine more thoroughly the features of states in conflict where armed PMSCs are present.

We use logistic regression with armed PMSC presence/absence as the dependent variable and report robust standard errors clustered on country. Models 10 and 11 include variables for contemporaneous factors, in Models 12 and 13 all relevant variables are lagged and cubic polynomials for duration of presence are included to address temporal dependence.[79] We ran additional robustness checks, using GDP per capita as an alternative measure of military capacity and controls for the African continent and time. Results were not affected.

The results are not consistent with either the argument that PMSCs are contracted when conflicts become especially intense or the argument that they avoid more intense conflicts, as there is no significant association between conflict intensity and PMSC presence. Occupation by a foreign power, but not smaller-scale intervention, is strongly associated with armed PMSC presence — there was a perfect relationship in one model we estimated. In the time-period of our dataset, powers occupying weak states virtually always contracted with private security providers. State collapse is negatively associated with the presence of PMSCs. It seems that, although PMSCs are present very frequently in weak states, they do not contract with the weakest of states. Perhaps for PMSCs to be present there must be a state that is capable of contracting with them.

Table 3. Analysis of Factors Affecting Armed PMSC Presence.				
	Model 10	Model 11	Model 12 (All variables t$_{-1}$, time controls)	Model 13 (All variables t$_{-1}$, time controls)
Ln battle deaths t$_{-1}$	-0.056 (0.172)	-.137 (0.175)	-0.176 (0.161)	-0.255 (0.190)
Rebels ≥ Parity	1.815** (0.813)	2.294*** (0.877)	2.648** (1.070)	2.754*** (1.017)
State collapse	-1.142 (1.159)	-0.962 (1.227)	-2.741*** (0.886)	-2.889*** (0.775)
Conflict Extent	0.017 (0.246)	-0.051 (0.245)	-0.110 (0.334)	-0.096 (0.332)
Democracy	-2.596*** (0.961)		-1.73 (1.071)	
Anocracy	-0.273 (0.682)		-0.361 (0.795)	
Occupation	3.579** (1.685)		Perfect	
Diamonds	3.585*** (0.742)	3.761*** (0.790)	2.798*** (0.616)	3.089*** (0.684)
Oil Dependence	-0.507 (0.660)	-0.978 (0.658)	-0.165 (0.729)	-0.319 (1.065)
Troop Quality	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)	-0.000 (0.000)
Ln of Population	0.029 (0.341)	-0.128 (0.329)	-0.049 (0.272)	-0.039 (0.270)
Polity2		0.406 (0.319)		0.222 (0.244)
Polity2 Squared		-0.027* (0.015)		-0.019* (0.011)
Intervention		-0.544 (0.558)		-0.553 (0.603)
Constant	-3.139 (2.941)	1.494 (3.328)	-2.064 (2.063)	-0.166 (2.965)
N	199	195	197	190
Pseudo R^2	0.425	0.457	0.526	0.513

Cluster-robust standard errors in brackets. *$p < .1$, **$p < .05$, ***$p < .01$.

We find some degree of evidence that the most democratic states, but not partial democracies, are less likely to employ PMSCs. It is not possible to determine whether this is driven by the unwillingness of democracies to contract with PMSCs, or whether PMSCs have an active preference to seek employment with non-democratic states. Nonetheless, the evidence is consistent with the claim that PMSCs are indifferent about the democratic credentials of the states that they operate in. This corroborates our argument that PMSCs are governed by a profit-seeking logic of action and echoes some of the popular criticisms about
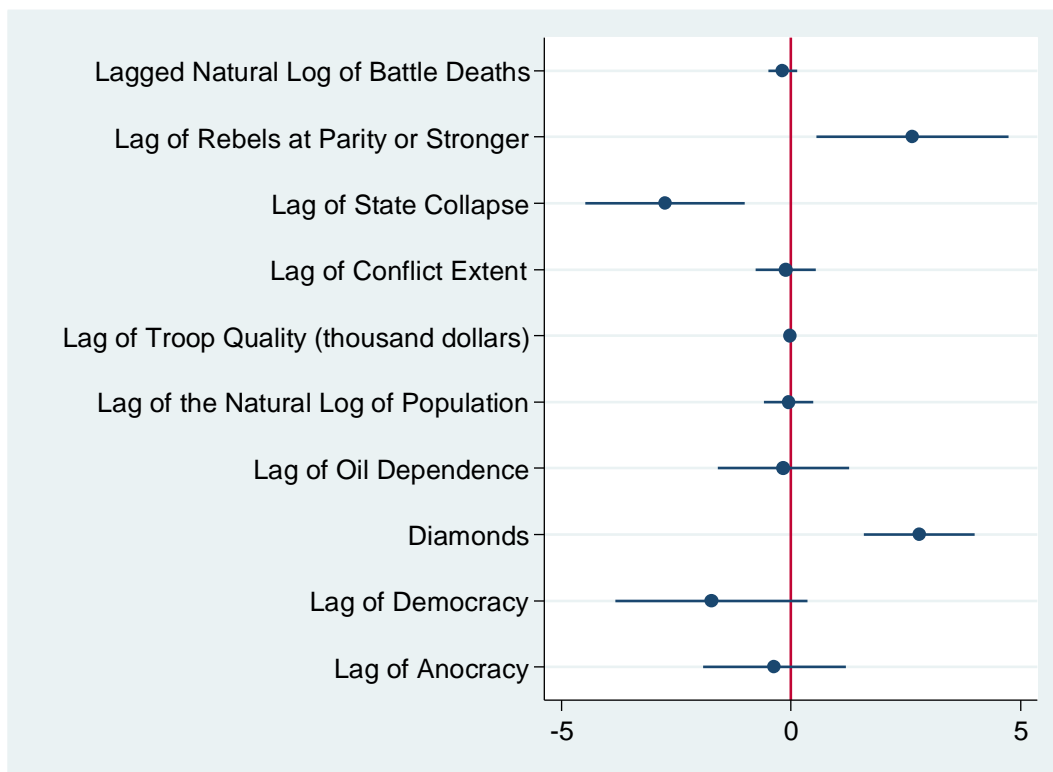
Figure 3. Coefficient plot based on Model 12. Dots represent estimated effects of a one-unit increase in an independent variable and lines 95% confidence intervals.

the unscrupulous nature of commercial security providers. Originally we used the scale of rebel strength and its square as independent variables, but the results were insignificant — possibly due to the collinearity between these measures. We recoded the rebel strength variable as a dichotomous measure of whether a rebel group at least as strong as government forces was present[80]. Consistent with theoretical expectations, this variable is a statistically and substantively significant predictor of PMSC presence. Straightforwardly, PMSCs are hired to fight formidable rebels.

We do not find evidence corroborating the existence of a substitution effect between PMSCs and the state's own armed forces, as fact troop quality was never significant. Therefore it does not appear that the states with the lowest military capacities are the most likely to hire PMSCs. In all our models we find a strong, significant, positive effect for the presence of diamond sites. This effect does not weaken when rebel strength is properly controlled for, as we would expect it to if diamonds resulted in strong rebels and strong rebels resulted in PMSC presence[81]. Lootable resources such as diamonds may not only result in resource-fuelled rebellions, but also provide governments facing rebellions with the

opportunity to hire PMSCs. Providing a ready supply of foreign exchange, diamond sites may grant rulers of fragile states additional options when threatened.

It is not readily apparent why, unlike diamond sites, oil dependence is not associated with the presence of PMSCs. It is possible, however, that the high value-to-weight ratio of gemstones make them unique as conflict resources. Oil deposits require a great deal of capital investment to generate a saleable resource, but uncut diamonds are a saleable commodity. As already noted, the direct evidence that PMSCs are paid in rights to exploit diamond fields, or even in diamonds themselves, is extremely limited. Nonetheless, our statistical analysis is consistent with the argument that states with diamond sites on their territories make attractive clients for PMSCs.

Among the countries in our dataset, for years that it covers, there appear to be two ideal-typical paths to armed PMSC involvement in conflicts. The first is invasion and occupation of a weak state by a Western power, which virtually always results in the employment of PMSCs in security-related tasks. The second is where a fairly weak state in a diamond-producing country faces a threat from rebels. This suggests a natural interpretation: weak states hire armed PMSCs due to rebels, they are able to pay PMSCs due to diamonds.

Conclusion

The global market for professional security and combat services has grown rapidly since the end of the Cold War. Our analysis indicates that corporations providing security-related services are significant actors in their own right, with the ability to increase the violence and intensity of conflicts in weak states. It will surprise no one that the attributes both states and rebels influences the severity of civil conflict. Yet our investigation indicates that private military and security companies can have an equally significant effect. We find no evidence that PMSCs are drawn to the world's hottest hot-spots, and no evidence that they are risk-averse reluctant warriors who avoid the most intense conflicts. We found that the association between the presence of armed PMSCs and severe conflict remains even when conflict severity in the previous year was controlled for, indicating that the association is not driven by reverse causation. The association remains robust even when a much more comprehensive set of controls are included than in previous studies of conflict intensity, when key variables are operationalised differently, when important cases are excluded from the analysis, when

different model specifications are employed and when we attempt to take into account the unobserved uniqueness of different weak states. Diamonds and formidable rebels increase the probability that armed PMSCs will be hired, but armed PMSCs nonetheless seem to have an independent impact on conflict severity.

It is nonetheless possible that PMSC presence is endogenous to conflict severity on a shorter time-scale. PMSCs are, after all, able to put boots on the ground in conflict zones at short-notice; they might be hired when the intensity of a conflict suddenly escalates over the course of weeks. However, both the data on PMSC presence from the PSD dataset and many of the control variables that we used in this paper are coded on an annual basis. Exploring dynamics on shorter time-scales will therefore require more fine-grained data. Such data might also help in disentangling the effect of support PMSCs on conflict intensity, which was less consistent in the models we estimated.

Our investigations indicate a very close interrelationship between rebels, diamonds and PMSCs. Although we have shed some light on this dimension of the political economy of civil conflict, we cannot claim to have fully fathomed it in this paper. Future large-N studies might examine the relationship between the political economy of rebellion, criminality in ongoing conflicts, and the market for force. Further qualitative research is needed on the role of PMSCs in the political economy of resource-rich states to identify the causal mechanisms that link resources like diamonds with security-service contracts.

Because our panel of countries includes only weak states, we cannot generalise about the role of PMSCs in the conflicts of all states. It is possible that the relationships we examined operate slightly differently among strong states that have experienced civil conflict. Our panel is also limited in terms of the time-period it covers. More comprehensive data on commercial conflict actors is needed, covering a longer time-period and more states. Particularly useful would be data covering multiple decades to enable us to examine the prevalence of different types of commercial conflict actors over time and the changing roles they played in the conflicts of the Cold War, the post-Cold War period and the War on Terror era.

Of all our findings, the most concerning from a normative perspective was the negative association between democracy and PMSC presence. It might be that non-democratic states hire PMSCs because they cannot mobilise their own populations to support the struggle against rebels. The possibility that PMSCs prefer to work for non-democracies is

equally worrying and raises the question of whether commercial security providers enable undemocratic regimes to remain in power. This prompts a further set of questions: do PMSCs improve or worsen respect for human rights in the states that they operate in? As security professionals, do they promote compliance with international humanitarian law in weak states or, as profit-driven actors, are such concerns irrelevant? These considerations are especially relevant for policy-makers in liberal democratic states – not least because such states have been some of the biggest customers for PMSC services in conflict zones during instances of intervention and occupation.

Finally, PMSCs seem to make conflicts more severe, but we remain agnostic about whether they are effective or just violent. Do PMSCs help to bring civil conflicts to a rapid conclusion, even if fighting becomes more intense in the interim? Or, as their strongest critics allege, do they engage in indiscriminate, destructive violence that fails to improve the security situation in conflict zones? Solving this puzzle will require an investigation of both the influence of PMSCs on conflict intensity and their impact on the way that conflicts end.

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[81] After identifying diamonds as a strong predictor of PMSC presence we returned to our models of conflict intensity to check whether armed PMSCs 'merely' intervene between diamonds and battle deaths. Diamonds remain an insignificant predictor of conflict severity even when the PMSC variables are dropped.
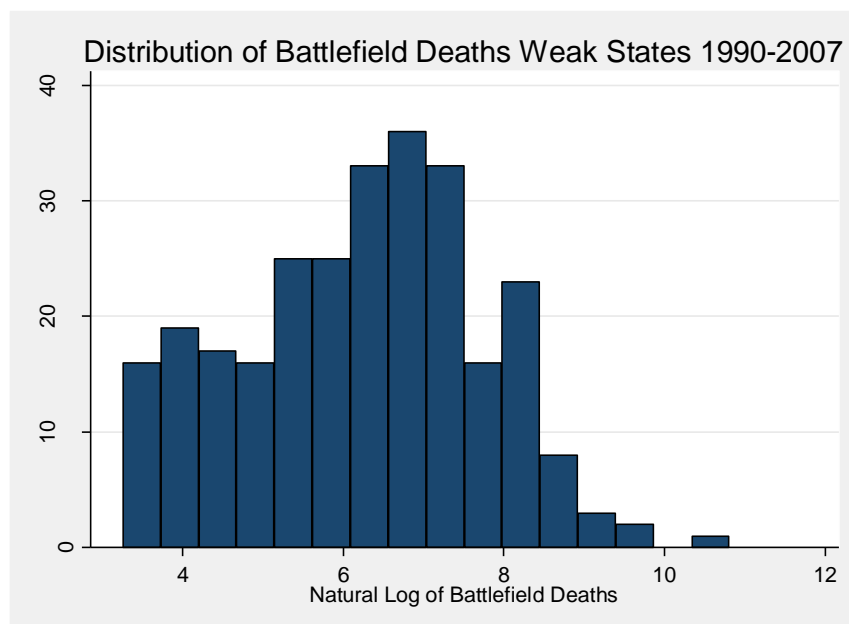

Figure 1. Histogram of the natural log of battlefield deaths in our sample.