A puzzling trend in the third world is the survival of authoritarian regimes in the face of persistent civil war. I argue that this phenomenon can be explained as a coup-proofing paradox: efforts to ensure that the military will be unable to topple a leader via a coup d’etat will ultimately make the country more vulnerable to civil war. I identify two manners in which coup-proofing can lower the military capabilities of the government vis-à-vis would-be insurgents. First, structural “counterbalancing” of militaries by creating diversifying the chain of command and creating paramilitary groups will create a collective action obstacle for would-be putschists, but these efforts will undermine the ability of the military to operate effectively. Second, vulnerable leaders often “purge” their militaries of elements whose loyalty is suspect, particularly in accordance with ethnicity. This acts to lower the capabilities of the regular armed forces while providing an already-aggrieved ethnic group with a pool of trained soldiers. To test the theory I offer two original variables. First, I consider the ratio of paramilitary strength to that of the regular armed forces, using secondary materials to create a global time-series measure for 1965-2007. While increased paramilitary strength should decrease the probability of a coup, it is expected to increase the likelihood of civil conflict onset. Second, I offer a secondary analysis that considers the impact of military purges. Large-N and case study analyses both offer strong support for the theory, though mixed results are found in regard to military purges.


PRELIMINARY DRAFT – DO NOT CITE WITHOUT AUTHOR’S PERMISSION
Civil conflict is a term that has been used to describe virtually any form of violence that occurs within a state’s borders. The Uppsala Conflict Data Program, for example, defines intrastate conflict as “a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths” (Harbom and Wallensteen 2005). While such a definition can be said to be comprehensive, a potential shortcoming is that the definition might conflate different types of conflict, including activities that are perpetrated by altogether different types of actors. Phrases such as “civil war,” “civil conflict,” or “intrastate conflict” may conjure images rebel soldiers in a war-torn Congo or Angola, but many of these “civil wars”—upon closer inspection—do not involve such rebel groups. Instead, a number of these conflicts are actually initiated by members of the state, specifically the armed forces undertaking a coup d’état.

Take, for example, the recent civil war in the Ivory Coast. Over 700 soldiers mutinied against President Laurent Gbagbo in the early morning hours of September 19, 2002. The first day of fighting left 270 dead in Abidjan, including former military ruler General Robert Guei, the purported instigator of the attempt. Forces loyal to the government were able stop the coup, but the conspirators gained control of a number of locales in the country’s north and from there waged a civil war against the government (McGowan 2007; Uppsala Conflict Data Program). Without the thousand-plus lives that would be lost in the ensuing civil war, the September 2002 coup attempt would be but one of over 450 that have transpired in the last sixty years (Powell and Thyne 2011). The case, however, leads to a variety of questions regarding the relationship between leadership stability and conflict. First, the Ivory Coast was one of just a few African states to have never experienced military rule and had been viewed as a beacon of stability in
West Africa. Why then, had they suddenly slipped into what Londregan and Poole (1990) dubbed as the “coup trap?” Further, what factors had changed that allowed this stable country to slip into prolonged civil conflict? Finally, how was the leadership able to withstand such a large-scale conspiracy from within their armed forces, yet unable to prevent a descent into civil war?

In this paper I will argue that these questions are interrelated, can be applied globally, and that this relationship can be attributed to leadership survival strategies. First, I consider coups as a function of expected utility for the plotters. I incorporate a number of theoretical streams in investigating coup likelihood, ranging from economic performance, level of democratization, and multiple factors related to the military—specifically coup-proofing strategies. It is the task of regime preservation strategies implemented by actors such as President Gbagbo to reduce the expected utility of a coup. This is most directly accomplished by increasing obstacles to conspirators, thereby lowering their probability of succeeding, or by lowering the disposition to attempt a coup. Such coup-proofing strategies have been discussed in prior literature, but have largely been limited to country- or region-specific efforts such as Frazer’s (1994) dissertation on Kenya, N’Diaye’s (1999) investigation of the Ivory Coast, or Quinlivan’s (1999) look at the Middle East states of Iraq, Syria, and Saudi Arabia.

Regime survival strategies ultimately seek to undermine the ability of a state’s regular armed forces to stage a coup by lowering the probability that an attempted coup will succeed. I believe that in doing so, these regimes inevitably worsen their military capabilities relative to an extant or potential insurgency by weakening their militaries through the creation of cohesion obstacles and through the purging of elements that are perceived to lack loyalty. The former undermines the state, the latter provides rebels with a skilled pool of soldiers from which to recruit. Further, coup-proofing can also raise the expected payoff of rebellion by creating
grievances amongst a segment of the population, particularly when personnel are purged based on ethnic identity. While the likelihood of a successful coup is lessened, the expected utility of a rebel group forming actual *increases* due to shifts in the balance of capabilities between government forces and rebels and the stakes for which the rebels will fight.

The remainder of this paper is set up as follows. First, I review a variety of purported determinants of coup activity, given heightened attention to coup-proofing strategies. I specifically frame this review in terms of a model of expected utility, a model that will later be applied to the decision to attempt a rebellion. I next illustrate how coup-proofing strategies undermine the capabilities of the state, while strengthening the capabilities of insurgents. Finally, I test the utility of coup-proofing by investigating the impact of a variety of strategies on coup-likelihood, followed by testing the consequences of coup-proofing for civil war onset. These tests will provide evidence that coup-proofing creates a paradox for leaders: the practice does in fact reduce coup activity, but those efforts actually increase the likelihood of civil war. Finally, I discuss the implications of the findings, specifically tying the results into contemporary policy.

*Preventing Coups*

Here we will consider coups to be a rational endeavor. To frame the argument I incorporate the following model, adopted from Quinn, Mason, and Gurses (2007):

\[
EU_{coup} = P_V (U_V) + (1 - P_V) (U_D) - \sum_{n=0}^{\infty} C_{ni}
\]

Here we will think of \( EU \) as the expected utility of a successful coup d’etat. \( C_{ni} \) reflects ongoing costs that result from the maneuver, such as international sanctions, or factors such as
domestic fallout such as riots, protests, or strikes. $P_V$ represents the probability of a coup attempt’s success, $U_V$ is the expected payoff from a successful coup, $\left(1 - P_V\right)$ is the estimated probability of defeat and $U_D$ represents the estimated costs from a coup’s failure. The estimated costs of a coup’s failure, for example, include consequences such as exile, imprisonment, or death for individuals. There are also consequences at the group level. Finer (2002, 21-32) has noted that militaries will fear that “not only their lives but the army itself will be forfeit.” Costa Rica, for example, abolished its military following an attempt within the ranks to annul the results of a national election, and Kenya dismissed virtually every Air Force officer after the service’s ill-fated 1982 coup attempt (N’Diaye 2002). Though there is an occasional granting of amnesty to plotters (see 1995 Sao Tome, for example), these cases are rare and usually come about after the conspirators have already seized power, and is thus determined not by the factors that led to the coup but rather incidental developments following its undertaking. When looking at whether the coup will succeed, $U_D$ will be treated as a high value. We can expect this factor to be constant for all coup plotters.

Probability of victory ($P_V$), however, varies in accordance to a number of static and dynamic factors. Plotters who target legitimate regimes could face serious resistance from non-military actors. For example, a variety of investigations have noted that economic problems can create or exacerbate distaste for a regime. Johnson’s (1962, 260) commentary on Latin America notes that economic decline will “invite coups that will have popular approval” and Galetovic and Sanhueza (2000, 194) similarly argue that the citizenry is more “willing to obey a new ruler when the short-run performance of the economy is bad.” In their quantitative analysis of successful coups, Londregan and Poole (1990) have described a dramatic “coup inhibiting” effect of income, a finding supported elsewhere by Janowitz (1977) and Belkin and Schofer
(2003). Without public approval, plotters are subjected to stronger opposition than previously calculated. According to Sutter (1999, 130), citizens can have a hand in inhibiting a coup’s outcome by “credibly refusing to support an illegitimate regime.” He goes on to liken a coup attempted in the face of public disapproval to seizing the bridge of a ship whose engines are inoperable.

A coup attempted against a head of state operating a functioning economy will make opposition to the coup more likely, potentially lessening both the probability of victory \( P_V \) and long term costs \( C \). Both factors impact the expected utility \( EU \) of the coup, making coups less likely during periods of economic prosperity. Leaders, of course, cannot increase their survival prospects by deciding to improve the economy. However, a number of characteristics of the military can inhibit the disposition or ability of a would-be plotter to successfully coordinate a wide-ranging conspiracy within the armed forces. This latter point is particularly important, as leaders can manipulate these factors in an effort to lessen their vulnerability to a coup. These efforts, commonly referred to as “coup-proofing,” are meant to lessen \( P_V \) for the state’s armed forces.

A number of studies have claimed militaries with less “cohort rivalry” are more likely to attempt coups (Wells 1974; Wells and Pollnac 1988; Johnson et al. 1984; Jenkins and Kposowa 1992; Kposowa and Jenkins 1993), though Svolik (2009, 484) has recently “assumed away” any collective action problem elites may face when confronting a dictator. To the contrary, I argue that cohesion obstacles are of paramount importance for plotters, a distinction that has not gone unnoticed by leaders who have intentionally sought to increase cohesion obstacles.

An early observer of the practice, First (1970, 429) noted that numerous African regimes had attempted to decrease the prospects of a coup by “building up counter-forces” within their
armies. Reports of a foiled August 2008 coup in Guinea-Bissau illustrate this dynamic. When seeking the ouster of President Joao Bernardo Vieira, Rear Admiral Jose Americo Bubo Na Tchuto had to solicit cooperation from parallel branches. Instead of finding reinforcements for his plot, the head of Guinea-Bissau’s Navy found himself under arrest by the order of Army Chief of Staff (BBC 2008). Moving beyond the plotting stage, the infamous 1982 coup attempt perpetrated by the Kenyan Air Force was violently suppressed by the General Services Unit, a paramilitary organization that has been described as more powerful than the Kenyan army (N’Diaye 2002). Perhaps the best example of creating this cohesion obstacle in recent history is Iraq. The country experienced nine coup attempts—three successful—between 1958 and 1968. Upon their seizure of power the Baathists created parallel forces in the Republican Guard and the Popular Army in an effort to coup-proof their regime. Quinlivan (1999, 146) has noted that Iraq’s Republican Guard alone was divided into 28 brigades under 6 different commands. Perhaps the best selling point for the body being a truly “countercoup” force is the fact the unit was not originally committed to the Iran war. Despite possessing the best soldiers Iraq had to offer, the unit would only be used in battle after the creation of other coup-proofing units.

Thompson (1976) offered an early test of this argument by using descriptive statistics to show coups attempted with the overt support of more armed services branches were more likely to succeed. Though he does not claim more branches translate directly into fewer attempts, potential plotters are no doubt aware of the need to gain the support of potential opposition. Belkin and Schofer (2003) recently created a “counterbalancing” measure based on the number of military branches and paramilitary organizations for each country. In doing so they conclude that at-risk regimes do in fact divide “their armies into numerous, mutually suspicious rival forces that check and balance one another” (Belkin and Schofer 2003, 596). This represented the
first quantitative effort to verify that counterbalancing was a commonly used polity, but they do not test the effectiveness of these efforts. Qualitative and quantitative evidence suggests leaders that feel vulnerable to a coup do in fact balance their militaries, but there is limited empirical effort to show whether or not these actions are being rewarded. Any discussion of coup likelihood needs to address such efforts.

The presence of such structural cohesion obstacles—whether through increasing chains of command, strengthening an independent paramilitary, or both—can be seen as decreasing the probability of a coup’s victory \( (P_V) \) and should deter coup plotters from attempting to overthrow the regime.

**Rebellion as a Function of Relative Capability**

While the civil war literature is replete with discussions such as the “greed versus grievance” debate, which identifies civil conflict as a function of motive, a very limited body of work has actually sought to theoretically and empirically investigate opportunity to rebel, as determined by the balance of capabilities between a state and a would-be insurgency. Unlike commonly-used national level data such as military personnel, expenditures, mechanization, material capabilities, etc, rebel group-level data is clearly limited. There have, however, been a number of efforts to indirectly look at factors that will influence the ability of rebels to fight effectively. The fighting capacity of rebels will be an important determinant in the decision to fight. Consider, once again, the adaptation from Quinn, Mason, and Gurses (2007):

\[
EU_{\text{rebellion}} = P_V (U_V) + (1 - P_V) (U_D) - \sum_{n=0}^{t_n} C_{ri}
\]
In the above equation we will treat $EU$ as the expected utility of a successful insurgency. $P_V$ represents the probability of a rebellion’s success, $U_V$ is the expected payoff from the rebellion, $(1-P_V)$ is the estimated probability of defeat and $U_D$ represents the estimated costs from a failed rebellion. Given the consequences of failure are dire, rebelling should only be considered rational when likelihood of victory and the expected payoff are sufficiently high. $P_V$ for a rebellion is expected to increase when the capabilities of a state’s regular armed forces are diminished or when an insurgency’s capabilities are enhanced. Fighting capacity is clearly an important determinant for the decision to rebel, but previous efforts to consider capabilities have been severely limited. Here I will contend that civil war onset is most likely when the fighting capabilities of the state are weakened relative to the would-be insurgents.

Below I propose a theory in which efforts to prevent one form of anti-regime activity—the coup d’état—can actually reduce the fighting capacity of the state, as well as increase the capacity of rebels, thereby raising the rebel’s relative capability and heightening the risk of civil conflict.

Implications of Coup-Proofing for State Strength

The ability of a state to root out and destroy an insurgency has been a frequently cited determinant of conflict onset or duration, though operationalizing the idea has remained a challenge. “State capacity,” for example, has been a purported determinant of multiple aspects of conflict activity. Arbetman and Kugler (1998) and Buhaug (2006) have argued for its impact on conflict onset, while DeRouen and Sobek (2004) have looked at duration. A common predictor of intrastate conflict onset, GDP per capita has frequently been purported to represent a variety of different factors relating to civil war. Fearon and Laitin (2003), for example, proxy a
state’s “police and military” capabilities by looking at per capita income, an approach that parallels that of Collier and Hoeffler (1998). Buhaug (2010) has more recently treated level of economic development as a sign of the ability of the state to project power over distances, as we can expect better roads and means of transportation when a country possesses better financial resources.

Others have looked at the purely economic impact of the measure. Buhaug (2006), for example, treats GDP per capita as a sign of a government’s ability to make costly reforms and to reduce grievances, while Collier and Hoeffler (2004) consider the factor to raise the opportunity costs of rebellion. For the former, the state will have considerable flexibility of bargaining space when faced with a crisis. For the latter, citizens of wealthy countries have much more to lose through fighting and should thus avoid rebellion save for the most extreme circumstances. Such an interpretation would see the consequences of defeat \( U_D \) as being too high.

Others have looked at alternative economic aspects, such as the extractive capacity of the state. The ability of a state to tax has been noted as an important determinant in intrastate conflict dynamics, as it is a sign that the government can accrue revenue to invest in counterinsurgency (Levi 1988). Others have more generally looked at the ability of the government to outspend those “challengers capable of mobilizing rebellion” (Fjelde and de Soysa 2009; see also Azam 1995; Collier 2000; Ghandi and Pzreworski 2006). These approaches go beyond other efforts in that they explicitly tie a country’s economy to their ability to procure arms or otherwise prepare for combat, thus lowering the probability of victory for rebels \( P_V \).

While such measures might be appropriate for looking at administrative strength or state fiscal capacity, using economic factors to quantify fighting capability is—at best—crude. In this
section I propose that a state’s ability to function in combat can be directly constrained by coup-proofing in two ways: reduction in resources and the presence of coordination challenges.

First, when a state puts more resources into coup-proofing they inevitably do so at the expense of the regular armed forces. This creates an assumption that as the amount of resources dedicated to coup-proofing—such as larger paramilitary bodies such as a Presidential Guard—the regular armed forces are less capable in combat than they otherwise would be. The is due to a lessening of potential resources such as reduction in personnel or armaments, a reduction of soldier quality due to a lack of training, and an unwillingness to use the more fighting-ready paramilitary in support of regular armed forces during combat. Pollack (2002, 386), for example, has noted that Muammar Qaddafi put paramount importance on his Jamahiriyyah Guard, who proved their utility by beating back an army coup attempt in May 1984. As for the regular military, his survival strategy included “frequently and unexpectedly” rotating command positions as well as limiting the military’s training through prohibition of live-fire exercises. As will be discussed below, such actions drastically undermined the fighting capacity of his armed forces.

Second, counterbalancing also undermines the fighting capacity of a military by creating coordination challenges. This is as true for waging battle as it is for attempting a coup. Durrell-Young (1997, 23), for example, has claimed that unity of command is a “sine qua non for successful military operations,” and unity of command is what counterbalancing specifically attempts to avoid. Libya is once again a telling case. In addition to prohibiting live-fire drills, Qaddafi also proscribed the regular military from forming division-level commands, which would have to be created “on an ad hoc basis in the field” (Pollack 2002, 386). The end result was an army in which “concerted” action was “nearly impossible,” and accounts of the conflict
fail to report “a single mention of Libyan forces conducting a tactical counterattack” (ibid). As Pollack has concluded, the Libyans deployed “far more advanced and far more powerful weaponry [against the Chadian army]…but were crushed nonetheless” (Pollack 2002, 417).

Such actions greatly reduce the ability of a state to suppress a rebellion. First, coup-proofing commonly includes the dedication of significant, if not exhaustive, resources to paramilitary units that are unlikely to be used outside of a capital. Second, coup-proofing often includes dividing militaries into “mutually suspicious” sometimes “redundant” bodies that will face cohesion obstacles—whether in the plotting of a coup or in fighting a rebel-group. These factors will dramatically increase a rebellion’s probability of victory, thus making the onset of civil war more likely.

*H1: The onset of intrastate conflict is more likely when structural coup-proofing efforts (paramilitaries & counterbalancing) are stronger*

*Implications of Coup-Proofing for Rebel Capabilities*

Civil Conflict scholars have estimated rebel strength in a number of ways, though still very crude. The most common approach is to look at the total population of a state. This is seen as both increasing the number of potential rebel groups as well as the size of the population from which the rebellion can recruit (Sambanis 2001; Collier and Hoeffler 2002, 2004; Fearon and Laitin 2003; Thyne 2006). Others have looked more specifically at the size of a minority ethnic group, arguing that as a minority’s size relative to the dominant ethnic group increases, conflict is more likely (Collier et al 2003). Christenson (2001) and Ellingsen (2000) similarly found that states with medium-sized ethnic groups were more likely to experience civil conflict. Such groups will have a larger potential pool of recruits.
Aside from potential personnel numbers, another indirect way to look at capabilities has been to look at terrain. If rebels have access to favorable geography we can think of the probability of victory \( (P_v) \) as increasing. The most common treatment of this factor in the quantitative literature has been the presence of mountainous terrain (Fearon and Laitin 2003). Others have considered access to a transnational border. Buhaug and Rod (2006), for example, have shown that conflicts seem to be close to international borders, supportive of the contention that rebels fair better when they have access to resources from cross-border ethnic brethren (Gleditsch 2007) or a cross-border sanctuary (Salehyan 2007). Others have considered access to exploitable natural resources. Access to oil, gemstones, or opiates can provide rebels with the fiscal capacity to launch and sustain armed conflict (Collier and Hoeffler 2004; Regan and Norton 2005).

Another way to look at rebels capabilities, perhaps more directly, is to once again consider the consequences of coup-proofing. Perhaps against intuition, I argue that coup-proofing can actually increase the ability of rebels to wage an insurgency, just as the capabilities of a state to fight one are diminished. Aside from facing a regular army with diminished capabilities, coup-proofing can also increase rebel capabilities in one major respect: creating a pool of soldiers from which to recruit.

Vulnerable leaders will often purge the military of elements whose loyalty is suspect. This can be seen in terms of political ideology (Ghana, Tanzania, Post-Soviet States) or ethnic affiliation (Iraq, Kenya, Ivory Coast, Sierra Leone). Joseph Nyerere, for example, removed the Sandhurst-trained General Sarakikya from the military altogether, assigning him to the Culture and Sport Ministry. The position of army head went not to another established military officer, but to a TANU regional secretary with no military experience (Pachter 1982). While the average
person might view the average rebel as an uneducated, violent warlord, they overlook individuals such as UNITA leader Jonas Savimbi, who earned a PhD at the University of Lausanne. Putting qualified soldiers out of work could potentially allow them to seek employment from insurgents.

Political loyalties can be feigned or purchased—Savimbi originally sought a government position in Marxist Angola—but one particular source of suspect loyalty is particularly difficult to overcome: ethnicity. Indeed, some states have seen entire ethnic groups purged from a state’s armed forces. N’Diaye (2002) has noted that under Daniel Arap Moi the Kenyan army went from being “almost exclusively Kikuyu” to “Kalenjin at the bottom, in the middle, and at the top,” this following an original purging of non-Kalenjin elements at independence. Outside of Africa, Horowitz (2002) has similarly noted that Burma purged its British-trained and Karen-dominated officer corps shortly after independence in an effort to create a unified ruling class.

Such purges do not only reduce the fighting capability of a state’s regular military, they create more grievances within an ethnic group (increases $U_V$) as well as provide that ethnic group with a readily available cadre of trained soldiers (increases $P_V$). This last point cannot be overstated. In an effort to coup-proof their regimes, many leaders have purged their militaries of elements that are perceived to be disloyal, creating a potentially highly-trained force from which a rebellion can recruit. Such action is not only detrimental to the capabilities of the state, it is additive to the capabilities of would-be rebels such as the Karen in Burma. The Karen’s undertaking of a half-century-plus civil war is thus not a coincidence. Indeed, the fighting capabilities of the Karen—at least at the onset of the conflict—can be looked at as more than simple demographic or geographical peculiarities, and more than simply a government that weakened its military. Probability of victory ($P_V$) is thus dramatically increased, raising the
likelihood of civil conflict. Finally, purged soldiers may also be able to utilize a knowledge of arms depots, transfers, or access to contacts still in the armed forces to procure arms.

\[ H2: \text{The onset of intrastate conflict is more likely when militaries have been "purged," that is, reduced their numbers} \]

Data and Analysis

For a test of the impact of regime survival strategies on the onset of civil conflict, I predominately rely on quantitative methods. First, I offer an illustrative set of models that illustrate the impact of regime survival strategies on the likelihood of a coup d'etat. Next, I will test the main thesis of this paper by investigating the relationship between these activities and the onset of civil war. For these analyses the level of analysis is the country-year, with a global sample being utilized. Temporal availability of the data allows an analysis of the years 1966-2000. Given the dichotomous nature of the dependent variables, a logistic regression is employed.

Dependent Variables

The primary dependent variable will be civil war, as defined by the Correlates of War: fought within state borders between a government and non-government forces (civil war)... the central government should be actively involved in military action with effective resistance for both sides, and there should be at least 1000 battle related deaths during the civil war” (Sarkees 2000). I utilize this measure over the PRIO intrastate conflict variable for two reasons, both subjective and objective. First, the theory argues that the consequences of coup-proofing should be particularly problematic. As a consequence, this vulnerability is best illustrated by looking at
larger conflicts. Second, from an empirical standpoint the PRIO data has one major problem for the current analysis. As mentioned in the introduction, the dataset includes dozens of coup-attempts, a distinction that can cause serious reliability concerns.

For the coup models, I use yearly coup data from Powell and Thyne (2011). These data are useful for a variety of reasons. First, the dataset specifically distinguishes coups from other forms of anti-regime activity, such as mass revolutions, civil wars, and assassinations. Taylor and Jodice (1985), for example, include “irregular power transfers” that are perpetrated by members of government, the military, the public, foreigners, etc. These events have often been conflated as coups in previous analyses despite warnings from the authors that the measure does not specifically describe coups. This is a particularly important distinction given that the crux of the theory presented here is that coups and civil war are expected to be influenced in fundamentally different ways. A failure to properly distinguish these types of intrastate violence would introduce serious concerns regarding the validity of these analyses. Second, Powell and Thyne only report overt coup attempts, discounting frequently reported rumors or plots that could have been fabricatated by a regime. Coup attempts follows their definition: “attempts by the military or other elites within the state apparatus to unseat the sitting head of government using unconstitutional means” (Powell and Thyne 2011). I have recoded the data from a count of the number of coup attempts in a country-year to a dichotomous measure that considers whether or not at least one attempt was made in that year.

Coup-Proofing Strategies

Some leaders have actively “counterbalanced” their militaries in order to divide them into “mutually suspicious” organs, thus precluding the possibility of a widespread conspiracy. Data
for the degree of military *counterbalancing* has been explicitly coded by Belkin and Schofer (2003). They computed the ratio of military to paramilitary organizations and personnel numbers as determined by *The Military Balance*, published yearly by the International Institute of Strategic Studies. They then converted the ratios to z-scores to standardize the measure. The variable ranges from -4.04 to 5.92, with a mean of -.001. I also offer an original *paramilitary* variable for two reasons. First, the counterbalancing measure is temporally constrained to the 1966-1986 timeframe. Second, it will allow consideration of the size of the paramilitary relative to the regular armed forces, not taking into account the additional consideration of fractionalization taken into account by Belkin and Schofer (2003). Using the *Military Balance*, I look at the ratio of total paramilitary personnel to that of the total regular armed forces (excluding paramilitary personnel). Data is available yearly beginning in 1966 and ended in 2010, though there are some notable gaps. Early years of the sample, for example, saw the IISS only include information for states with militaries of at least 5,000 soldiers. This problem is compounded when looking at African regimes. Already hampered by omission due to the typical African military being small, many African states were left out of the early years of the publication, as it was more interested in the American-Soviet competing spheres of influence. Following 1980 the publication is comprehensive. Before 1980 data from Africa (and Latin America and Middle East to a much smaller extent) are sporadic and have been supplemented with data from *Adelphi Papers*, especially numbers 15 (Bell 1964), 20 (Wood 1965), 23 (Bell 1965) 27 (Wood 1966), 34 (Wood 1967), 93 (IISS 1972). Linear interpolation is used to complete any remaining gaps. The final measure ranges from 0 (there is no paramilitary) to 3.44 and a median of .28. A regime is expected to experience fewer coup attempts as these collective action obstacles increase, whether counterbalancing or paramilitary ratio. However, these efforts
will undermine the capabilities of those most likely to respond to a rebellion, thus raises the prospects for the onset of civil war.

While a comprehensive time-series dataset on military purges as a coup-proofing strategy would be a useful tool, one is not in existence, nor is the coding of one a feasible task. It is thus important to incorporate reliable personnel data. I consider purges in two ways. First, I code a *change in personnel* variable by using military personnel data from the Correlates of War project. Specifically, I consider the current 3 year moving average of total military personnel versus the three year moving average from 5 years earlier. I will emphasize that a reduction in personnel numbers is not in any way claimed to be specifically undertaken as a coup-proofing strategy. The loss of personnel, however, still provides a pool of soldiers from which to recruit. The measure will be included in this model in order to compare the variable’s influence on coups and civil war. Second, I code a dichotomous (1=purge, 0=no purge) *purge* variable. Here I claim a purge has occurred if the change in personnel noted above is greater than a five percent reduction. This is be an important distinction in the civil war model since purging specifies that soldiers are leaving the armed forces and are entering the general public. Looking merely at a change in personnel measure could conflate a military buildup due to a perceived threat of a rebellion (increase in personnel reduces conflict propensity) instead of a personnel reduction leading to a rebellion (decrease increases conflict propensity). To reiterate, this quantification of purge can often be nothing more than general disarmament completely unrelated to coup-proofing, such as states following the resolution of a war or South Africa following the end of Apartheid. Though these purges do see soldiers leave the military, in these cases it is not necessarily done so for coup-proofing purposes.
For controls I utilize a number of variables commonly associated with studies of coups or civil war. For the civil war models, I included the often-included measure of *mountainous terrain* (Fearon and Laitin 2003). The most commonly noted predictors of coup activity or civil war involves either wealth or economic performance. I operationalize wealth through *GDP per capita* from Gleditsch (2002), held in real 1996 dollars. Economic performance is measured by using each state’s year-to-year *change in GDP per capita*. Percent changes are reflected in all models. Higher values of both factors are expected to negatively influence the likelihood of a coup attempt as well as civil war onset. Next, I control for level of democratization by including a state’s *Polity* score (Marshall and Jaggers). As a state’s level of democratization increases, coups are expected to be less likely (Lindberg and Clark 2008). In addition to the democratization hypothesis, I also include *polity squared* as a control for regime strength. Civil war scholars have shed some light on intrastate conflict in non-democracies by demonstrating a non-linear relationship between democratization and the onset of a civil war (Hegre et al 2001). Specifically, there is an “inverted-U” relationship that sees strong authoritarian or democratic regimes relatively free from civil wars compared to anocracies that would fall in the center of the polity scale. Coups have recently been shown to follow a similar trend (Powell 2010). Strong autocracies—through their ability to manipulate elites through force or patronage—prevent the rise of a coup conspiracy just as they prevent the masses from challenging their rule via a civil war. This coincides with Svolik’s (2009) formal model regarding leadership dynamics that contends that dictators can consolidate executive power to the extent that they can no longer be credibly threatened. Just as the most democratic states should be relatively coup free, so should the least democratic states.
Finally, it is also necessary to control for the existence of a recent coup or civil war. Efforts to control for this in terms of coups usually considers whether a country had a successful coup in the last X number of years (see for example, Londregan and Poole 1990). I address this temporal dependence by including *years since last coup attempt* with associated cubic splines in accordance with Beck, Katz, and Tucker (1998). I differ from some previous efforts by using years since *all* attempts as a control. This is a more appropriate approach since factors that lead to failed attempts are expected to be the same as the factors that lead to successful attempts. Further, coups are attempted based on calculations done by the conspirators. Familiarity with public or regime responses to a coup attempt will provide conspirators with important intelligence regarding the likely response of civilians, other actors in the military, and response mechanisms available to the regime. More recent coup attempts not only show an inherent lack of positive civil-military relations, they also could provide a strategy roadmap for plotters. There is as a consequence no compelling reason to exclude failed coups from the analysis. For the civil war models, I include a *lagged civil war* measure, which captures the existence of a civil war in the state in the previous year.

*The Utility of Coup-Proofing*

I will begin with the illustrative model on coups. Table 1 reflects four models, testing for the impact of counterbalancing, paramilitary, change in personnel, and purging, respectively. Models 1 and 2 demonstrate that counterbalancing and paramilitary are statistically significant with the expected negative signs. This suggests that these coup-proofing efforts are actually being rewarded.
To consider the substantive impact of these factors I computed predicted probabilities of a coup using CLARIFY (Tomz, King, and Wittenburg 2003). Table 2 reports, while Figure 1 illustrates, the predicted probability of an attempted coup at given ranges of counterbalancing and paramilitary strength. The probability for a coup in at state located at the 10th percentile in counterbalancing sees a coup probability of .043. Moving upward to the 90th percentile, we see a substantial drop to .022, a 50% decline. A less dramatic decline is seen for paramilitary, as we see the probability of a coup drop from .023 to .018, a 24% slide. These numbers give strong support to the contention that creating cohesion obstacles for the armed forces is a significant challenge to conspirators.

The coefficients for a change of personnel and a military purge are insignificant. While numerous studies have pointed to the dismantling of the armed forces as a coup-proofing strategy, the measures employed in this quantitative analysis are admittedly only loosely connected to the factors they would be meant to represent. As a consequence it is perhaps not surprising that they failed to attain significance. The controls behaved as suspected. GDP per capita was significant with the expected negative sign in three of the models, with polity-squared and years since the last coup attempt were negative and significant in each specification. Change in GDP per capita was insignificant across the board, suggesting that wealth is a better indicator of coup activity that economic performance. Finally, polity failed to attain significance, hinting
that it might be best to think of coup vulnerability in terms of regime strength and not level of democratization.

**Onset of Civil Conflict**

Table 3 presents a set of models investigating the onset of civil conflict. As with the coup specifications above, individual models consider the impact of counterbalancing, paramilitary, change in military personnel, and military purge. Just as with coups, counterbalancing and paramilitary are in fact significant predictors of civil war. The direction of the sign, however, flipped as expected.

[Table 3 about here]

Table 4 provides the predicted probability of civil war based on a range of counterbalancing, paramilitary, and change in personnel, controlling for the confounding factors shown in the models from Table 3. The trend is graphically illustrated in Figure 2. Here we see an important influence on intrastate conflict. Moving from the 10\(^{th}\) to 90\(^{th}\) percentile of counterbalancing increases the probability of a civil war from 0.003 to 0.027, and increase of over 800%. Even looking at a much more modest range reveals that the risk of civil war increases by about 65% when moving from the 40\(^{th}\) to 60\(^{th}\) percentiles (0.0047 to 0.0089 probabilities, respectively). The Philippines is a telling case. At the 1966 start of the Belkin and Schofer dataset the country had a counterbalancing score of -0.25, which would make it less “balanced” or “coup-proofed” than over 50% of the sample. At this point there would be little reason to suspect a cohesion obstacle to undermine the military’s fighting capacity. However, the score increases dramatically, up to 2.59 (into the 90\(^{th}\) percentile) by the beginning of the long-running civil war with the Moro Islamic Liberation Front. The score would ultimately climb to 4.96 two
years into the fighting until being reduced to 1.09 by 1980. At the other end of the Belkin and Shofer temporal range we can see Senegal moving from an unbalanced score of -.72 in 1980 to 2.64 in 1986, just prior to the onset of the Casamance Conflict.

[Table 4 about here]

[Figure 2 about here]

We see a significant, though less dramatic, trend for the paramilitary. A shift from the 10th to the 90th percentile increases the probability of civil war from .014 to .032, a decline of 130%. A modest jump from the 40th to 60th percentiles increases the probability by 21%, from .017 to .020. Mobutu’s Zaire actually got to the point where it’s number of paramilitary personnel actually outnumbered the regular armed forces, though by the outbreak of war in 1996 this ratio had dropped to .63. A careful review of the trend, however, reveals that the decline was not a reallocation of resources to the regular military, rather it representing the beginning of a phasing out of the Civil Guard in favor of the newly created Special Presidential Division (IISS 1994).

Kisangani’s (2000) look at Mobutu’s Zaire is particularly revealing. Soon after taking power, Mobutu operated under a framework that would best fall under Huntington’s “objective control” rubric that would look at the Zairean military as professionalizing. He increased military spending for a modernization effort that saw the armed forces’ prestige increased. He promoted efforts to “ensure that the military’s role remained restricted to external defense” as well as pushed education in the officer corps by having hundreds of its members given tutelage at the “best military schools in the west” (Kisangani 2000, 211). Further, the patronage politics for
which he would become famous remained separated from the military, though that fact that would soon be resented by those in uniform.

Professionalism, however, was not to last. A decade later he had come to view his high quality soldiers as a threat to his rule and began to make drastic changes. Seasoned officers comprising the “old oligarchy” were purged, with many being executed (Kisangani 2000, 214). Restructuring the military would take a personalist character, thus putting “political considerations” over “military ones” (Kisangani 2000, 215). Promotions were isolated to those with “enthusiasm for the existing regime,” specifically those from the Ngbandi ethnic group (Kisangani 2000, 215-216). The quality of his forces was clearly diminished, as seen during skirmishes between 1977 and 1978, when the Zairean military was soundly humbled by former Katangan soldiers. Only the efforts of French and Belgian paratroopers would push back the insurgency (Kisangani 2000, 216). By 1975, Kisangani contends, Mobutu’s goal for his armed forces had made the transition from protecting against external foes to protecting against domestic elements. Kisangani is correct in his assessment, but misses one important point. The capabilities of the Zairean military were in fact directed at domestic threats, but the focus remained on protecting the capital. During the Shaba conflicts, for example, Mobutu would continually rotate command positions in the field, like Qaddafi versus Chad, in order to minimize the rise of a potential rival in the army. Further, in line with Saddam Hussein’s Republican Guard, Mobutu would keep his best soldiers in the capital regardless of the performance of the military against insurgents elsewhere in the country (David 1987). Though this strategy prevented any one officer from becoming a coup threat and no doubt contributed to his long tenure, the strategy also led to a considerable reduction in the military’s fighting effectiveness against rebels.
A similar reduction in soldier professionalism can be seen in Guinea. Sekou Toure forced educated soldiers to serve under the command of illiterate officers, and promotions and pay were determined by political loyalties. Though he had a high-quality Cuban-trained paramilitary whose *raison d’etre* would be to keep him in power, the National Militia’s domestic focus is illustrated by its “rather slim connection to the Military of National Defense” (Camara 2000, 320). Camara has gone so far as to refer to Toure’s stabilization efforts as “decapitating his own armed forces” (Camara 2000, 322).

It is also worth noting that when we consider the far extremes we can see dramatic shifts. From example, going from the 90\(^{th}\) to 99\(^{th}\) percentile in counterbalancing increases war probability from .027 to .106, a near fourfold increase. Paramilitary sees a jump of .032 to .057 when looking at a similar shift, while change in personnel jumps nearly threefold from .023 to .068. This trend suggests that leaders that go overboard on any of these policies is greatly enhancing their country’s vulnerability to the onset of civil war.

Figure 3 overlays data from the previous two figures. The trends are clear. Increases the resources of a paramilitary or increasing counterbalancing in the armed forces significantly reduces the likelihood of a coup d’etat. Leaders such as Mobutu Sese Seko, Siaka Stevens, Saddam Hussein, and others can effectively coup-proof their regimes, especially through the developing of structural obstacles to their militaries. Doing so, however, has an inverse relationship on the onset of civil war. Once such leaders reach a certain threshold for the development of their paramilitaries or counterbalancing, they enter a danger zone in which their ability to respond to a domestic insurgency is limited.

[Figure 3 about here]
Change in military personnel also reveals a significant sign, leading to speculation that as soldiers are released from duty, the probability of civil conflict increases. To make the data reflect a purported additive impact of personnel reductions, I multiplied change in personnel by negative one when plotting the substantive impact of personnel changes in Table 3. By rank ordering changes in military personnel in this manner we can see that those in the 10th percentile (.018) are 24% less likely to experience a civil war than those in the 90th percentile (.023). Changes in the measure are modest, though. Moving from the 40th to 60th percentile only brings with it a 1.1% reduction in the likelihood of civil conflict. Admittedly, it could also be argued that an increase in soldiers would discourage a rebellion. The purge variable was included in an attempt to overcome this causal murkiness. The positive sign would indicate that a loss of military personnel is additive to the onset of civil war, but the sign is insignificant. At this point the impact of personnel reductions—from a quantitative standpoint—is still unresolved.

However, there is considerable historical evidence that suggests that a more proper refining of “purge” variable could provide better results. Looking at Africa has indicated purges are a near-universal phenomenon by state, though not every leader undertakes purging. However, there is variation in the type of purge that gives marginal support for the second hypothesis. Looking at former British colonies in Africa, for example, Ghana (Nkrumah) and Tanzania (Nyerere) purged their militaries based on political ideology (Pachter 1982; Jackson and Rosberg 1982). Neither country has witnessed a COW civil war (1000+ battle deaths) and the only three resulting cases of civil conflict according to the Uppsala Conflict Data Program and its far-lower 25 battle-relate death threshold were actually coup attempts that resulted in high body counts in Ghana (1966, 1981, 1983; see Powell and Thyne 2011). On the other hand, ethnic purges in former British colonies were followed by civil conflict in Sierra Leone and
Uganda (Decalo 1990; Kposowa 2006). Kenya is exceptional in that purges were clearly undertaken without the consequence of civil war, though an investigation into recent turmoil could show that purge-related grievances could be playing a role.

Theoretically, such a distinction is clearly merited. While the dismissing of soldiers due to non-ethnic loyalties could potentially raise $P$, for an insurgency, purges based on ethnic identity can contribute an additional additive influence on the expected utility of rebellion. These soldiers will identify strongly with the out-group due to ethnic ties and would be particularly likely to be recruited, if not outright lead, a rebellion. Further, the aggrieved group has more to gain by rebelling, raising the expected payoff of a successful effort ($U_v$). As a consequence, ethnic purges should be particularly likely to promote civil war. Looking at the recent civil war in the Ivory Coast illustrates this dynamic, as the leaders of the rebellion are former Ivoirian military officers that were dismissed by Laurent Gbagbo, whose regime was only saved by the intervention of 3,000 French forces (Chirot 2006). The limited nature of the current purge variable limits large-scale generalizations, but a careful evaluation of the historical record indicates that ethnic purges might be important determinants of civil war onset.

**Discussion**

The results of this analysis have important policy implications, both for leaders when considering their domestic security arrangement, and in regards to foreign policy for the United States. For the former, consider Mexico. Estimates put the current death toll of the ongoing conflict with drug cartels at just under 30,000. The existence of such a high casualty rate, as well as high-profile assassinations of politicians and high ranking military officers, already shows a high level of capability amongst the cartels. This should come as no surprise given their vast
financial resources, resources that allow them to recruit former soldiers and national police. The cartels have further infiltrated the state apparatus through widespread bribery of officials. Corruption is particularly rampant in the national police, where it was recently announced that over 10% of the force (over 3000 officers) was being fired due to corruption allegations. While such a purge might rid the body of corrupt officers and does not burden the government with the needs of numerous trials, there is the threat for fallback. Given these officers were already tied to cartels, there is little reason to suspect that these officers would avoid offering their services full time. This purge, then, could substantially increase the capabilities of the cartels.

A similar concern is being dealt with in Iraq. The dissolution of the Iraqi army was not due to ethnicity, but given the body’s predominately ethnic makeup, the massive purge no doubt created animosity amongst Iraq’s former soldiers. It is no secret that many of these individuals would go on to represent any of Iraq’s numerous insurgent groups following the 2003 invasion. Recent years have, however, seen many of the insurgents lay down their arms and return to the state as security personnel. These “sons of Iraq” numbered over 90,000 in 2008, illustrating the large numbers of trained insurgents the state must deal with. One out of every 27 Iraqis is currently employed in security, a number that the government has expressed a desire to change to one in 100. While such a move could take Iraq from appearing to be a police state, the government certainly needs to have a competent demobilization, disarmament, and reintegration program in place. Putting tens of thousands of highly trained military or security personnel out of work in a state with limited jobs opportunities would no doubt contribute to the prospects for continued insurgency.

For others, careful consideration must be given to coup-proofing. Recent democratic norms in regional international organizations such as the Organization of American States and
the African Union seem to be deterring militaries from ousting leaders, a trend whose continuance could lessen the need for potentially costly coup-proofing strategies. Until then, coup-proofing offers a clear paradox in which leaders must carefully balance the utility of preventing a coup with the risk of insurgency.
Works Cited


Table 1: Coup-Proofing Strategies and the Likelihood of Coups d’etat

<table>
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<th>Coefficient</th>
<th>T-statistic</th>
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Notes: ***p<.001; **p<.01; *p<.05 (one-tailed). Robust standard errors in parentheses, clustered by country. Cubic splines were included in the analysis but are excluded for ease of presentation.
Table 2: Substantive Impact of Coup-Proofing

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Figure 1: Predicted Probability of Coups d'état as a Function of Coup-Proofing
Table 3: Coup-Proofing Strategies and the Onset of Civil War

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Notes: ***p<.001; **p<.01; *p<.05 (one-tailed). Robust standard errors in parentheses, clustered by country. Cubic splines were included in the analysis but are excluded for ease of presentation.
Table 4: Substantive Impact of Coup-Proofing on Civil War Onset

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Figure 2: Predicted Probability of Civil War Onset as a Function of Coup-Proofing Strategy
Figure 3: The Inverse Relationship Between Coup-Proofing, Coups, and Civil War