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Private Military Companies, Opportunities, and Termination of Civil Wars in Africa

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Abstract

The article analyzes the impact of private military companies (PMCs) on the duration of civil wars in Africa from 1990 to 2008. We develop an “opportunity structure” theory to argue that while PMCs are profit-oriented entities, the prevalent opportunities in conflicts will determine how they behave in war zones. Empirical findings for civil wars with at least 1,000 battle deaths show that as level of competition among government-hired PMCs increases, they are more likely to deliver optimal services and help bring an end to violence. In the absence of competition, the prevalent structure creates opportunities for PMCs to underperform in order to maximize profits by staying in conflicts longer. The authors also show that swift cessation of hostilities could benefit those profit-seeking PMCs that are compensated with contracts to extract natural resources because resource extraction generates more wealth in peace time. In such cases, the prevalent opportunities in conflict create an incentive for companies to deliver optimal service and terminate hostilities.

Keywords

private military companies, civil wars, Africa

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In the summer of 2010, the story about a group of mercenaries freeing a country from the gripping claws of a dictator and a rogue Central Intelligence Agency agent has topped the box office charts. Whether portrayed as invincible heroes in Sylvester Stallone's *The Expendables* or ruthless killers in historical accounts of medieval warfare, mercenaries have captured the public's imagination for years. Yet, modern-day "mercenaries," or fighters who deliver military services for monetary reward, have less in common with their medieval-era predecessors. Professional, highly organized, and well trained, they are some of the leading military experts in the world. They are also skilled business operatives with stakes in some of the most profitable oil and mining industries.

With the growth in demand for private military companies (hereafter referred to as PMCs), which we define as corporations specializing in military services, scholars have increasingly pondered the impact of such players on security around the world although systematic analysis of the PMCs' role in conflict has remained elusive. This is largely due to limited data access and strong emphasis on single case analysis. We fill this gap in the literature by examining the conditions under which PMCs shorten or prolong civil wars in the African context where the demand for private warriors has increased dramatically. This then is the first empirical study that evaluates the debate about the positive and negative aspects of private military industry as it pertains to the industry's role in conflict management using an updated, original data on PMCs' presence in Africa's civil wars.

Our focus is on PMCs rather than on freelancing mercenaries. Unlike freelancers, soldiers working for a PMC are directly contracted to the PMC rather than to a government or a rebel group. As they are often bound by the rules of the organization, which in turn is accountable to its shareholders, such soldiers are likely to exhibit greater degree of professionalism and concern for their image than freelancing mercenaries (Musah and Fayemi 2000). This implies that employees of a PMC who are subject to institutional constraints could behave differently in conflict zones than freelancing mercenaries without such constraints. Consequently, our analysis focuses exclusively on the impact of these professional military firms rather than on freelance mercenaries whose role in conflict has already been documented. Although military companies range from those that engage in combat and provide military training, to firms responsible for logistical tasks (Singer 2001/2002), we examine the general impact of military companies on conflict, rather than concentrating on how one or another type of service affects security. Because even logistical assistance can help a warring party obtain advantage over an enemy, it is imperative to study not merely the combat-engaging companies but also the "smaller," yet potentially valuable players. Indeed, the bulk of PMC contracts in Africa have included requests solely for noncombat services. Thus, we investigate all the cases of civil wars in Africa from 1990 to 2008 in which any type of PMC was present, regardless of the service it delivered.

To understand when PMCs could contribute to the termination of conflict, we need to, as Peter Singer (2003) suggested, place PMCs in a context with either similar military companies or overarching business models rather than study them in isolation. This study is a step in this direction. PMCs are indeed profit-seeking companies that could exploit the chaos of conflict to further their interest, but they also face stiff competition to deliver protection, security, and possibly victory to the groups they serve or risk losing valuable contracts. We argue that prevailing opportunity structures in conflicts will determine PMCs' behavior in wars. Consequently, placing PMCs within the opportunity structure they face, such as growing competition from other companies, allows us to predict when the companies' impact on conflict dynamics will be less insidious than commonly assumed.

The policy implications emerging from this study could help us to better manage the services of PMCs so they become the bearers of security rather than rogue agents, breeding tension and stagnation. This is of interest to policy makers and scholars concerned with growing privatization of the state and international relations, phenomena that have led to nonstate global actors taking over, in various extents, responsibilities previously embraced by states. There is considerable disagreement about the positive and negative consequences of the changes brought forth by globalization and the rise of nonstate actors in terms of their impact on state sovereignty and respect for the rule of law (Hibou 2004). Our article contributes to the broader theme pertaining to the privatization of the state by showing conditions under which nonstate security providers could help terminate fighting that threatens to weaken the state domestically and internationally or alternatively prolong violent fighting among groups contending for state control. The message of this study is that increased reliance on nonstate actors can be a good or a bad thing, at least when it comes to the cessation of violence and state survival, depending on how the state manages its relations with such players. For example, our analysis shows that dividing contracts among several companies could be more beneficial to conflict termination than awarding it to a sole contractor. This is because the presence of competition will make it more difficult for PMCs to engage in potentially disruptive practices without being caught and jeopardizing their reputation. In other words, diffusing the contracts across several players may increase accountability and lead to better performance, which in turn spells good news for the cessation of hostilities. Systematic analysis of the PMCs' involvement in civil wars therefore enables us to deliver policy recommendations that concentrate on how private warriors could become more responsible security providers in the absence of legal measures to regulate PMCs' behavior in wars.

In the remainder of the article, we highlight the debate on the PMCs' effect on security around the world and set the foundation for our argument. We then develop the article's theoretical argument about conditions under which PMCs can help shorten or prolong the duration of war. In the Research Design section, we describe data sources and measurements, and follow with a discussion of empirical findings.

We conclude by reflecting on the substantive meaning of our findings and policy recommendations.

Private Military Companies and Security

With increased reliance on private military firms around the world, scholars have begun to explore the impact of such companies on conflicts. Although the presence of mercenaries in wars is hardly a novel development, the rise of highly organized and sophisticated military firms has the potential to change the way wars are waged. Unlike freelance mercenaries, individuals working for a PMC are hired by a private firm, which then receives contracts from governments or rebel organizations. Thus, soldiers working for a PMC are subject to the firm's regulations about combat, service, and so on. Not surprisingly, the rise of PMCs and the professionalization of security providers in the post-cold war environment have led to renewed question about ways in which these "transformed" private warriors could affect security.

At first glance, the use of PMCs in conflict appears as a cost-effective strategy designed to restore order in war zones. The demise of the Soviet threat and the end of the cold war has greatly reduced great power interests to intervene in weak states plagued by years of domestic unrest. The dramatic failure of US intervention in Somalia in 1993 has sealed the fate of such missions—no longer would the public tolerate risky foreign adventures in remote parts of the world where national interest appeared limited. Yet, leaving such troubled spots unattended could present serious security risks. Weak states such as Yemen and Somalia, for example, are a refuge to Al-Qaeda. Private military firms could thus fill the security vacuum left by great powers and bolster weak governments (Whyte 2003). With sophisticated weapons, professionalism, and efficiency these companies effectively replace ill-equipped government armies and terminate conflicts (O'Brien 2000). They are also more flexible, better trained, and easier to mobilize than most United Nations (UN) peacekeepers, making them an attractive force to safeguard peace and complement international efforts to resolve conflicts (Shearer 1998). And they could do so at a competitive price. Whyte (2003) estimates that Executive Outcomes, the South African PMC, charged the government of Sierra Leone 35 million dollars for a period of twenty-one months whereas the presence of UN peacekeepers for eight months would have cost a staggering 47 million dollars. Not surprisingly then, Brooks (2000) argues that soon the UN will no longer be able to disregard the benefits such armies offer in peace stabilizing operations.

Despite the PMCs' potential to deliver positive security dividends around the world, many scholars argue that PMCs are a destabilizing force in conflicts. Unlike public forces, PMCs are private entities responsive to their shareholders but not to governments. Even if they are more professional than freelancing mercenaries, their existence as private firms could still create problems with accountability (Mayer 2010). While PMCs are available to fight on a short notice, some argue they can defect quickly if short-term interests override long-term costs to their reputation

(Singer 2001/2002). Even if they stay, their goals do not always reflect those of the governments that hire them. Some companies may support opposite groups in conflict thereby exacerbating the tensions. On rare occasions, the market-driven interest of PMCs could make them potential clients of both legitimate and illegitimate players, including rebel groups and terrorist organizations (Leander 2005; Musah 2002). Consequently, rebel groups with access to funds from drug trafficking or the sale of precious gems could secure sophisticated technology and weapons from military companies and acquire the means to overthrow the government or, at the very least, wage long wars.

Even if PMCs are not directly responsible for exacerbating the tensions, their presence has been linked to long-term instability in weak states (Richards 2005). Some argue that compensating PMCs with mining contracts instead of cash can curtail the country's control of major assets that are vital to generating national wealth in postconflict reconstruction. Yet, increasingly cash-stricken governments sell mining and oil rights in exchange for security while potentially neglecting the adverse consequences of such transactions on economic growth (Singer 2001/2002; Musah and Fayemi 2000). Short-term security incentives are also behind the decision to hire PMCs as the guardians of public security. While this may seem beneficial in states where lack of professionalism among the military threatens stability, the long-term consequence is the opposite. Leander (2005) argues that excessive reliance on private security firms diverts funding from improving public armies. This, in turn, pushes soldiers either to join commercial activities or to contest the status quo by siding with the rebels, the most notable case of this being Sierra Leone where soldiers deprived of cash blurred the distinction between public and private security, working for the government by day and for the rebels by night (Leander 2005).

Despite increased attention to the impact of PMCs on security, existing research has not systematically analyzed the effect of private military firms on conflict dynamics, either in the short or long term. Part of the problem concerns limited data existence and little emphasis on testable hypotheses that would enable us to uncover when these players could make a positive contribution to security around the world. As such existing works are mostly descriptive and rarely focus on more than one case study of the PMC's involvement in conflict. While this is useful in recognizing the growing importance of PMCs in civil wars, future research needs to identify conditions under which PMCs could be best utilized as positive security providers.

We contribute to existing studies by developing a theory of the PMCs' impact on civil war duration. Assuming that PMCs are market-driven entities, we develop testable hypotheses to understand conditions under which their presence in civil wars could have a positive impact on conflict termination, which we define as the immediate cessation of hostilities. This study avoids the pitfall of treating private military firms as armies operating in isolation (Singer 2003) and instead examines how the conflict environment in which the PMCs operate influences their goals and, in turn, affects their impact on war termination.

Private Military Companies, Opportunity Structure, and the Duration of Conflict

To determine the impact of private military companies on the duration of civil wars, we begin with key assumptions. First, PMCs are self-interested, rational actors seeking to maximize profit because they operate as business ventures. The incentive to make money was true for mercenaries foraging for work in medieval times and continues to be the underlying motive of modern-day military firms (Musah and Fayemi 2000). Second, because they offer a variety of security-related services, these companies will have an interest in the existence of security threats. Whether the government hires a PMC to achieve victory over the rebels, or the companies' employees train the government's army to offset rebel incursions, the presence of security threats keeps the companies in business. Previous research has shown that PMCs can exacerbate security problems once they are hired (Berman and Florquin 2005; Francis 1999). In such a way, the relationship between PMCs and the warring parties that hire them can be examined in terms of principal-agent framework, where the PMCs act as the agents of the principal or the warring party—the government or the rebel group that hires them—but pursue their own interests instead of those of the principal. Here, we relax this assumption; instead, we argue that existing opportunity structure or the conflict environment in which the companies operate affects their behavior, which in turn, may sometimes exacerbate conflict but at other times may have a positive impact on the cessation of hostilities. The key to understanding the PMCs' behavior in conflict then is to recognize when and how the structure in which they are embedded encourages or discourages actions that lead to conflict termination. That is, we seek to understand how the conflict environment can minimize and maximize the principal-agent problem.

If the environment in which a PMC operates allows it to profit from prolonging the war without facing reputational consequences, we expect it to do so. Such an environment usually exists in the absence of competition among PMCs operating in a given conflict because a company can secure long-term contract while delivering less than optimal level of services. Because the governments hiring the companies often lack monitoring capacities, they may not realize that a PMC they contracted is deliberately underperforming to extend its contract. With their specialized expertise, these actors are in a position to define and create new threats (Leander 2005) and thus convince the governments that their services are needed. On some occasions, a profit-seeking company may even support opposing sides in a conflict without either one of them knowing and in doing so maintain the ongoing security threat. For example, when Ethiopia leased an air force from the Russian firm Sukhoi, the latter failed to fully engage the Eritreans in the 1997–99 conflict possibly because some of its staff also worked for the other side (Singer 2001/2002). The structure or an environment of limited oversight that exists in the absence of competition increases information asymmetry between the principal and the agent and

encourages PMCs to profit from exacerbating threats and underperforming—behaviors that are detrimental to conflict termination.

At the same time, the post-cold war environment has seen an increase in the number and sophistication of PMCs (O'Brien 2000)—no longer were established PMCs isolated players in the security market. The phenomenon has been especially true for companies operating in Africa. O'Brien (2000) estimates that by mid-1997 nearly ninety PMCs delivered services to African states. On some occasions, such as in Angola in the 1990s, the government has hired multiple companies to secure commercial facilities, train government forces, and engage in direct combat with the rebels. Similarly, in 1996 the government of Zaire had a plethora of providers to choose from as private companies from France, Israel, Belgium, South Africa, Britain, and the United States all vied for contracts (Pech 2000). More companies are also capable of delivering services in multiple areas of expertise. It is not uncommon for a company to provide logistical support to its client while also train the military and offer protection to politicians. This crowding effect has transformed the structure in which a private company operates. The growing competition that PMCs face as suppliers of security means that they must deliver success—bringing violence to an end—to secure future contracts or risk being replaced by other companies. The reputational concern that emerges in the environment marked by increased competition is then expected to shape the nature of the PMCs' involvement in civil wars.

With a limited number of PMCs supplying services in a given conflict, it is easier for such companies to maintain their contracts even if their effectiveness is mixed. One may wonder whether such results could generate reputational costs. This is less likely to be the case when the monitoring capacity is limited in a given conflict, especially in the African context that we are focusing on here. Most governments that employ PMCs in Africa are considered weak states—such countries have limited institutional capacity, are marred by corruption, poor coordination, inefficiency, and shabby management (Economic Commission for Africa 2003). As such, the government may be unaware of the extent to which a company manufactures threats to stay afloat or engages in activities that alienate the population. A company may prolong the war without suffering reputational costs by claiming that conditions on the ground are difficult and fighting the enemy necessitates a longer engagement. Such arguments are likely to be acceptable to the government that hires a particular company or to future clients. This is because a government that relies on a PMC in the first place most likely faces a challenging enemy and may have only a vague idea about what it takes to fight the opponent it was unable to defeat. While the government expects results from a PMC, it need not expect major gains knowing the enemy mounted a challenge the government could not handle on its own. In fact, the government may allow a PMC to shape its expectations for the type of acceptable results because it simply has little ability to monitor the situation on the ground. This allows a PMC to engage the enemy in less than optimal manner without facing reputational consequences because the government may already anticipate a longer struggle. As long as the PMC is able to deliver some results to the government, it can justify why

it needs to stay in the conflict zone for six years, for example, as opposed to only three. Many conflicts in Africa are difficult to resolve—fighting in the DRC or Somalia are some examples of cases where conflict termination has been elusive for years. There is often an expectation that working in such conflict zones is difficult. In the Congo, infrastructure is in such dire state, with parts of the country impenetrable, that in the 2011 presidential elections, for example, voting ballots were delivered to remote regions by helicopters (Nossiter 2011). Because operating in such conflict areas is challenging, a company that performs less than optimally while eventually helping the government make some, albeit limited, progress against the enemy is less likely to suffer reputational costs. Given the governments' weak monitoring capabilities, the expectation of dealing with a strong enemy, and the potential for a PMC to define new security threats to governments, a single PMC could make a case for a longer contract. In the battlefield this could mean that a company could take fewer risks or even engage in black market activities without getting caught. Overall, this may delay the termination of violence.

This does not mean that such companies do not face any competitive pressure. A company still has to deliver something so it is not replaced by another, but they need not deliver a lot to stay afloat, as long as they can justify limited gains. One may also argue that a company routinely negotiating long contracts to prolong its stay in conflict could be associated with long wars and so be considered unreliable. Such habitual opportunistic behavior would indeed be too costly but then few if any companies may even have the chance to always be the same, sole security providers hired by governments in different conflicts. In other words, given that the same companies are only occasionally operating as a single PMC in a conflict zone, the likelihood of becoming habitual opportunists in a way that could threaten the company's reputation in the eyes of future clients is limited.

In contrast to cases with only one PMC operating in a conflict zone, an increase in the number of private companies, that is, the presence of multiple agents offering diversified services creates more pressure to deliver results quickly. By observing the activities of multiple agents, the government can compare the performance of each PMC and update information on its type, whether it is a low or high performing agent. As the competition increases, the most sought-after companies will be the ones that demonstrate their ability to meet existing challenges efficiently. Furthermore, the presence of several companies creates an effective way to monitor PMC performance in conflict as weak performance or even deliberate manipulation of threats by one company could be publicized by competitors. In his work on principal-agent problem, Varian (1990) shows that mutual monitoring, where agents alter other agent's costs and benefits of engaging in undesirable acts, can provide a particularly cost-effective way for the principal to scrutinize the behavior of its agents. The presence of competitors introduces the monitoring element that weak states with limited resources are traditionally missing. The fact that several companies operate in a given conflict means that even a government with weak monitoring capacity can enhance its control over the agents. As such, prolonging the war in such

a context does not pay off. Justifying lackluster results with difficult conditions on the ground, something that could work if only one PMC were hired, may not work here because if the competitor were to deliver good results or show that a rival PMC failed to engage the enemy, the company that underperformed could face reputational costs. If each company then performs at its best and is hired by the government, the aggregate outcome is to see greater security gains for the government. This, in turn, should allow the government either to achieve victory or would prompt the rebels to negotiate.

On rare occasions, rebel organizations will seek the PMCs' assistance. If PMCs intervene on behalf of the rebels, we expect their involvement to shift the balance of power in favor of the rebels. Rebel organizations with funds to hire a PMC are likely to have the resources to wage an armed conflict, thus presenting a reasonable challenge to the government. Incoming assistance from PMCs could tip the military balance in favor of rebel victory because groups which can afford to hire them are unlikely to be weak in the first place. There are several ways in which PMCs can help the rebels achieve victory. Besides aiding in combat, PMCs can also become indirectly involved when they serve as liaisons in weapons trade. In fact, anecdotal evidence suggesting that PMCs facilitate connections between illegal sellers and buyers has prompted the international community to devise measures that would monitor the firms' activities (Olonisakin 2000).

The optimal performance of PMCs hired by the rebels is expected particularly in situations when the rebels rely on multiple companies for services. Just as we argued that competition will push PMCs to effectiveness when they support the government, so should the same be true in the cases of intervention on behalf of the rebels. We posit that

Hypothesis 1a: The greater the competition among government-hired PMCs operating in a civil war-torn country in any given year, the greater the possibility that PMCs will contribute to shorter duration of war.

Hypothesis 1b: The greater the competition among rebel-hired PMCs operating in a civil war-torn country in any given year, the greater the possibility that PMCs will contribute to shorter duration of war.

Like any private businesses, PMCs operate to maximize profit. Yet, the incentives to generate a continuum of payments by PMCs may create a discrepancy between what they promise to do and what they deliver to the warring party that hires them. When the opportunity presents itself, as is the case when the principal is unable to monitor the activities of the PMC, that is, in the absence of competition, a profit-seeking PMC may maximize gain by delivering a quality of service that falls short of ending the security threat and hence the life span of their contract. This, we argued, could then explain why, at times, we see the destructive impact of PMCs on conflict termination. Yet, sometimes an opportunity emerges when the companies' motivation to make profit aligns with the wishes of the principal, that is, a decrease in long-term

security threats (Francis 1999). In such a situation, the inability of the principal to monitor the activities of the PMCs no longer creates an incentive for the agent to deviate from optimal performance. This is true in cases where PMCs are paid with contracts to exploit the country's natural resources. In such instances, PMCs still benefit from initial instability in the country, after all this gets them hired, but prolonged insecurity actually hinders the wealth they could generate from resource exploitation in a secure environment.

When cash-strapped governments in resource-rich countries lack the means to fully finance the activities of PMCs, they may offer concessions involving resource exploitation in the form of digging or mining rights in diamond, oil, and copper fields. Francis (1999) alleges that when the government in Sierra Leone had no means to pay for the Executive Outcomes' military services costing several million dollars a month, it offered the company commercial rights in the conquered territory. Similar arrangements were allegedly made between the governments of Angola and Papua New Guinea and PMCs (Brayton 2002; Ross 1999). In those instances when the government compensates PMCs with resource concessions, the end of hostilities is desirable to corporate warriors because a stable business environment for the extraction of resources is likely to generate wealth in the short and long term. The commercial opportunities for strategic resource extraction in peace far outweigh the costs of foregone revenue from fighting a war or "defining" new security threats. Given that in some countries resource exploration is underdeveloped and at first requires additional investments to make the facilities operational, peacetime is far more conducive than is instability to transforming dormant industries into lucrative businesses. Hence, PMCs compensated with resource concessions are likely to meet their contract obligation and decrease the security threat to avoid endangering their stream of revenue. In other words, the opportunity structure in a given conflict creates an incentive for such actors to terminate the war as quickly as possible because doing so is consistent with the companies' underlying interest—the maximization of profit.

Furthermore, as we argued, competition among PMCs increases the importance of reputation and constrains the extent to which these companies can undersupply services to their client. Since many PMCs are eager to exploit strategic resources, any company that fails to provide an adequate service will be easily replaced. For example, allegedly, it was Executive Outcomes in resource-rich Sierra Leone that secured concessions from diamond mines when other PMCs had previously failed to tilt the military balance in favor of the government (Francis 1999). This implies that when the prevailing opportunity allows the companies to make profit from resource extraction, their goal would be to ensure peace in the country as soon as possible rather than exacerbate tensions as might be commonly assumed. The incentive to end violence will be present regardless of competition, but it will be even greater if several companies are vying for contracts involving resource exploitation. We posit that

Hypothesis 2: When PMCs receive compensation in the form of concessions to extract natural resources, they are likely to contribute to shorter duration of wars.

Research Design

To test our arguments, we analyze the PMCs' presence in Africa's civil wars in the post-cold war years. Our focus is on the post-cold war environment because private military companies that emerged during this time differ substantially from companies that have operated in Africa before. Present-day companies are well organized, more concerned about their reputation than ever, and offer diversified services (Musah and Fayemi 2000). Pre-1990 PMCs were often ad hoc groupings of former soldiers (O'Brien 2000) while now these companies are corporate ventures with permanent locations and clearly specified institutional regulations. We do not focus on freelance mercenaries or individuals obtaining contracts directly from their clients because such soldiers are not subject to institutional rules in the way that specialists working under the banner of a PMC are. Thus, the behavior of freelance mercenaries in wars could differ substantially from the behavior of PMCs. Our contribution is to address the impact of these institutionalized military firms because their presence on the continent is increasing at a high rate yet we lack systematic analysis of their performance.

The study focuses on Africa for two reasons. First, the region attracts the greatest number of PMCs because many states in Africa are weak and prone to power contestation among rival factions that often lead to armed conflicts. This instability is driving the need for military services. Second, international responses to these conflicts are meek, leaving desperate governments to rely on private warriors to maintain security. Not surprisingly, in the absence of regional and international arrangements to prevent conflict escalation, the presence of PMCs has proliferated (Olonisakin 2000), making Africa of primary interest to study the firms' impact on civil wars. Findings from Africa can be generalized to other cases where governments or rebels of weak states embroiled in conflict have hired PMCs. Given that in many instances PMCs operate in conflicts occurring in weak states, we expect that the sample of PMCs we analyze here is representative of the broader population of cases of PMC interventions in armed conflicts.

Dependent Variable

The duration of civil wars in Africa from 1990 to 2008 is our dependent variable. We use the Correlates of War data set (v4.0) and Armed Conflicts data set (v4.0) to include all conflicts in Africa which are either still ongoing in 1990 or have started in the period of 1990–2008. Focusing only on the years of 1990 and beyond for those wars that began before 1990 but were still ongoing in 1990 would bias the results, as we would be analyzing only part of an ongoing conflict rather than its entire

duration. Each observation in the data corresponds to a conflict year, resulting in a total of 135 observations, covering thirty-three conflicts in fifteen African countries according to COW data set; and 343 observations, covering seventy-three conflicts in twenty-three countries according to AC data set. There are no censored cases in COW data set, and approximately 16 percent of all conflicts are ongoing in the AC data set. While COW's definition of a civil war includes militarized conflicts with at least 1,000 battle-related deaths and effective resistance on both sides, the AC data set incorporates low-intensity conflicts based on the twenty-five battle-deaths threshold. The duration variable is continuous and ranges from a minimum value of 1 year to a maximum of 16 years with an average of 4.16 years when we use the COW data. The range is between 1 and 28 years with an average duration of 6.6 years with the AC data.

Independent Variables

For our independent variables, we resorted to multiple sources to collect data on the presence and activities of private military companies in African civil wars. We also focused on understanding which companies received contracts to extract natural resources as part of their compensation. We relied on the British Foreign and Commonwealth Office's report for data from 1990 to 1999. We then collected our own data and updated it to 2008. Data on the PMCs' involvement in conflicts are notoriously difficult to obtain because contracts, at times, involve covert activities. To increase the reliability of our data and capture particularly those difficult cases where covert involvement existed, we relied on newspaper articles, books, reports, and blogs. Occasionally, we consulted with country experts to verify information or to help us refine our data collection. Three individuals collected data on the same conflicts to increase reliability. We define a private military company as a professional, corporate entity that delivers military services for monetary compensation. Our focus is on any PMC operating in Africa regardless of the service it delivers. We thus focus on companies that engage in combat, deliver logistical support, provide security, training, and so on because each of these services can help tip the balance of power in favor of the group which hired the companies. Assessing the independent impact of different services on the war's duration is problematic because in many cases companies in a given conflict may deliver several services. Sometimes a single company can provide those different services. Consequently, our focus is on exploring whether any companies were involved in a given conflict year and with what impact on the conflict's duration rather than in establishing the impact of each service separately.

Competition among PMCs (government-hired PMCs). We measure the basic level of competition among government-hired PMCs by focusing on the number of private military companies the government hired in a given conflict. An ordinal variable, it ranges from 0 or absence of government-hired PMCs in a given conflict to 5 in

COW data, the maximum number of providers the government employed in a given conflict. The maximum number of providers in AC data is fifteen.

Competition among PMCs (rebel-hired PMCs). We measure the basic level of competition among rebel-hired PMCs by focusing on the number of private military companies the rebels hired in a given conflict. An ordinal variable, it ranges from 0 or absence of any rebel-hired PMCs in a given conflict to 5 in COW data, a maximum number of providers the rebels employed in a given conflict. The maximum number of providers in AC data is 5.

Resource compensation. This is a dummy variable and indicates that private military company received resource concessions in a given conflict year. This occurs on average in 15 percent of the conflicts where PMCs intervened according to COW data and in 10 percent of conflicts according to AC data.

Control Variables

- (1) *Proportion of forces.* The variable represents government forces divided by rebel forces. The data for military personnel until 2001 come from the COW Material Capabilities data set. The data between 2001 and 2008 come from World Bank Indicators. The correlation between the two data sets is .91 and thus any potential bias from merging them is likely to be random. We obtained the data on rebel forces from Cunningham, Gleditsch, and Salehyan (2009) and updated it for missing values and for recent wars. We expect the duration of war to be shorter when the proportion of government forces to those of the rebels is larger. We took the ln transformation of the variable.
- (2) *Ethnic fractionalization.* This variable captures the extent of ethnic diversity and comes from Fearon and Laitin (2003). Findings suggest that ethnic diversity may contribute to continuation of war because as the number of ethnic groups increases, the greater the possibility that commitment problems will be severe (Fearon 2004). This could hinder conflict resolution. We took the ln transformation of the variable.
- (3) *Gross domestic product (GDP) per capita.* This variable captures real GDP per capita adjusted for prices in 2005 and comes from Penn World Table v. 6.3 (Heston et al. 2009) for the years 1957–2007. GDP is a robust finding in the civil war literature; not only is GDP associated with higher state capacity (Fearon and Laitin 2003) but also higher opportunity costs for rebellion (Collier and Hoeffler 2004). Higher GDP per capita should act as a deterrent against longer wars. We took the ln transformation of the variable.
- (4) *Ethnic wars.* The variable denotes the type of issues involved in civil wars and comes from Cunningham (2006). Ethnic issues are harder to resolve because nationalist rhetoric hardens group cleavages, making it difficult for intergroup dialogue to emerge. This leads to greater distrust and intensifies the security dilemma, all of which prolong the conflict (Kaufmann 1996).

- (5) *Polity*. Polity captures the type of governing system in a country. We obtain the scores from Polity IV Project, 1800–2009. Opportunity costs for a rebellion are likely to be higher in democratic societies as rebels will have alternative means of resolving contentious issues. Moreover, norms of accommodation and peaceful conflict resolution will be valued in such places, prompting leaders to take initiatives to end wars.
- (6) *Intensity*. The variable indicates the number of battle deaths in armed conflict and comes from PRIO data set V.3 (Lacina and Gleditsch 2005). More intense conflicts are expected to shorten conflicts by pushing the two sides into a mutually hurting stalemate and encouraging negotiations (Regan 2002a, 2002b).
- (7) *Mountainous terrain*. The variable denotes the presence of mountains in the region and comes from Fearon (2004). Mountainous terrains create a safe haven for rebels to hide, hindering the government's effort to defeat them and prolonging the war. We took the ln transformation for skewness.
- (8) *Rebel support and government support*. These two variables show external intervention on behalf of the rebels and the government respectively. They come from Cunningham, Gleditsch, and Salehyan (2009) and are updated for recent years. Findings show that simultaneous external interventions on behalf of the warring parties prolong conflicts as they increase the motivation of the parties to continue the fighting. Interventions supporting only one party are more likely to shorten the war than those supporting both warring parties (Regan 2002b).

Results

We use a Cox proportional hazards model to estimate the impact of independent variables on the risk of conflict termination in the smallest time span given that it has survived up until that interval. This statistical model is not only preferable to ordinary least squares, which fails to address time dependence, but is also preferred to other parametric models including Weibull. The latter applies restrictive assumptions on the distribution of the baseline hazard. Box-Steffensmeier and Zorn (2003), for example, argue that time dependence is highly sensitive to model specification and should be treated as a nuisance. This implies that using a Cox model with flexible baseline hazard is recommended for survival models.

The basic specification for Cox model is as follows:

$$h_i(t) = h_0(t)\exp(\beta_1 X_{i1} + \beta_2 X_{i2} + \dots + \beta_k X_{ik}) \quad \text{or} \quad h(t) = h_0(t)e^{x\beta},$$

where $h_0(t)$ is the baseline hazard, β s are slope parameters, and X s are independent variables. In this semiparametric model, the hazard function, $h_0(t)$ remains unspecified while the covariates enter the model linearly.

We report the hazard ratios which are interpreted according to whether or not they exceed 1; those ratios that are greater than 1 imply that greater values of the variable increase the risk of failure, or in this case the termination of conflict.

Higher values of the variables with hazard ratios less than 1 contribute to the continuation of wars.

Models 1 and 2 (Table 1) show our findings using the COW data for civil wars with a minimum threshold of 1,000 battle-related deaths, while models 3 and 4 depict results using AC data for civil wars with a minimum threshold of twenty-five battle-related deaths. Given that Cox model is based on an assumption of proportional hazards, we performed diagnostics checks to test this assumption. We analyzed the residuals whereby the residuals are estimated as a function of \ln time, if proportional assumptions hold, these residuals should be a random walk unrelated to survival time. Using Schoenfeld (1982) and scaled Schoenfeld residuals (Schoenfeld 1982; Grambsch and Therneau 1994) we tested the proportionality assumption of models 1 through 4; we failed to reject the null hypothesis of zero slopes globally in all models verifying that there was no need for incorporating time-varying covariates. We also applied the Klein and Moeschberger's (1997) two-step process for the assessment of functional forms. We computed Martingale residuals and plotted the residuals against each omitted variable to see if the smoothed pattern portrayed linearity. The plots showed that the covariates, GDP per capita, proportion of forces, ethnic fractionalization and mountainous terrain violated the assumption of linearity, and thus, we took the \ln transformation of these variables in all the models to account for nonlinearity.

We first discuss our results using COW data (models 1 and 2). Our data shows that competition among PMCs exists in the majority of cases involving PMC interventions (approximately 9 percent of conflict years). Our results indicate that as the competition among government-hired PMCs increases so does the hazard rate for conflict termination. This supports Hypothesis 1a. The estimated hazard or risk of conflict termination is on average 29 percent higher with one unit increase in the number of government-hired PMCs. The positive impact of PMCs on reducing the conflict's duration is evident from the initial years of the war and continues to increase if the war progresses.

Figure 1 further depicts the impact that an increase in the number of private firms working for the government has on conflict termination. It indicates that in those cases where the government hires multiple companies, the hazard rate for conflict termination increases greatly in comparison to those cases in which the government does not receive such help. If six PMCs intervene in the sixth year of the war, for example, the war is at least 2.5 times more likely to be terminated than if just one PMC intervenes. This is consistent with our hypothesis that increased competition among PMCs will lead to optimal performance and allow to shift the balance of power in favor of the government, thereby facilitating the end of hostilities.

One may argue that our findings do not necessarily support the argument about competition leading to optimal efficiency and merely reflect the idea that by hiring many PMCs the government accrues additional resources to fight the war, thereby allowing it to secure victory regardless of the quality of such services. Because an increase in competition among providers leads to greater efficiency and the more

Table 1. The Duration of Civil Wars in Africa, 1990–2008.

	Large wars (COW)		Small wars (ACD)	
	Model 1	Model 2	Model 3	Model 4
Polity	0.994 (0.006)	0.994 (0.005)	0.991 (0.005)**	0.992 (0.004)*
GDP per capita	0.873 (0.028)***	0.845 (0.025)***	1.046 (0.160)	1.039 (0.155)
Ethnic Fract.	0.498 (0.110)***	0.494 (0.107)***	1.016 (0.193)	1.000 (0.185)
Ethnic wars	0.745 (0.361)	0.705 (0.328)	1.066 (0.401)	1.105 (0.408)
Intensity	0.816 (0.032)***	0.819 (0.032)***	0.074(0.037)***	0.077 (0.038)***
Mountainous terrain	0.805 (0.039)***	0.802 (0.038)***	0.673 (0.036)***	0.673 (0.036)***
Proportion of forces	0.970 (0.012)**	0.972 (0.013)**	0.987 (0.006)**	0.986 (0.006)**
Support rebels	1.565 (0.779)	1.690 (0.808)	0.746 (0.213)	0.742 (0.210)
Support government	0.432 (0.213)*	0.414 (0.193)*	0.190 (0.071)***	0.192 (0.071)***
Competition PMCs _{gov}	1.294 (0.151)**		0.911 (0.078)	
Competition PMCs _{reb}	1.160 (0.200)		0.695 (0.240)	
Resource compensation			2.894 (1.688)*	0.648 (0.400)

Note. ACD = Armed Conflict Database; COW = Correlates of War; GDP = gross domestic product; PMC = private military companies.
 * $p < .1$. ** $p < .05$. *** $p < .01$, $N = 135$ for models 1–4, $N = 343$ for models 5–6.

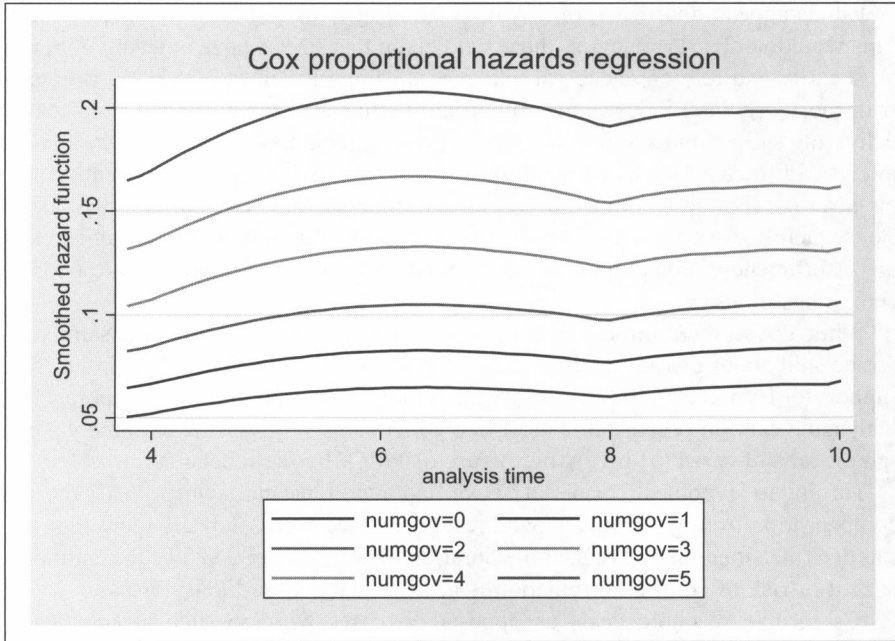


Figure 1. Competition among government-hired private military companies (PMCs) and the duration of civil wars (COW data set).

of such efficient providers we have, the greater the odds of war termination, it is difficult to capture the mechanism of competition and its independent effect from the outcome it inevitably produces, mainly the shift in the balance of power. Yet, if our argument about competition driving efficiency among PMCs is correct, then we should expect that a company with monopoly on service provision in a given conflict could be in a position to deliver suboptimal performance because it faces limited accountability from other firms. This means that one PMC in conflict zone should have limited impact on bringing the conflict to a quick end. Figure 1 shows that hazard rate for termination in the sixth year is nearly the same in cases where only one PMC intervened on behalf of the government ($\sim .085$) and those cases of civil wars where no PMCs intervened in the same year ($\sim .065$). Furthermore, having two PMCs has an impact on conflict termination but having one PMC makes very little difference; in fact, the difference between the latter case and cases of no PMC intervention is minimal in terms of the hazard rate. That rate is much smaller than the difference in hazard rate in cases of one PMC intervention and cases with two PMCs intervening. It is, thus, puzzling that a single PMC with sophisticated technology would have limited impact on conflict termination, that is, unless it had little interest in ending the war quickly.

It thus appears that when one PMC is hired, it is more likely to underperform. This would not be surprising to those who claim that PMCs have a negative impact on security and rely on anecdotal evidence to support their views. Here, we agree with those scholars; indeed our “opportunity structure” theory would predict that delivering suboptimal services in order to prolong their stay would be in the PMC’s interest. In the absence of competition from other providers they can identify new threats, take limited risks in warfare, or just underperform without getting caught. Consequently, we believe that a boost in competition is an important mechanism that drives efficiency, reputational accountability, and ultimately increases the odds of ending hostilities.

While government-hired PMCs strongly affect the war’s duration, the same cannot be said about private warriors providing services to the rebels. We do not find support for Hypothesis 1b (model 1). This finding, however, needs to be approached with some caution because it is most likely inconclusive given the extremely small sample size of cases (5) involving the use of PMCs by the rebels.

Turning to Hypothesis 2 (model 2), we find that in instances when PMCs receive compensation from governments with resource concessions, they are more likely to stabilize the situation and reduce the duration of war. Model 2 shows the estimated hazard or risk of conflict termination is at least twice more likely for cases where PMCs receive resource deals as opposed to cases with no such arrangements. Figure 2 allows us to further evaluate the impact of resource concessions on the war’s duration. When the government pays a military company with contracts to extract oil or diamonds in the sixth year of the war, the hazard rate for conflict termination is approximately 3 times (.19 hazard rate as opposed to .06 hazard rate) of the hazard rate in those cases in which a company did not receive such compensations. This finding is consistent with our “opportunity structure” theory—operating in a conflict environment which delivers financial benefits to companies in the form of contracts to extract natural resources means that it is in the interest of a profit-seeking company to deliver an optimal service to the government so it could maximize its gains from lucrative contracts in the absence of violence. In other words, the opportunity presented in such arrangements encourages the companies to strive for peace because resource extraction is easier and more profitable then.

Finally, we tested our hypotheses with civil war data that adopts a lower threshold for war, mainly twenty-five battle-related deaths (models 3 and 4, Table 1). Increasingly, scholars of civil wars rely on such data to study war dynamics (e.g., Cunningham 2006; Sambanis 2004). We do not find that PMC intervention on either side matters (Hypothesis 1a and 1b) for conflict termination (model 3) and neither does compensation with resource extraction (Hypothesis 2; model 4) when we use the twenty-five battle-death threshold for conflict. This, however, is somewhat expected because PMCs are more likely to intervene in conflicts with more battle deaths because large numbers of casualties suggest that the government is unable to secure a swift victory and may need external assistance. Once casualties increase, the PMC intervention is more likely, and the 1,000 battle-death data capture much greater

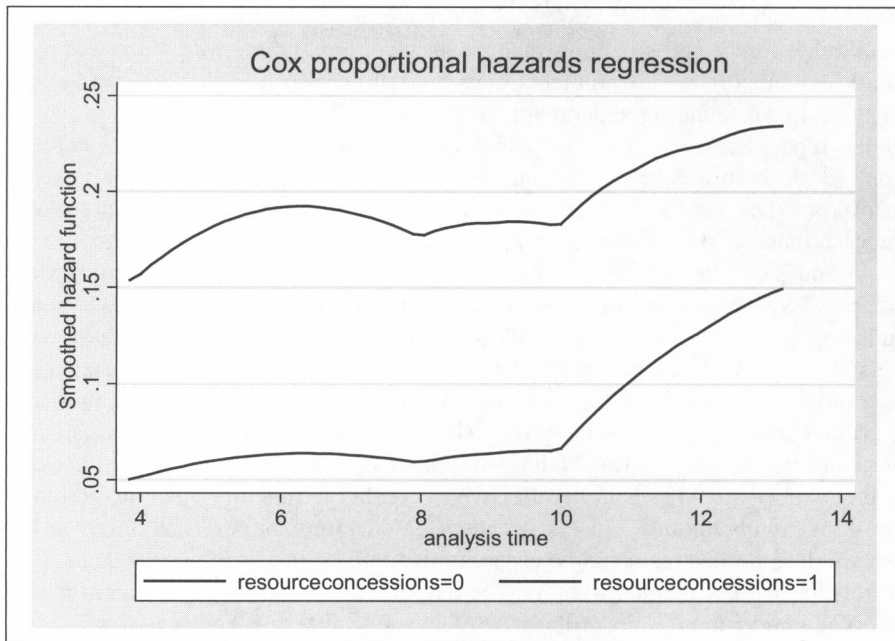


Figure 2. Resource compensation and the private military companies' (PMCs) impact on the duration of civil wars (COW data set).

frequency of those interventions in the very intense wars. We also have very few PMC interventions on behalf of the rebels which might explain why we have no statistical significance for this covariate in any of the models. In terms of our finding on the lack of statistical significance for compensation with resource concessions in small wars, it is likely that governments are more inclined to compensate PMCs with resource contracts when they run out of cash, and this is less likely to happen in low-intensity conflicts. Because the governments rarely offer resource concessions in such conflicts, this may explain why our resource-compensation variable is not statistically significant in conflicts with low-casualty threshold.

Turning to control variables, we find support for proportion of forces, conflict intensity and mountainous terrain across all models (COW and AC data sets). Mountainous terrains are associated with long conflicts, an idea that is consistent with most findings in the literature. Contrary to our expectations, we find that conflict-intensity variable, while statistically significant, increases the duration of war. It could be that more battle deaths harden the groups' resolve, prompting them to seek victory rather than negotiate. Furthermore, we expected that militarily stronger governments would be able to terminate conflict, yet our results indicate the opposite to be true. It is possible that weak rebel forces can survive by hiding in rough terrain that lies outside of the government's control (Cunningham, Gleditsch, and Salehyan

2009). It could also be the case that the government is not threatened by such weak rebel forces and so allows them to survive. Finally, we found that external, non-PMC support for governments prevents termination of both large and small wars while we found no support for the importance of external support on behalf of the rebels across all models. These interventions differ from PMC interventions. Both the presence and the number of PMCs, whether hired by the government or the rebels, are negatively correlated with external, non-PMC interventions. In only 7 percent of conflict-year observations (10 of the 135 in COW and 23 of the 343 in AC data) do we see government benefiting from external, non-PMC support and PMC service simultaneously, this number is between 2 and 3 percent (4 of the 135 in COW and 8 of the 343 in AC data) for the rebels. This suggests that warring parties seem to treat PMC service as a substitute instead of as a compliment to other external support—this is not surprising as the need and the utility of hiring PMCs should increase when alternative support mechanisms are absent. The findings on external intervention show that increase in the number of PMCs is more effective in conflict termination than the presence non-PMC interventions. This is because the literature on external intervention usually does not distinguish among the motivations of intervening parties, and the correlation with prolonged wars may be due to a large number of instances where external intervention is insufficient to decisively alter the balance of power in favor of the government or is designed to deliberately prolong the war. When multiple PMCs intervene, however, the impact on war termination is positive because competition among PMCs creates an added incentive to deliver strong results for the government.

We conducted robustness checks. First, one might argue that timing of PMC interventions may affect the duration of wars. An intervention in earlier stages of the conflict could have a different impact from the one that occurs later. To examine if timing of intervention matters one can interact the variable of interest with time, t . These variables are referred to as time-varying covariates in duration models. However, the tests we conducted for violation of proportionality assumption in Cox models automatically detect the need for incorporating the variables that capture time. We used Schoenfeld and scaled Schoenfeld residuals from models 1 and 3 in Table 1 to conduct this test—we failed to reject the null hypothesis of zero slopes for our competition variables. This means that the timing of PMC intervention is not important for estimating the duration of war. Second, we checked for outliers by obtaining deviance residuals and plotting them against predicted duration; there were none in the COW data set. The observation of Yemen in 1994 had a relatively high deviance residual in the AC data set. Running the analysis without this observation did not change the results. Finally, given that 16 percent of the conflicts in the AC data were ongoing, we checked the results of models 3 and 4 without censored observations. Eliminating the censored cases left us with 61 conflicts and 264 conflict-year observations. Our results remained the same.

Conclusion

Despite the growing presence of private military companies in conflicts around the world, systematic research on their impact is scarce. Most researchers paint a stark picture of PMCs, often describing the negative effects of such companies on security in the post-cold war environment. One of the aims of this study was to present an empirical analysis of the PMCs' impact on civil war duration in Africa to understand precisely when these military companies can be the agents of insecurity and when their presence can generate positive dividends for peace.

Unlike some studies, we relaxed the assumption that most PMCs strive for insecurity because it allows them to expand their profits. We argued that as business ventures PMCs strive to secure profit, but that opportunity structures greatly determine their behavior. Thus, to understand the impact of these entities on conflict dynamics, it is imperative to place them in the context of the environment, the market structure, that determines how profits are generated. The "opportunity structure" theory we proposed yields some interesting predictions. It shows, paradoxically, that prolonging conflict is not always the optimal choice for PMCs as some argue. When PMCs receive payments for their services in the form of concessions to extract natural resources, it is in their interest to deliver an optimal service and strive for termination of violence because a peaceful environment enables them to achieve their goal of maximizing profit.

Similarly, we have shown that when multiple companies operate in a given country, a military company would actually hurt its future contracts if it sought to prolong violence and underperform in delivering security. This is largely due to the competition that encourages optimal delivery of services and serves as a monitoring tool of the rival companies' activities. Fortunately, our data show that the practice of hiring multiple PMCs in conflicts is a frequent phenomenon in the post-cold war environment, thereby suggesting that if this trend continues, the reliance on PMCs could be a good thing for terminating civil wars. Yet in some instances, the opportunity structure argument predicts a detrimental effect of PMCs on security. This we argue could be true when a single company operates in a country or does not receive compensation involving resource contracts. In the absence of constraints, the opportunity structure would enable a company to deliberately underperform and manufacture new threats in order to secure more profit. We also find that when the rebels hire PMCs, the increase in competition among these providers, may not be enough to deliver rebel victory and terminate violence. Thus, the beneficial effect of increased competition among PMCs, our findings show, is present when the government employs such companies in large conflicts.

Our argument about the role of opportunity in shaping PMC behavior in conflict and empirical findings shed light on new policy recommendations. For those interested broadly in the privatization of international relations and the

potential threat of nonstate actors breaking international and domestic law, the article offers some ground for optimism. Given that prevalent environment in which the PMCs operate shapes their behavior, it follows that such players are not necessarily a menace to the rule of law. Instead, market pressures are increasingly regulating their behavior. Government officials interested in ending violence would be advised to diffuse contracts among several companies rather than work with only one as doing so will encourage each company to deliver the best service or risk looking inadequate in comparison to others. This recommendation is somewhat counterintuitive because many scholars believe that having more PMCs is destabilizing. Such concern might also be shared by those alarmed by the growing trend in delegating state responsibilities to nonstate actors. Yet, this study has shown that greater competition will deliver the monitoring mechanism that many have already called for in the scholarly and policy-making community. Once government-hired PMCs perform optimally and the conflict ends, the international community can then help the state rebuild to secure peace.

Future research could explore several venues. First, this study concentrated exclusively on Africa because the number of PMCs working here is much larger than in other parts of the world. Yet, focusing on other regions could strengthen our understanding of these companies' impact on war dynamics. Second, researchers should continue to disaggregate the concept of "security," which in many studies is broadly defined, to examine the impact of PMCs on specific aspects of security. For example, we looked at the duration of war but not at the survival of peace. We believe that once the combatants reach a point where one group achieves victory over another or the balance of power shifts in a way that prompts the parties to negotiate, the end in hostilities presents an important transition point in conflict that sets the foundation for long-term stability. Yet, we recognize that even if PMCs deliver victory to the government, they may not guarantee the survival of peace. Because PMCs are not always hired by legitimate governments, it is possible that if they help an illegitimate leader secure military victory, they may simply prolong the overall conflict in the society, even if they help secure moments of peace. Others (Musah and Fayemi 2000) have also expressed concern that granting resource contracts can lead to long-term instability because a vital part of the country's wealth is given to a foreign company rather than remaining in the hands of the people. There is also a potential for environmental degradation, displacement and local clashes taking place between companies controlling vital resources and the population that is sometimes expected to accommodate the companies' resource extraction without proper compensation. Such issues would be of interest to those concerned about the impact of globalization on conflict and the importance of corporate responsibility toward local populations (Bennett 2002). Future research thus should examine the longevity of peace in conflicts involving PMCs to determine if the cessation of violence they bring is indeed sustained.

Appendix

PMC Presence Linked to African Civil Wars, 1990–2008

Warring groups*	War onset/end	PMC intervention	Year(s)
Rwanda/RPF	1994	Ronco	1994
Rwanda/Hutu Rebels	1997–98	None	
Liberia/NPFL	1989–90	None	
	1996	None	
Liberia/NPFL & ULIMO	1992–95	MPRI	1995
Liberia/LURD & Model	2002–03	None	
Sierra Leone/RUF	1991–96	Specialist Services Int.	1991
		Marine Protection	1992
		Executive Outcomes	1995–96
		Ibis Air International	1995–96
		Gurkha Security Guards Ltd.	1995
		Control Risks; Group 4	1995
		Defense Security Ltd., DSL	1995
		Sandline	1996
		Lifeguard Management	1996
		Teleservices	1996
Sierra Leone/Kabbah Faction	1998–99	Sandline	1998
		Lifeguard Management	1998
		Executive Outcomes	1998
		Pacific Architects Engineers (ICI)	1998
		Cape International Corporation	1998
Chad/Deby's MPS	1989–90	None	
Chad/MDD and MDJT	1998–2000	None	
Chad/FUDC	2005–06	None	
Congo Brazzaville/FDU	1997	None	
Congo Brazzaville/Ninjas and Cocoye militias	1998–99	None	
Democratic republic of Congo/AFDL	1996–97	Omega support	1996–97
		MPRI	1996–97
		Kellogg Brown and Root	1996–97
		Geolink	1997
		Executive Outcome/Sandline	1997
		Stabilico	1997
		Intercon	1997
		International Defense and Security (IDAS)	1997
Democratic Republic of Congo/RCD & MLC et al.	1998–2002	Defense Security Ltd. (DSL)	1998
		Safenet	1998
		IRIS Service	1998

(continued)

Appendix (continued)

Warring groups*	War onset/end	PMC intervention	Year(s)
		Executive Outcomes (spinoffs)	1998
Burundi/Tutsi army	1993–98	None	
Burundi/FNL and Florina	2001–03	None	
Somalia/rebel clans	1988–91	None	
Somalia/Aideed faction	1992–97	None	
Somalia/SCIC	2006–08	ATS Tactical Select Armor	2006–08 2006–08
Ethiopia/Eritrean People's Liberation	1982–91	None	
Ethiopia/Oromo Liberation Front	1999	None	
Angola/UNITA	1976–91	None	
Angola/UNITA	1992–94	Executive Outcomes Capricorn	1992–94 1994
		Teleservices	1994
Angola/UNITA	1998– 2002	Stabilico	1998
		Panasec Corporate Dynamics	1998
		IDAS	1998
		Omega	1998
		IRIS Service	1998
		Airscan	1998
Mozambique/Renamo	1979–92	None	
Algeria/Islamic Front	1992–99	Eric SA	1992
Sudan/SPLA-Garang Faction	1983–91	None	
Sudan/SLA & JAM	2003–06	None	
Cote d'Ivoire/MPCI, MPIGO & MJO	2002–04	None	
Yemen/South Yemen	1994	None	
Yemen/Zaidi Muslims	2004–07	None	

*Data on civil war parties and duration comes from COW.

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