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A Comparative Study of Electoral Systems: Majoritarian Rules and Electoral Violence in Africa

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An increasing trend of violent elections is undermining the former optimism over multi-party elections in Africa. Electoral systems are frequently associated with election violence, but the effects of different systems are relatively unknown. This study addresses this gap and assesses whether conditions for electoral violence are greater under certain electoral systems compared to others. Using a new time-series cross sectional (TSCS) dataset, I conduct an analysis of election violence in sub-Saharan Africa from 1995-2013. Overall, I find evidence for the violence-permitting nature of majoritarian systems, and the violence-constraining nature of proportional representation systems. These findings remain after controlling for the timing of violence (in relation to the election), the effect of informal institutions, and the presence of violence-mobilizing factors.

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A Comparative Study of Electoral Systems:

Majoritarian Rules and Electoral Violence in Africa

A Thesis

Presented to

the Faculty of the Josef Korbel School of International Studies

University of Denver

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts

---

by

Gavin M. Kiger

June 2019

Advisor: Timothy Sisk

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Title: A Comparative Study of Electoral Systems:
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Abstract

An increasing trend of violent elections is undermining the former optimism over multi-party elections in Africa. Electoral systems are frequently associated with election violence, but the effects of different systems are relatively unknown. This study addresses this gap and assesses whether conditions for election violence are greater under certain electoral systems compared to others. Using a new time-series cross sectional (TSCS) dataset, I conduct an analysis of election violence in sub-Saharan Africa from 1995-2013. Overall, I find evidence for the violence-permitting nature of majoritarian systems, and the violence-constraining nature of proportional representation systems. These findings remain after controlling for the timing of violence (in relation to the election), the effect of informal institutions, and the presence of violence-mobilizing factors.

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I. Introduction

Electoral democracies are increasingly more common among states. International IDEA notes that since 1975, the percent of states holding democratic elections has grown from around 30 percent to nearly 70 percent (Skaaning & Jiménez, 2017). This trend represents promising expansion, yet electoral democracies are not free from instability. The Center for Systemic Peace explains that partial democracies (anocracies), are highly vulnerable to political instability, often during election periods (Marshall & Elzinga-Marshall, 2017). As such, it is important to uncover the conditions that make these periods potentially destabilizing.

Elections are competitive by design, and often invoke strong feelings, divisive rhetoric, and ideological clashes. The ballot box represents a political battleground, where voters can exercise accountability and express political preferences. Rightly managed, elections are an invaluable tool in democratic processes. However, elections introduce uncertainty and vulnerability, which can lead to acts of violence. Already Benin, Nigeria, and Senegal have witnessed election violence in 2019. Yet uncertainty and vulnerability alone are not enough to produce election violence, raising questions around the specific causes.

Uncovering the causes of election violence is a crucial first step in mitigating its effects, and preventing it in the future. In this study, I investigate the causes of election

violence, focusing on elections in Africa from 1995-2013. From a theoretical standpoint, I choose to focus on electoral systems. I find that majoritarian systems, those that raise the stakes of electoral competition, are more highly associated with election violence. This holds true when controlling for the timing of violence, the role of informal institutions, and escalatory/mobilizing factors.

By narrowing the focus to sub-Saharan Africa, I can more clearly investigate the conditions under which election violence occurs. Rather than taking Africa as inherently different or violent, I focus on the continent because of its similar context (post-colonial, growing multi-party systems), illustrative cases (e.g. Kenya 2007/8 and Cote d'Ivoire 2010), and variation in electoral systems and institutions.

Even with the frequency of election violence in Africa, scholars do not have a fully comprehensive understanding of its many causes. Scott Straus and Charlie Taylor explain that between 1990 and 2008, nearly 60 percent of African elections faced electoral violence (Straus & Taylor, 2012). This statistic starkly contrasts with the optimism of the 1990s, where over 75 percent of states adopted multiparty elections after the Cold War (Burchard, 2015). Many framed the '90s rush of multiparty elections as a turning point for democracy on the continent. Caught in the rhetoric behind Huntington's "third wave," and Fukuyama's "End of History," observers argued Africa was catching up, and finally adopting Western forms of liberal democracy (Fukuyama, 2006; Huntington, 1993). Today, the problematic assumptions behind such claims are clear, and

their inaccuracies no better demonstrated than through the frequent cases of electoral violence broadcasted across many African states.[1]

The 2011 general election in Nigeria was praised for its management in the run-up, but featured widespread violence, with over 800 killed and 65,000 displaced after results were announced (Bekoe, 2011). In Kenya, a disputed election in 2007 led to over 1,000 deaths, nearly 650,000 displaced, and the brink of civil war (HRW, 2017). Pierre Nkurunziza's announcement to run for a constitutionally prohibited third term in Burundi sparked massive demonstrations, a coup attempt, and large-scale coercive violence from the government (Bouka, 2017). These three examples help highlight the prevalence and severity of election violence, and demonstrate the need for continued research. Large scale research projects, such as the Electoral Integrity Project,[2] are helping address questions around failed and/or violent elections, and illustrate the growing demand for work in this area.

While election violence in Africa certainly exists, it is incorrect to characterize "African elections" as exclusively violent. This simplification of elections in Africa is reminiscent of Africa as the "Dark Continent" and the "Heart of Darkness," and overlooks diversity among the 54 unique African states. In reality, for every case of violence in Kenya or Nigeria, there are peaceful and competitive elections in states like Botswana and Ghana. The variation and different experiences with elections and violence

[1] The neo-colonial implications of imposing Western systems on African states is highly problematic.

[2] A joint project between Harvard University and the University of Sydney under the guidance of Pippa Norris.

among African states begs the question: under what conditions are elections accompanied by political violence?

In pursuit of answers, approaches emphasizing the role of institutions are becoming increasingly common and important (Fjelde & Höglund, 2016). In particular, many are beginning to question the role of electoral system design, and the unique ways proportionality inherent (or absent) in electoral processes contributes to violence. This line of thinking has roots in the literature on deeply divided societies, and generally supports the notion that majoritarian rules are more violence-inducing than their proportional representation (PR) counterparts (Reynolds, 2010). However, statistical evidence supporting this finding is relatively scarce, and often overlooks the complexity found in different cases (Bogaards, 2013). Observationally, Kenya and Nigeria's majoritarian rules suggest the ill-suited nature of winner-takes-all systems. However, violence in PR states like Togo and South Africa, and a lack of violence in majoritarian Botswana suggest that further study is necessary (Bekoe, 2010; Bruce, 2009; Charlton, 1993; Reynolds, 2010).

The purpose of this study is to contribute to the growing literature on the causes of election violence, specifically with regard to the many electoral systems underpinning each election. What follows is a quantitative analysis of electoral violence, taking institutions, and specifically electoral systems, as the main explanatory variable. Relying on a new dataset of electoral violence, the Countries at Risk of Election Violence (CREV), I replicate and expand on Fjelde and Höglund's recent statistical analysis of election violence and electoral systems. Where previous authors neglect the timing of elections, I help fill the gap.

The findings generally support the notion that majoritarian rules are more frequently tied to election violence. However, this trend only exists at certain times for particular actors. Furthermore, the context of informal institutions like neo-patrimonialism, as well as the presence of excluded groups, armed conflict, election monitors, and fraud are all additional factors that work alongside electoral systems. Considering all of this, no single system is inherently better, yet opting for greater proportionality may help mitigate the ill-effects of structural risks for election violence.

This study adheres to the following organization. In the next section, I present an overview of the principal literature on elections, their importance for democracy, and how scholars currently think about the causes of electoral violence. Here, I also suggest a clear definition of electoral violence that helps guide my analysis. In the third section of this study, I offer my theoretical framework and a short discussion around the role of electoral systems. The section concludes with the main hypotheses. Section four presents the data and methods I use to analyze election violence. In the fifth section I present the results of my analysis, before moving to a discussion of the findings and final conclusions in section six.

II. Democracy, Elections, & Electoral Violence

Elections and Democracy

The topic of democratization in Africa is far beyond the scope of this study, but it is a major reason scholars and policymakers are interested in election violence. Election violence matters for human security, regional stability, sustainable development, post-conflict peacebuilding, and a wide range of other topics. However, the necessary link between elections and democracy warrants a short discussion on their relationship.

Elections are a vital outward demonstration of democratic systems. Since the widespread adoption of democratic norms among modern (and largely Western) states, frequent elections have become a mainstay of political society on a global scale. When they are well-managed, elections offer an outlet for healthy and necessary political competition. Theoretical ideal types of democracy, like Robert Dahl's polyarchy, stipulate elections as a necessary attribute in large part for this reason (Dahl, 1998). In fact, some procedural definitions of democracy are based solely around holding regular and competitive elections (Przeworski, Alvarez, Cheibub, & Limongi, 2000). As such, one may look at the health of elections when assessing the state of democracy in a particular context.

However, simply holding elections does not indicate the presence of a vibrant democracy. Elections are also common among non-democratic systems. Termed *hybrid*

regimes, states that engage in electoral competition, yet tend to disregard civil rights and liberties present in most "consolidated democracies,"[3] are at higher risk for election violence (Mainwaring, Brinks, Pérez-Liñán, & Munk, 2007). Often the decision to hold elections in non-democratic societies stems from political elites. Given the normative and practical importance of elections, non-democratic governments often hold elections hoping to earn legitimacy from the international community (or demanding constituents; Gandhi, 2008). This can often lead to violence when these same governments attempt to ensure favorable electoral outcomes (through coercive measures).

Even well-intentioned states (those deemed more-or-less democratic) are at risk of election violence, simply given the competitive nature of electoral events. The basic point is that elections are important and common across most modern states. Some of these states are at higher risk for violence than others. However, not all states at risk for violence actually experience election violence. The differences here have implications for human rights and security, development, sustainable peace, and democracy. As such, it is very important to understand the causes of election violence.

Electoral Violence

This next section looks at the drivers and consequences of electoral violence. Electoral violence starkly contrasts with the overarching goal of elections: offering a peaceful means to political power. Elections provide elites legitimacy, and allow voters to exercise accountability, choose representatives, and exercise voice (Sisk, 2017).

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[3] The idea of democratic consolidation is problematic.

However, it is unsurprising that elections sometimes incite violence. They are conflict inducing and produce losers by nature, opening windows of vulnerability that often lead to violence (Höglund, 2006). Most elections across the world are peaceful, suggesting that violence is not necessarily a direct byproduct of voting, but an anomaly that occurs under certain conditions. The remainder of this section is devoted to defining electoral violence, and working through the various conditions under which it appears.

Defining "Electoral Violence"

Electoral violence is a more specific form of political violence. Political violence refers to physical, psychological, and symbolic damage towards people and/or property intended to influence political, social, or cultural change (Bosi & Malthaner, 2015). As a narrower form of political violence, electoral violence always occurs within the context of elections.

Straus and Taylor note the lack of a consistent definition of "electoral violence," and propose the following: "physical violence and coercive intimidation directly tied to an impending electoral contest or to an announced electoral result" (Straus & Taylor, 2012). Straus and Taylor's approach mirrors earlier definitions like that offered by Fischer (2002), which highlights violence as a strategy. Fjelde and Hogulnd similarly emphasize the strategic nature of election-related violence, but note that bottom-up protests against electoral events can also turn violent (Fjelde & Höglund, 2016). Sisk defines electoral violence as "acts or threats of coercion, intimidation, or physical harm perpetrated to affect an electoral process or that arises in the context of electoral competition" (Sisk, 2008).

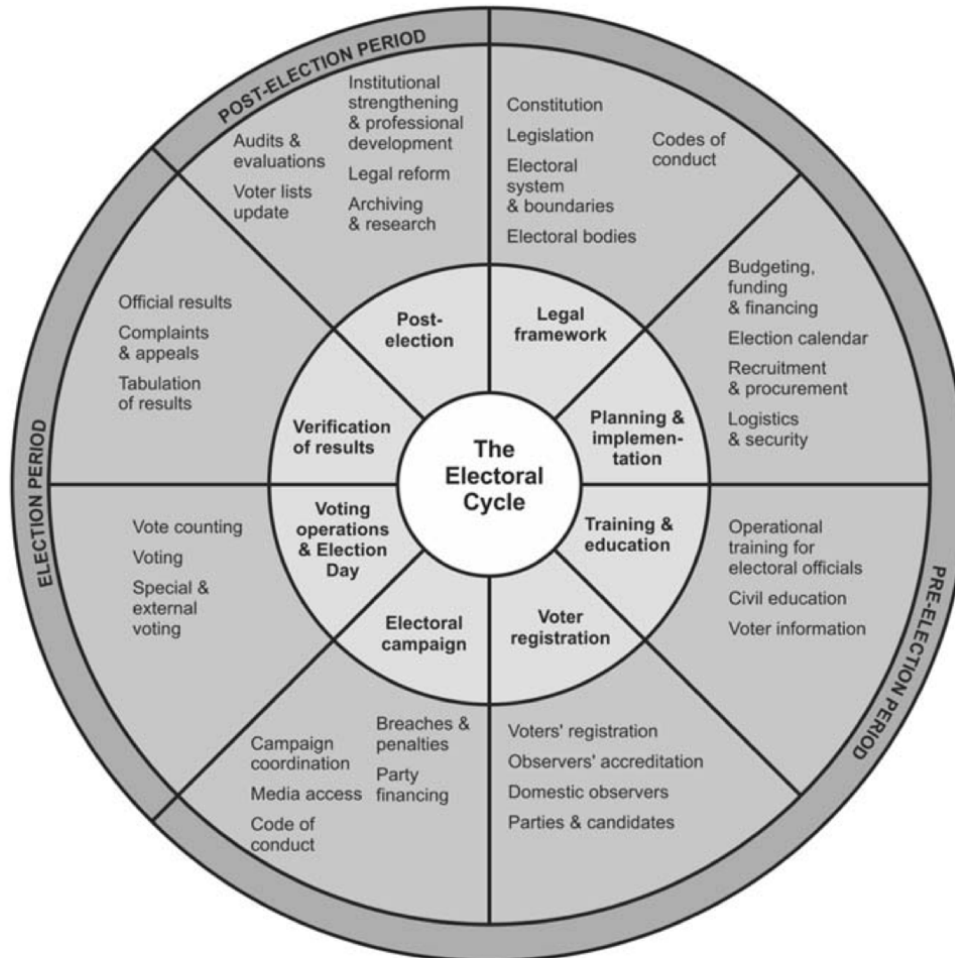
Each definition draws on a set of similar assumptions, largely related to timing and motive. Höglund explains that timing and motive are the most important factors in distinguishing electoral violence (Höglund, 2009). Electoral violence always includes a temporal aspect in that it occurs during the electoral cycle (in either pre-electoral, electoral, or post-electoral periods). Similarly, its motives are connected to the electoral process, as opposed to other types of violence that occur during the cycle, but have "no direct bearing on the election" (Birch & Muchlinski, 2017).

Along with timing and motive, it is possible to delineate three additional dimensions of electoral violence: type, method, and actors. Taken together these five dimensions help establish a more procedural definition of election violence. This line of thinking draws on the work of Burchard, who offers a clearer definition to account for the effects of electoral institutions. She provides a framework for assessing election violence, separating violence by type, means, timing, and actor (Burchard, 2015). This framework helps unite the somewhat disconnected set of definitions currently present in the literature. Each dimension, and its utility, is described in detail below.

The first dimension is *timing*, which relates to the electoral cycle. Timing is an important and easily measurable aspect of election violence. While political violence can occur anytime, election violence is unique in its proximity to an upcoming (or recently held) election. The electoral cycle approach, developed by International IDEA and the European Commission, identifies three specific periods around elections. The pre-election period, election period, and post-election period are important distinctions policymakers and scholars use when designing election, but are also relevant for election violence. Timing is important as it influences the nature and purpose of the violence

employed. A visual representation of the electoral cycle is displayed in Figure 2.1 (from: Alihodžić, 2011).

Figure 2.1: Election Cycles



Motives are the second dimension, and one of the most controversial. Many argue that for violence to be electoral in nature, it *must* be aimed at influencing electoral processes or outcomes. Intimidating voters during election-day, assassinating political opponents in the run-up, and violently rioting against recently announced results are all examples with clear motive. However, some like Elizabeth Murray and Jonas Claes argue

that such a distinction is problematic, especially in contexts "where violence is commonplace and investigations are scant" (Claes, 2016, p. 4; Murray, 2016). Instead, they propose focusing more closely on the targets (people and objects related to elections) and the context (elections; Alihodžić, 2011; Claes, 2016).

Type, the third dimension, is equally contentious. Burchard splits electoral violence into two distinct types: incidental and strategic. Incidental violence is unplanned and often involves protestors or "over-zealous security forces" (Burchard, 2015). Strategic violence, however, is pre-planned and "deliberately employed" (Burchard, 2015). This distinction relates to the work of Donald Horowitz, who argues that ethnic violence (violence from one group directed at another) is hardly ever irrational or unplanned, even if highly emotional (Horowitz, 2001).

Though the specific object of intent may differ between cases of violence, it is important to recognize that each form of motive falls within the wider umbrella of influencing electoral outcomes (Höglund, 2009). Much like measuring motives, however, accurately measuring the "type" is also difficult.[4] Furthermore, many question the fact that electoral violence is ever "incidental" (Ellman & Wantchekon, 2000).

Overall, the second and third dimensions are an important conceptual characteristic of election violence. Nevertheless, their measurability is highly questionable, which may warrant removal from narrower procedural definitions.

The fourth dimension of electoral violence deals with *methods.* Here, Sisk and Spies offer the most useful approach, describing the various methods involved in the

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[4] There are also debates around the relevance of including an "incidental" form of electoral violence.

perpetration of electoral violence. The specific activities included are assassinations of challengers, brawls between rival groups, and "threats, coercion, and intimidation of opponents, voters, or election officials" (Sisk & Spies, 2009). These actions fall into two broader categories: threats and attacks. The dichotomous framing builds on Sisk's definition, and matches the typology of violence found in this study's dataset. The main distinction between the two is the presence (or absence) of physical violence. From a procedural point-of-view, *method* is much easier to categorize.

The final dimension deals with the actors involved in electoral violence. Different actors employ violence with unique actions at different times for various reasons (though all generally related to electoral influence). Many studies tend to focus on state elites perpetrating election violence against civilians, but the range of actors involved is much more widespread. Claes and Murray agree with scholars like Sead Alihodzic, who emphasizes the importance of distinguishing electoral violence by actions involving "electoral actors" (Alihodžić, 2011, p. 27). It is useful to delineate such actors, but the term "electoral actors" is vague and possibly obscuring. For this study, electoral actors are individuals involved either directly or indirectly with electoral processes. It includes voters, election candidates, incumbent governments, security forces, international monitors, and anyone else related to the election. For the sake of simplicity, this study categorizes actors into two groups: state and non-state actors.[5] State actors are those associated with the current government (such as incumbents and security forces), while non-state actors comprise the wide range of individuals who fall outside the government.

[5] Perpetrators may direct these activities at either people or objects to carry out their goals.

This five-dimensional description of electoral violence is necessary to help guide theory around why election violence occurs. Many studies fail to distinguish between these parts, possibly obscuring analysis. Future studies on the causes and effects of electoral violence would do well to adopt clear and measurable definitions. Table 2.1 presents a visual representation of this definition.

Table 2.1: Five-Dimensions of Electoral Violence

Timing	Pre-Electoral, Electoral, Post-Electoral
Motive	Influencing Processes or Outcomes
Type	Incidental vs Strategic
Method	Attacks vs Threats
Actor	State vs Non-State

Causes of Electoral Violence

This next section presents a broad overview of the current literature on the causes of electoral violence. Although there is a large amount of empirical evidence on electoral violence, few scholars have detailed a conceptual overview of its many causes. Höglund separates the causes of electoral violence into three different categories: the nature of politics, the nature of elections, and electoral institutions (Höglund, 2009). Sisk explains that electoral violence stems from social structural conditions, electoral system choice and the stakes of political competition, the neutrality and competence of electoral administration, and the nature and functioning of the security sector (Rao, 2014). Both hint at the different ways electoral processes and institutions create space for violence, but also emphasize contexts not directly related to elections.

International IDEA has a toolkit that builds on these distinctions. IDEA's Electoral Risk Management Framework distinguishes between internal and external

factors of violence to help organize the causes of electoral violence (IDEA, 2018). To best wade through the *general* literature on causes of conflict, it will be necessary to look at these two different groups, but also within the context of a third group: triggers of violence. Beyond this broad structure, many studies group their findings based on the timing of election violence. After reviewing the general causes found in the literature, I will present the current state of findings distinguished by timing of violence. Splitting the causes into these sections is necessary due to the informative nature of more general work, and also the growing recognition that the causes of violence vary depending on proximity (timing) to the actual election.

External Causes

External, or structural explanations for election violence focus on how unique social, cultural, and economic conditions reinforce and prompt the use of violence. These are external to the electoral process itself, and "relate to exogenous conditions which can trigger… election-related violence" (Alihodžić & Burcher, 2013). Structural causes include democratizing contexts, levels of socio-political exclusion and inequality, previous experiences with violence, post-conflict scenarios, and other external, context-specific factors.

This group includes what Högulnd calls, "the nature of politics" (Höglund, 2009). Here, she highlights the role of patrimonialism, arguing that it can "foster electoral violence" by encouraging corruption, and marginalizing the population (Höglund, 2009). Neo-patrimonialism is an important condition to recognize, and refers to a relationship where well-endowed patrons distribute resources through client-networks in return for

support. These patrons are often political figures that claim dominion over the resources they administer. Disrupting these chains and networks can be devastating and violent (Chabal & Daloz, 1999; Van de Walle, 2001).

On a similar note, Cyllah finds that a disregard for the rule of law, and a culture of impunity can underpin election violence (Cyllah, 2014). When election violence goes unpunished, the perceived costs of its use decrease. In countries where minorities are generally excluded, they are also found to be more at risk of electoral violence (Berry, Bouka, & Kamuru, 2017). Others find that elections in autocracies, and those in poorer countries tend to experience election violence more frequently (Salehyan & Linebarger, 2015; Straus & Taylor, 2012).

Many of the structural causes here are similar to those found in countries with recent experiences of armed conflict. Deeply divided societies facing grievances from previous conflict are often ill-suited for electoral competition, and at high risk for electoral violence (World Bank, 2018). Salehyan and Linebarger agree, finding that countries in the midst of conflict, and those not-far-removed experience more violent elections (Salehyan & Linebarger, 2015). Where identity is contentious and salient, some like Bates suggest that "electoral competition arouses ethnic conflict" (Bates, 1983, p. 161). Other pertinent factors include socio-economic inequality, political marginalization, and even the presence of organized crime (Alihodžić & Burcher, 2013).

Violence around elections is often a result of the high stakes associated with winning and losing. In cases where institutions may contribute to zero-sum politics, and the structural factors make the consequences of losing high, there is a greater risk for electoral violence. Building on Höglund (2009), neo-patrimonial structures can also

heighten electoral consequences in the context of limited resources (Chabal & Daloz, 1999; Van de Walle, 2001). Here, actors may resort to electoral violence to monopolize political and economic power. Taylor, Pevehuse, and Straus find evidence for this among incumbents (Taylor, Pevehouse, & Straus, 2017).

While deep-rooted structural conditions are necessary to consider when looking at the causes of election violence, they are not sufficient for explaining conflict entirely. Even though states with higher levels of poverty, ethnic fractionalization, and neo-patrimonial politics may be a greater risk, there are many with similar characteristics that avoid violence around elections.

Internal Causes

The next set of causes deal more specifically with factors directly related to the electoral process. The electoral rules, vote counting mechanisms, and laws surrounding parties, campaigning, and voter registration are all included in this group of causes. Most importantly, this is where the nature of the elections and electoral institutions manifest. Fortman argues that in cases where the nature of the elections have the potential to actually change power relations, violence is possible (Fortman, 1999). Additionally, in highly inflammatory elections, strong political rhetoric during campaigns can lead to violence, especially in the context of a divided society (Wilkinson, 2006). More recently, Opitz, Fjelde, and Höglund claim that inclusive election monitoring boards can help mitigate violence (Opitz, Fjelde, & Höglund, 2013). This relates more broadly to how actors view the integrity of elections. Norris finds that in cases where electoral integrity is

low, violence is more likely (Norris, 2012). All of these studies demonstrate the various ways internal factors can lead to electoral violence.

An additional internal factor concerns electoral systems. These systems make up the rules needed for translating votes cast into seats received. Scholars argue that these rules can be conflict permitting under certain conditions. The major debate is around plurality systems, where the winner-takes-all, versus proportional systems, where the spoils are shared. Sara Birch finds that winner-takes-all systems provoke election violence, and must be avoided in contexts where political competition is already contentious (Birch, 2005). Electoral systems fit into an institutional approach to election violence. Section 3 below explains this approach, and the role of electoral systems in greater detail.

Beyond electoral systems, majority-rules institutions in general tend to correlate with violence and instability. A major finding in this regard comes from differences between presidential and parliamentary systems. These systems define the nature of the relationship between the executive and the legislative branches of government. Similar to majoritarian/plurality electoral systems, presidential rules tend to abide by a winner-takes-all formula. Many like Juan Linz argue for the perils of presidentialism in struggling democracies, largely because of these rules, and the powers afforded to single individuals in presidential systems (Linz, 1996). However, others argue that the distinction between presidential and parliamentary systems is not always clear-cut, and transitioning from one to another can be highly destabilizing (Mainwaring & Shugart, 1997). These sources of instability, and the differing stakes of electoral competition under

presidential or parliamentary systems are important internal contexts when studying election violence.

Escalatory Triggers

Internal and external conditions alone are not enough to create violence, which normally requires a trigger to emerge. The intersection between structural and internal causes can occur through the various escalatory dynamics associated with electoral violence. Sisk and Spies note that electoral violence is related to stakes, expectations, outcomes, and incentives (Sisk & Spies, 2009). Certain external structures (like neo-patrimonialism) can produce expectations that, when threatened, can serve as a source of escalation.

Violence is also linked to expectations. In cases where outcomes are unclear, certain candidates may find violence attractive. This is especially true when challenged incumbents receive information suggesting they will lose (Hafner-Burton, Hyde, & Jablonski, 2014). Clear outcomes can also lead to electoral violence. When parties or actors expect exclusion from political power, violence offers a way "to either prevent their exclusion or to prevent the election's success" (Sisk & Spies, 2009).

A final escalatory dynamic involves incentives. Incentives deal with how the rules of the game rewards certain behaviors or actions in the electoral process (Sisk & Spies, 2009). Depending on the context, different institutions may encourage ethnic entrepreneurs and ethnic outbidding, or force party leaders to reach across identity groups for support (Horowitz, 1985; Sisk & Spies, 2009). The former often leading to electoral violence, and the latter more inclusive politics.

The literature on general factors and conditions is highly valuable, but tends to ignore the analytical importance of violence timing. In doing so, it becomes difficult to accurately aim interventions meant to prevent election violence. One of the contributions of this study is its attention to the differences in election violence timing, so it is useful to now turn towards the most recent work looking at this.

Pre-Election Violence

Studies focusing on the causes of pre-election violence tend to emphasize the role of violence in influencing outcomes through voter intimidation. Recognizing that motives are empirically difficult to measure, a large portion of pre-election theory agrees that violence is employed to alter voter behavior and/or turn-out (Burchard, 2015). The theory is closely tied to the consequences of winning and losing elections. In cases where the overall closeness or competitiveness of elections is high, violence is more likely. Höglund (2009), Straus and Taylor (2012) and Hafner-Burton et al (2014) all find that when the closeness of elections increases the likelihood of violence in pre-election periods also increases. Incumbents are often unwilling to vacate the benefits of office, and will result to violence if deemed necessary. This argument is consistent with the findings from Taylor, Pevehuse, and Straus (2017), Straus and Taylor (2012), and Fjelde and Höglund (2016) who all explain that pre-election violence is primarily perpetrated by incumbents (Taylor et al., 2017).

Another line of thinking emphasizes exclusion as a cause of violence, often from ethnic minorities or restricted political opposition. Here, the focus is on non-state actors

(like opposition groups), and how the fear of exclusion can lead to violent outbursts in pre-electoral periods (Wilkinson, 2006).

Finally, the presence of international monitors has the potential to incite election violence in the pre-electoral period. Specifically, Daxecker finds that successful punishment of election fraud has provoked domestic elites to shift “violent manipulation” to the pre-election period to “avoid negative publicity and punishment” (Daxecker, 2014, p. 232). Interestingly, these higher levels of pre-violence coincide with less violence during elections and in the post-election period. These findings contrast with a study from Hannah Smidt, who argues that the effect of international observers is only apparent when controlling for perpetrator type (Smidt, 2016). She finds that while observers can deter government forces, they can actually provoke opposition groups into using violence (Smidt, 2016).

Even though pre-election violence is understood as a unique and important category of electoral violence more broadly, scholars readily admit that “the causes and consequences of pre-election violence are poorly understood” (Daxecker, 2014, p. 233).

Election Day

There is less literature around violence on election day(s), but it still warrants review. Fischer explains that violence on election day occurs when rivalries play out at the ballot box. For example, supporters of the opposition party and the ruling party in Yemen began arguing at counting centers, and resorted to violence when the dispute escalated (Fischer, 2002).

Most of the theory around violence on election day is similar to the dynamics of pre-election violence. Daxecker explains that in both cases, actors are aiming to influence outcomes through voter suppression (Daxecker, 2014).

Post-Election Violence

The final time under review concerns the post-election period and violence. Both Burchard and Daxecker explain that post-election violence has a long history of theoretical studies (Burchard, 2015; Daxecker, 2012). Smidt explains that the basic theory around post-electoral violence can be divided between governments and opposition groups. The governments are primarily concerned with deterring and suppressing dissent, while opposition groups engage in violence "as a form of protest against fraud, repression, unfavorable outcomes and socio-economic grievances" (Smidt, 2016, p. 227). There are many studies and empirical cases to support these distinctions. For example, after the disputed 2001 elections in Chad, opposition supporters took to the streets in protest, and were "violently dispersed by government security forces" (Fischer, 2002, p. 13). The violence in Kenya and Nigeria is also linked to post-election dynamics.

In this section, I argued for a clearer definition of election violence, and for the need to separate causes based on timing. I now turn to the theoretical argument underpinning my statistical analysis around electoral systems and election violence.

III. Conceptual Orientation

The main theoretical components of my analysis are rooted in a largely neo-institutional orientation, but also emphasize the importance of actor mobilization for violence to occur. This section is devoted to explaining the many ways electoral violence is possible under unique electoral institutional settings. In particular, the focus is on electoral systems.

Institutions

The emphasis on electoral system design stems from a neo-institutional perspective. Put broadly, institutions make up the various rules, norms, and structures that constrain the behaviors of different actors (Miller, 2011). Crucially, these rules and norms can be formally codified, or informally recognized (Helmke & Levitsky, 2004). Elections, the electoral systems that define their scope, and the myriad set of processes, rules, and structures in states all fall within the scope of institutions. When studying electoral violence, it is useful and necessary to consider the institutional settings that either provoke, permit, or constrain the emergence of violence.

This form of institutionalism comes from March and Olsen's seminal work on institutions (March & Olsen, 1984). Here, the authors depart from the idea that institutions simply mirror society, or act only as an arena for actors to exercise rational

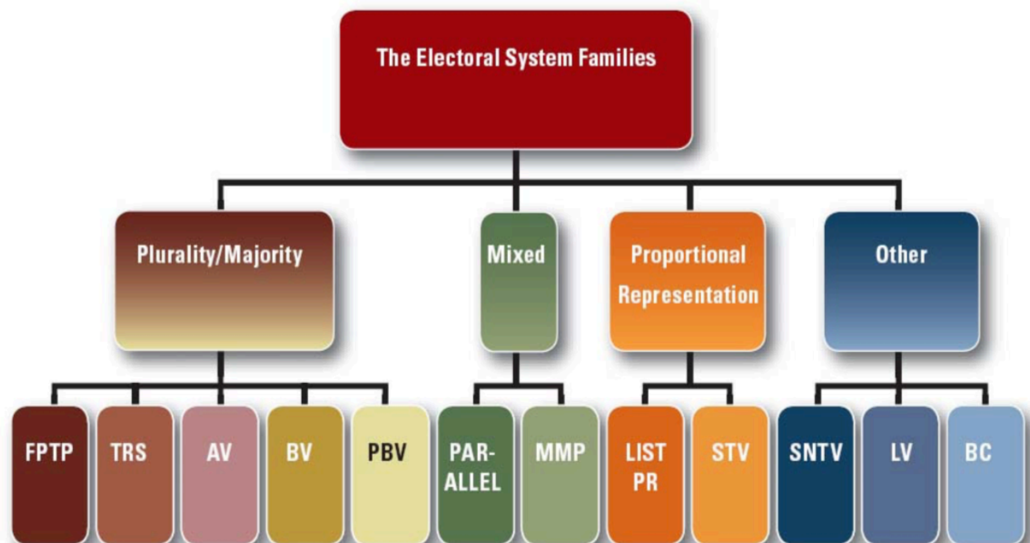
choice (though rational choice is still important). They argue instead for a logic of appropriateness, where institutions organize "acceptable" behavior (March & Olsen, 1984). Scholars hardly debate the significance of institutions anymore, with most of the focus on the extent, processes, and conditions that make institutions important (March & Olsen, 2011). Elections offer a means for democracies to peacefully transfer power, and strengthen the legitimacy of governments (Diamond, 2006). Considering the importance of elections for democracies, the rules that define appropriate behavior towards elections are equally vital.

Electoral systems are the main formal institution covered in this study. By settling on electoral systems, I am questioning whether the specific types of rules in electoral processes are more conducive to violence than others. Taagapera likens electoral systems to containers. Though the contents are frequently more interesting, if the containers "leak, crack, overflow or corrode, they do affect the outcome" (Taagepera, 1998). Electoral systems are the backbone of elections, and any related study should consider their role. An institutionalist framework helps demonstrate the importance of electoral systems (which goes beyond that of a container). While a single system is unlikely to cause violence alone, different types may provoke more violence under certain conditions than others. Following Fjelde and Höglund, as well as a number of African scholars and experts in the region, I also consider the role of neo-patrimonialism as an informal institution. How actors perceive the relationship between formal and informal institutions structures the types of actions and behaviors available.

Electoral Systems

On the most basic level, electoral systems make up the "set of rules that structure how votes are cast at elections… and how these votes are then converted into seats" (Michael Gallagher & Paul Mitchell, 2018). They exist as the formal rules of the electoral game. Many different options of electoral systems are available, but most fall into one of three distinct families: Plurality/Majoritarian, Proportional Representation, and Mixed. Figure 3.1 displays a summary of the electoral system families (adapted from: Menocal, 2011). Proportional representation (PR) systems are those most carefully designed to "match the percentage of votes cast… with the percentage of seats gained," while plurality or majoritarian systems are based on either the principle of plurality, or simple majority rule (Sisk, 2017). Mixed systems feature elements of both, and are harder to classify.

Figure 3.1: Electoral System Families



This classification of electoral systems is more based on *mechanics,* rather than *outputs*. Outputs look at the process of transferring votes into seats, and classify systems based on either proportional, or non-proportional outcomes (Farrell, 2011). Conversely, mechanics classifications focus more on *how* the process creates such outcomes. It relies on three measurements: district magnitude, electoral formula, and ballot structure (Farrell, 2011). Of these three, district magnitude (M) deserves special attention. Among election specialists, there is "near-universal agreement" that district magnitude is the "crucial determinant of an electoral system's ability to translate votes cast into seats won proportionally" (ACE, 2019). District magnitude refers to the size of constituencies in terms of the total number of seats available. For example, in a district with a magnitude of 1 (a single member district), there is only 1 available seat for candidates to win (increasing the percentage of votes needed). In districts with higher magnitudes, the percentage of votes needed to win a seat is less (if M = 6, there are six seats available, allowing voters to achieve more proportional outcomes).

From an institutional perspective, elections and electoral systems are greatly significant. Electoral systems are highly visible institutions. They are also one of the most exploitable aspects of society. New democracies often adopt particular types of systems to maximize prospects for consolidation, and ease tensions during transitions (Reynolds, 1999). However, actors often view elections as a way to "manipulate the system and structures" for personal gain, normally at the expense of others (World Bank, 2018, p. 147). It is therefore important to consider how different types of electoral systems influence the behavior of those participating in the overall electoral process.

Effects of Electoral Systems

Institutional perspectives emphasize the importance of electoral systems in unique ways. Some consider how the type of system influences parties. Maurice Duverger was one of the first to look at how institutions around elections constrain behavior. He found that systems tending towards majoritarian rules often produce two-party systems, while more proportional rules lead to multi-party systems (Taagepera, 2009). Some consider how the institutional rules influence party behavior, political coalitions, and voting behavior (Grofman, 2009; Reilly, 2006).

Others note the importance of electoral systems in deeply divided societies. Thinking back to the causes of election violence, deeply divided societies face an increased risk (Bates, 1983; Salehyan & Linebarger, 2015; World Bank, 2018). A large body of work on electoral systems considers how states with deep-rooted conflict respond to varying electoral rules. Most of the literature here neglects the effects of mixed systems in this area, choosing to focus on proportional representation versus plurality/majoritarian systems.

One school of thought argues that the inclusive nature of the rules in PR systems are best suited for divided societies, particularly in post-conflict settings (Lijphart, 2004; Norris, 2008). Lijphart views PR systems as the best option for avoiding zero-sum politics, and maximizing inclusion (Lijphart, 2004). Reynolds offers further evidence, suggesting that majoritarian systems can impede minority representation (Reynolds, 2010).

On the other side, Donald Horowitz argues that PR systems may encourage the solidification of narrow identities, worsening conflict in the long-run (Horowitz, 2003,

2014). Furthermore, he suggests that the nature of more majoritarian-like rules forces parties to form cross-cutting relationships among disparate (often ethnic) groups. Alonso and Ruiz-Rufino argue that the case for PR is overstated, as it does not always promote minority representation, nor moderate ethnic conflict (Alonso & Ruiz-Rufino, 2007). Most studies tend to emphasize the benefits of PR, though the debate over the effects of electoral systems in this context is still relevant. More generally, it demonstrates the importance of institutions.

While electoral systems matter, it is important to recognize that they are not solely attributable to the many effects described above. Variation and debate found in the literature shows that this is true (Horowitz, 2003; Lijphart, 2004). Bogaards admits that even with the numerous studies arguing for the adoption of proportional representation, there is little statistical evidence that it actually contributes to more inclusive political institutions (Bogaards, 2013). His conclusion does not mean the PR systems are less inclusive, just that additional study is warranted. Electoral systems exist as a series of tradeoffs, not as a "panacea for all ills" (Reynolds, 1999; Sisk, 2017). Sisk notes that a durable finding from Gallagher and Mitchell (2008) is that "no electoral system can maximize all the desirable outcomes that should flow from an electoral process" (Sisk, 2017). Therefore, electoral systems should be considered alongside other structures and institutions to determine their effects (Reynolds, Reilly, & Ellis, 2005). In the context of election-related violence, researchers must consider how electoral systems interact with a multitude of other conflict causes. However, these institutions likely play a significant role.

Mobilization in Electoral Processes

A final, brief consideration regarding electoral violence deals with actor agency and mobilization. As previously noted, the formal rules outlined by electoral systems can influence party formation, general inclusion in the political system, and even the nature of group interactions. All of these factors play a role in who will perpetrate violence, and how it will take place. Regardless of the various incentives to perpetrate violence, electoral violence is not possible without willing agents. Sisk and Spies note that while individual acts are possible, most forms of chronic violence require "extensive organization and mobilization" (Sisk & Spies, 2009). Mobilization in electoral processes is a natural part of the cycle, and normally an aspect of acceptable democratic conflict. However, in cases where violent elections are likely, mobilization dynamics act as a driving force for conflict. Furthermore, the dynamics behind actor agency and mobilization stem from interactions between institutions like electoral systems, and the various factors involved in promoting violence.

Mobilization is closely related to both the causes of electoral violence, and electoral institutions. In cases where party leaders, elites, or individuals face incentives to commit violence, they often require larger mobilization or collective action to achieve their goals. Klaus and Mitchell explain that most studies tend to overlook mobilization dynamics. They also argue that local grievances play a key role in mobilization (Klaus & Mitchell, 2015). The authors focus primarily on elite mobilization of the masses around land issues, but offer useful insight into general elite mobilization. They find that mobilizing violence around land grievances is only possible when constituents perceive an imminent threat to current land rights, *and* an opportunity to strengthen those rights

(Klaus & Mitchell, 2015). Applying this analysis more generally to grievances demonstrates how institutions factor into mobilization. Leaders or ethnic entrepreneurs that build on existing grievances will be able to mobilize actors based on perceptions of exclusion and potential loss. If the electoral rules of the game strongly emphasize winners and losers, elites (both incumbents and challengers) may find it easier to mobilize groups for violence. Conversely, if PR systems actually solidify group identities like Horowitz and others suggest, there may exist greater opportunities to summon mass support from distinct groups. These unclear relationships warrant further study.

Other important considerations around mobilization deal with the conditions necessary for other actors to perpetrate violence. In contexts where systems promote distrust among voters with the electoral process (and fraud is noted), mass mobilization and violent resistance to state authority becomes more likely (Sisk & Spies, 2009).

Theoretical Argument

Scholars are beginning to test the effects of electoral systems on election violence, much like the work on conflict more broadly. In an earlier theoretical study, Höglund echoes Lijphart, arguing that the winner-take-all style of majoritarian systems is conflict inducing (Höglund, 2009). She follows this up (alongside Hannah Fjelde) with a large quantitative study over the relationship between electoral systems and election related violence in sub-Saharan Africa. The results of the second study relatedly demonstrate that majoritarian voting rules and fewer elected legislatures are more frequently associated with electoral violence (Fjelde & Höglund, 2016). These two studies indicate that

proportional representation may act as an institutional constraint on election violence. As such, it is possible to derive the first hypothesis:

Hypothesis 1: States with majoritarian electoral systems are at an elevated risk for election violence overall.

This hypothesis can be further sub-divided based on the timing of violence. A major limitation of Fjlde and Höglund's study is a lack of timing dynamics (Fjelde & Höglund, 2016). During their tests, they fail to account for the period on the election cycle that violence occurred. Newer datasets exist that include temporal data, as well as more specific data on the type of electoral violence and the dyadic relationship between victims and offenders (Birch & Muchlinski, 2017). This study will attempt to test Fjelde and Höglund's conclusions against this new data.

Studies on coalition formation and violence helps further extend the theory around electoral systems and the timing of violence. Again, focusing on proportional vs majoritarian systems Pippa Norris explains that the timing of coalition formation is an important distinction between the two groups (Norris, 1997). In majoritarian systems, parties must engage in cross-group support to win elections, but can avoid any conflict from coalition formation in the aftermath of elections. Conversely, PR systems often require parties to form coalitions after elections (Norris, 1997).

Each system has distinct trade-offs. Majoritarian rules tend to produce stable systems, and give voters a clearer picture of electoral outcomes. The downside here is that minority groups are more easily excluded. With PR systems, outcomes are less clear,

and coalition building can create tension. However, minority groups are better represented. Given these distinctions, I propose an additional hypothesis:

Hypothesis 2: The probability of pre-electoral violence is greater with majoritarian systems, while PR systems lead to a higher likelihood of violence in post-electoral periods.

Violence during elections is more commonly attributed to the stakes of competition. Given the consequences of losing are higher in majoritarian systems, I formulate one additional hypothesis:

Hypothesis 3: The likelihood of violence during election days is higher in majoritarian systems.

Along with the effects of formal institutions, I also investigate the role of informal institutions. The prominence of neo-patrimonial relationships is well-documented throughout sub-Saharan Africa (Chabal & Daloz, 1999; Fjelde & Höglund, 2016; Höglund, 2009; Lodge, 2014). These relationships make up an important informal institution that structures many socio-economic interactions. Furthermore, patron-client relationships are highly political, and can change based on the composition of elected officials (Fjelde & Höglund, 2016). States that rely more on neo-patrimonial systems are therefore potentially at a higher risk for elections with high-stakes outcomes. As such, it is possible to formulate a fourth hypothesis that tests the prevalence of violence in contexts with powerful underlying informal rules:

Hypothesis 4: The violence inducing effects of majoritarian systems remain when controlling for neo-patrimonialism, which also leads to higher election violence.

Finally, I look at how institutions work in the context of mobilization factors. Neither electoral systems nor neo-patrimonial structures are entirely sufficient causes of electoral violence. Without triggers or explicit mobilizing factors, violence will not occur. Therefore, it is important to look at how systems respond in the presence of mobilizing factors. The presence of election monitors, fraud, and exclusion of ethnics groups are all closely associated with triggers of election violence (Burchard, 2015; Daxecker, 2012, 2014; Fjelde & Höglund, 2016; Smidt, 2016). Given this, I list one additional hypothesis:

Hypothesis 5: Majoritarian systems remain associated with increasing election violence when controlling for mobilization-related factors (fraud, ethnic exclusion).

These five hypotheses are not explicitly challenging significant findings in the literature, but attempt to add nuance to general understandings around election violence. I now turn to a description of the data and methods designed to test each hypothesis.

IV. Data and Methods

To assess the effects of electoral systems on election violence, I use a modified cross-sectional time series dataset based on the Dataset for Countries at Risk for Electoral Violence (CREV).[6] As mentioned previously, this is largely a replication of Fjelde and Höglund (2016), and it incorporates a similar set of variables. Like previous studies, I limit the scope of analysis regionally to Sub-Saharan Africa, and temporally from 1995 to 2013. Limiting the study to this period and location helps control for a number of potential confounding variables like the Cold War, and colonialism.

The CREV includes data on electoral violence from over 600 elections in 101 states, 24 of which are in Sub-Saharan Africa. Table 4.1 summarizes these states and the number of included elections. Data for the CREV comes from the Integrated Crisis Early Warning System (ICEWS), and is compiled automatically (a potential drawback; Birch & Muchlinski, 2017). Countries deemed "fully consolidated," with a Polity IV score of 10 are excluded from the dataset to help center the data around states most "at risk" for electoral violence. Additionally, only states with at least 365 reported events per year (from ICEWS) are included (Birch & Muchlinski, 2017). The limited number of African states in the CREV is a noted drawback, and the results need to be interpreted with this in mind.

[6] This dataset is available online at: https://drive.google.com/drive/folders/1UsooXfTGF57i_UxTNJCV2bJQSM8mjihn?usp=sharing

The main benefit of the CREV is its temporal coverage as well as actor and violence-type differentiation for recorded events. The unit of observation in the version of the CREV is election-month. The dataset records violent events in a 10-month period around elections, helping map events in accordance with the electoral cycle. Additionally, it notes both the type of violence and the actor-dyad involved in the event. Before the CREV, these distinctions were lacking among prominent datasets used for analyzing election violence. The African Electoral Violence Database (AEVD), the Social Conflict Analysis Database (SCAD), and the UCDP GED, all fail to explicitly distinguish events related to elections (Salehyan et al., 2012; Sundberg & Melander, 2013).

Table 4.1: States and Elections

Country	Elections
Angola	2
Burundi	3
Republic of Congo	5
Cote d'Ivoire	6
DR Congo	3
Ethiopia	9
Ghana	7
Guinea	6
Kenya	4
Liberia	5
Malawi	3
Mozambique	3
Namibia	3
Nigeria	8
Rwanda	5
Senegal	7
Sierra Leone	6
South Africa	3
Sudan	3
Tanzania	5
Togo	8
Uganda	6
Zambia	5
Zimbabwe	8
24 States	123 Elections

Dependent Variable

The dependent variable in this study is electoral violence, which is captured through the CREV. To look more precisely at the effects of electoral violence, I control for the timing, actors involved, and type of electoral violence. Theoretically, this fits more closely with the definition presented in section 2. Election violence in a given month is coded as either present or absent. The CREV includes data on the number of violent events during the month, but fails to distinguish the magnitude of each event. Creating a dichotomous violence variable helps standardize the data.

Timing is split between pre-election, election day, and post-election violence. The pre-electoral period includes up to six months prior to an election. Though the pre-electoral period is much longer than six months, going further back than six months risks mixing explicitly political events with those tied to the election. Election-day events include those during the month of the election. The CREV fails to distinguish events by day, instead taking election-months as its unit of observation. Limiting this period to the month of the election is as close to the actual day as the data allows. Finally, the post-electoral period includes the following three months after an election.

I distinguish two main types of actors: state and non-state. The CREV records events between five actor-dyads, though they can be simplified into two types. Rather than sorting by the dyadic-relationships, I choose to shrink actors into two clear groups for model simplicity.

I code events of violence as either threats or attacks. This distinction is present in the CREV. Additionally, coding threats and attacks is in line with the definition of electoral violence explained previously. *Threats* refer to coercion and intimidation, and

attacks refer to physical harm. Furthermore, violence in the *state-based* category is perpetrated by state actors, while the *non-state* category includes violence from non-state actors.

A first look at the data on election violence demonstrates several trends, though none are able to explain sources of causes. Overall, non-state actors perpetrate more electoral violence than state actors. Figure 4.1 shows the total number of events per actor. Looking more closely at the type of violence, state actors are more frequently engage in coercive threats, while non-state actors are more frequently engage in physical attacks. This is shown in Figure 4.2. Widening the scope, and looking at the total number of months each type of actor is engaged, the results are much more similar between the two.

Figure 4.1: Electoral Violence

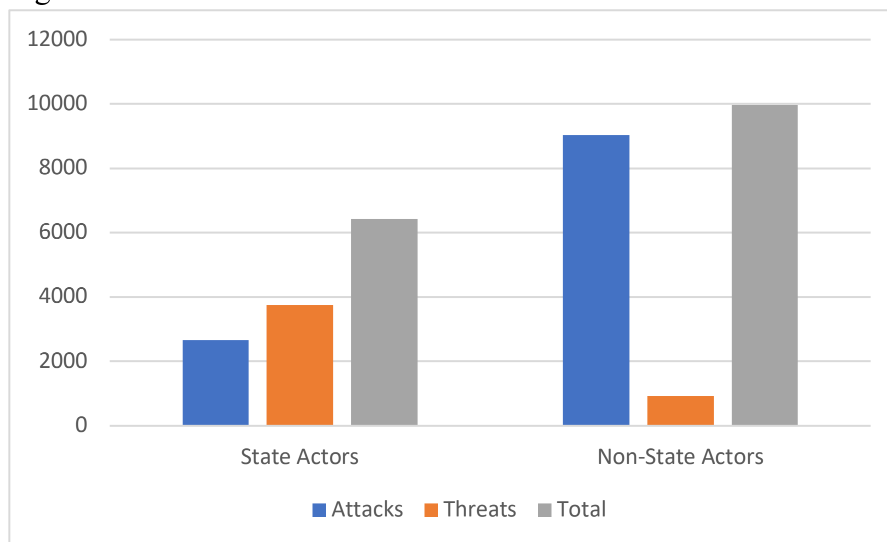


Figure 4.2: Number of Months with Electoral Violence

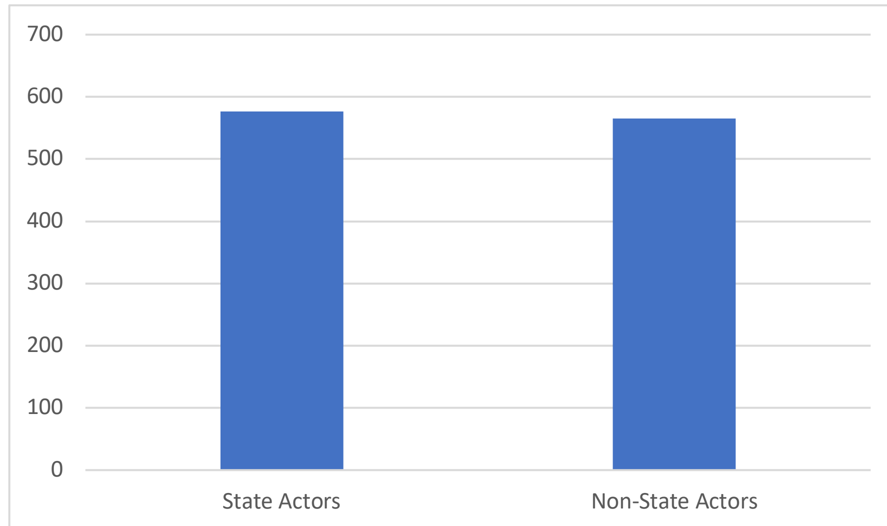


Figure 4.3 shows that election violence has increased over the time-period under review. The level of total violence fluctuates largely, but appears to indicate a slightly positive trend. This trend remains even when controlling for the number of elections in a given year (average violence per election over time). A linear regression on violence over time suggests that the line of best fit does have a marginally positive slope, and is significant at 99 percent. However, there are too many possible confounding variables to verify the accuracy of this trend. For example, the limited number of African states included in the CREV makes estimating the prevalence of violence potentially inaccurate.

Figure 4.3: Yearly Reported Election Violence Events

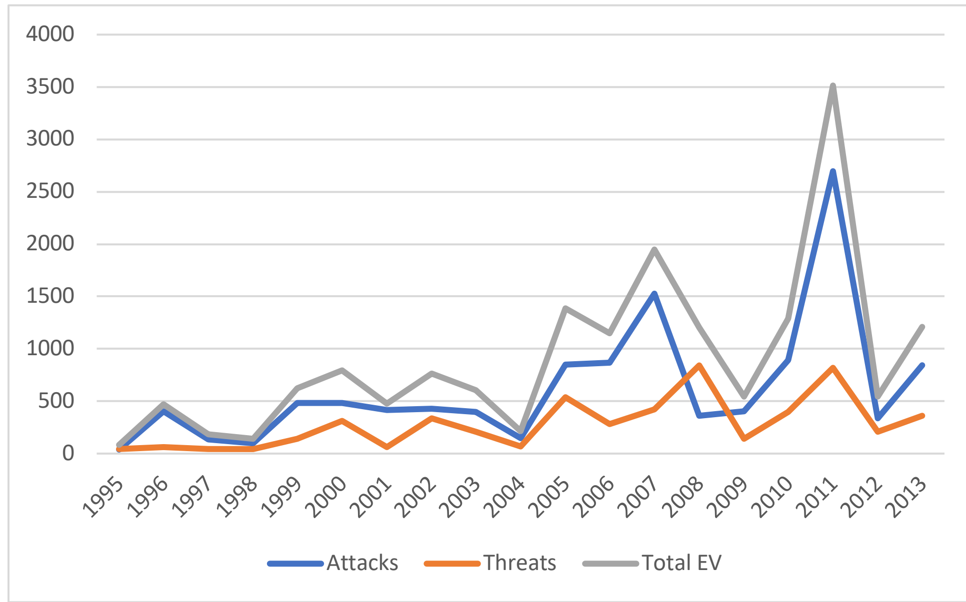
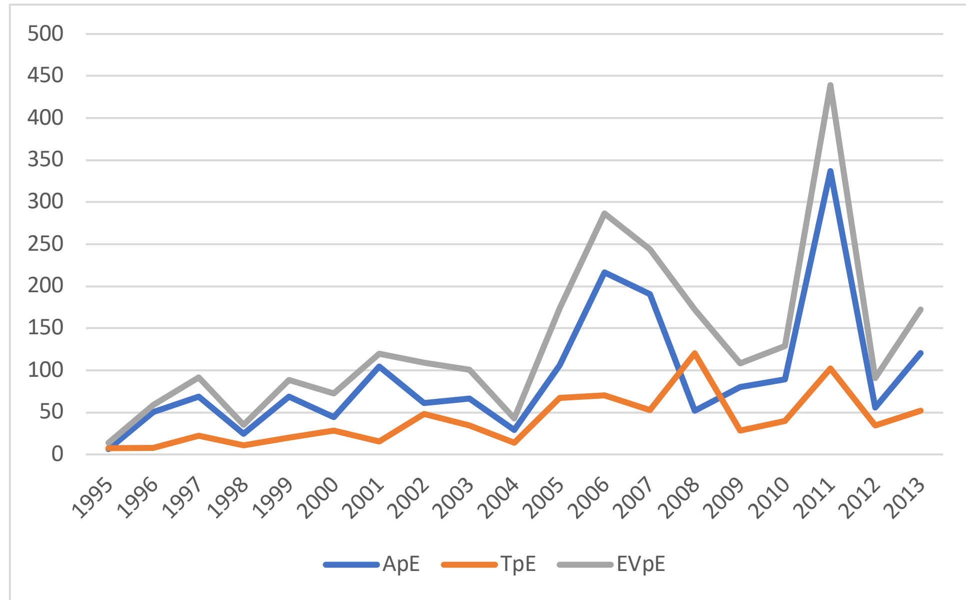


Figure 4.4: Average Yearly Events per Election



Independent Variables

The first set of explanatory variables are directly related to electoral systems, and address the first four hypotheses. Using Institutions and Elections Project (IAEP) data, I

assign an electoral system to each observation. IAEP lists four broad types, majoritarian, plurality, proportional representation, and mixed systems (Wig, Hegre, & Regan, 2015). Given the noted similarities between majoritarian and plurality systems (in both rules and effects), I narrow the options from four to three (Wig et al., 2015). In line with Fjelde and Hoglund (2016), I also include a variable for Mean District Member (MDM) size. This variable is a measure of district magnitude, and helps capture the proportionality present in each system. The MDM measure is taken from the Dataset of Political Institutions (DPI; Cruz, Scartascini, & Keefer, 2018). Figure 4.5 shows the distribution of electoral systems between states across each election.

Looking observationally at how systems and violence correlate gives mixed results. Overall, election violence is most frequent among observations with majoritarian systems. PR systems rank second, and mixed systems have the lowest numbers of violence. Figure 4.6 describes this distribution. However, Figure 4.7 demonstrates how this is misleading. When looking at average levels of violence *per election*, this trend is opposite. Mixed systems appear to be relatively more violent than PR and majoritarian systems, with majoritarian systems featuring the lowest numbers of violent events per election.

Figure 4.5: Distribution of Electoral Systems Among Recorded Elections

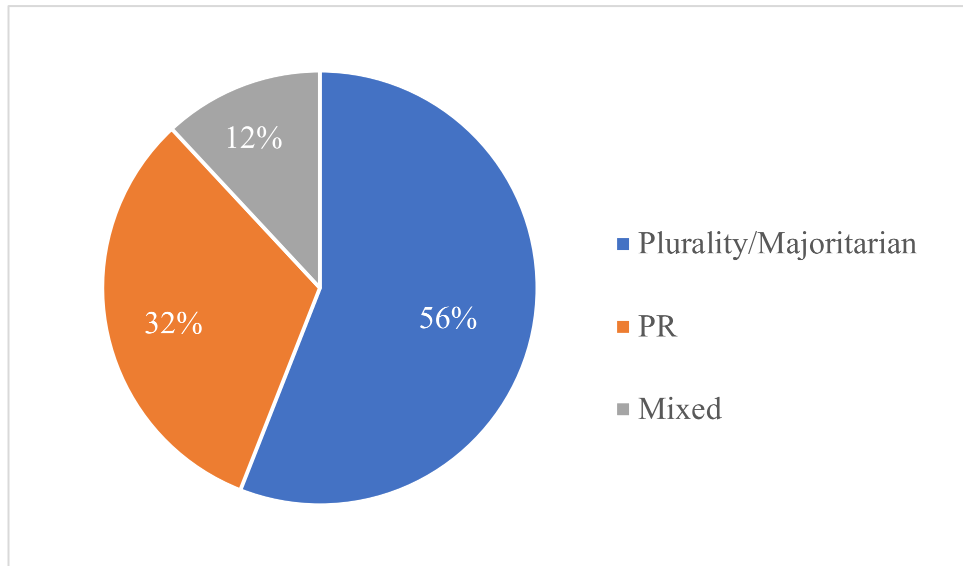


Figure 4.6: Average Election Violence by System Type

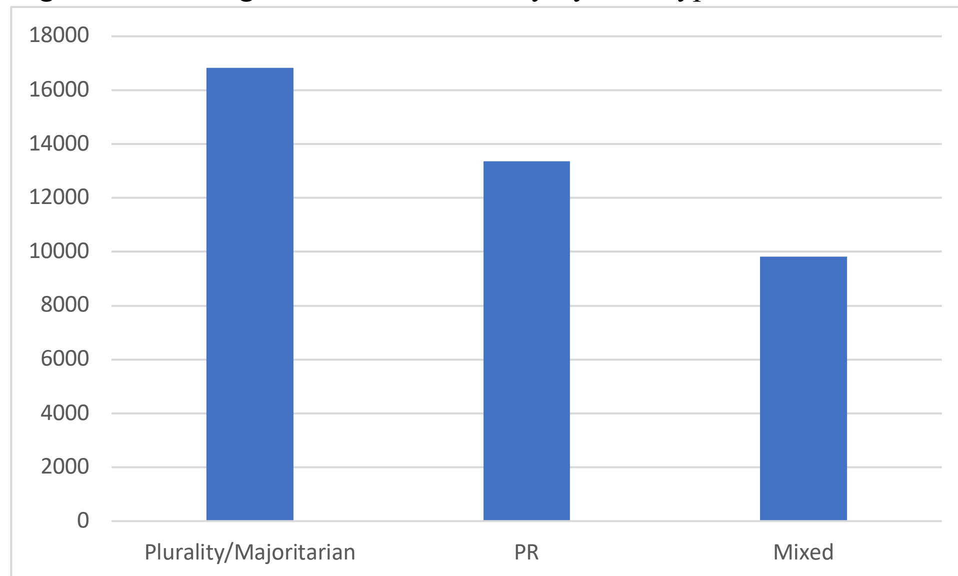
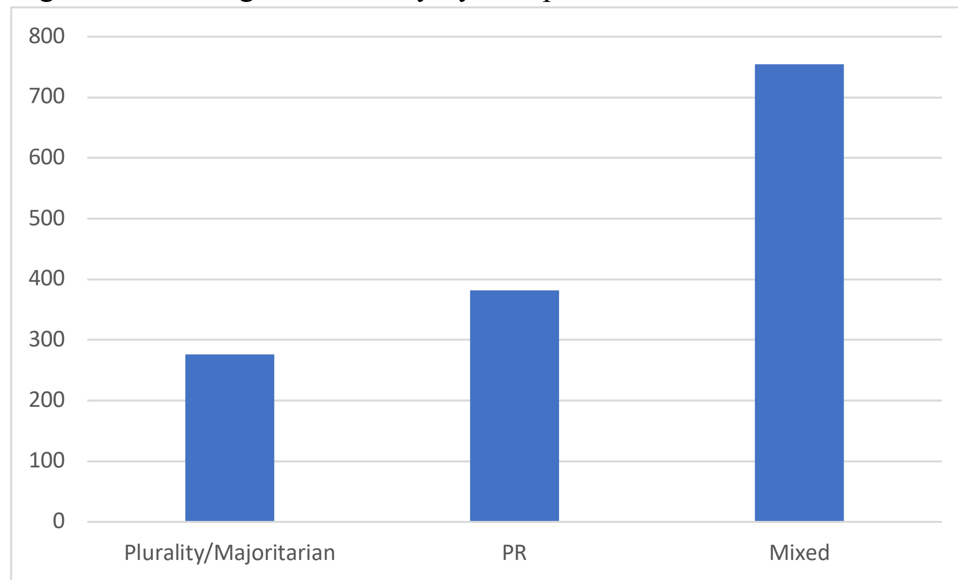


Figure 4.7: Average Violence by System per Election



The fourth hypothesis, which considers the relationship between formal and informal institutions, relies on a measure of neopatrimonialism. The neo-patrimonialism variable comes from the recent work of Rachel Sigman and Staffan Lindberg. In a study for the Varieties of Democracy (V-Dem) Institute, they conclude that neopatrimonialism is not entirely unique in Africa, and can be measured through a combination of different factors like regime corruption and clientelism (Sigman & Lindberg, 2017). I use the neo-patrimonialism variable to control for the prevalence of patron-client relationships in different states.[7]

Finally, I add variables for election fraud, election monitors, and ethnic exclusion to test the fifth hypothesis. Ethnic exclusion comes from the Ethnic Power Relationships (EPR) dataset, and describes the size of the largest politically excluded ethnic group. EPR

[7] The messiness involved in measuring such a variable is a noted limitation and potential drawback with this data.

takes note of ethnic groups that do not engage in political (electoral) competition (Vogt et al., 2015). My ethnic exclusion variable mirrors that from Fjelde and Höglund, and measures the size of the largest excluded group in a given state across observations. Data on election monitors, fraud, and competition comes from NELDA (Hyde & Marinov, 2012).

Control Variables

To make the statistical model as accurate as possible, I have included a number of controls suggested by other related studies. These include population, GDP, armed conflict, and previous election violence. Population and economic development (GDP) statistics are from the United Nations' National Accounts Main Aggregates Database (United Nations, 2017). GDP is measured in purchasing power parity.

Using the UCDP armed conflict dataset, I create a control variable that notes if a state is embroiled in armed conflict in a given observation. I only code events as armed conflicts if two specifications are met. First, the conflict must be intrastate. Interstate conflicts are excluded. Second, the year of observation must reach at least 1,000 battle-related deaths in a given year. Finally, I control for previous experiences with election violence. Controlling for former cases of election violence, I am following the literature on civil war recurrence. Several scholars argue that previous experiences with civil war leads to "conflict traps" strongly affecting the likelihood that conflict will reoccur (Collier & Hoeffler, 2004; Walter, 2004).

Methods

To analyze the potential effects of electoral systems on election violence, I use logistic regressions. The dichotomous nature of the dependent variable necessitates this form of analysis. The results are presented primarily as odds ratios, but also interpreted through marginal effects as probabilities of increasing violence.

V. Results

<u>*Election Violence and Electoral Systems*</u>

The first tests replicate Fjelde and Höglund's analysis, and address the first hypothesis. Overall, the results are similar to Fjelde and Höglund (2016), as majoritarian systems tend to correlate with increasing odds of election violence. Tables 5.1 and 5.2 displays these results with odds-ratios as the main output.

Odds-ratios are notoriously misleading, but offer a sense of whether the odds of achieving success in the dependent variable are more likely to occur. Values greater than 1 indicate that the odds of success increase, while values less than 1 indicate decreasing odds of success. Success here is defined as electoral violence occurring. Continuous variables (like population, GDP, and MDM) use 0 as a baseline of comparison, while categorical variables (the electoral system types) hold one category as the basis of comparison. In each output below, I use majoritarian systems as the reference category.[8]

Additionally, in several cases I look at the marginal effects within different variables to assess the probability of increasing election violence. Given the difficulty associated with interpreting odds-ratios, probability estimates are useful.

In general, majoritarian systems appear more correlated with election violence. This relationship is significant, but not particularly strong. Higher odds of violence

[8] Using different reference categories does not change the results, but can make different parts of the results easier to see. For an example of an output with PR as the reference category see the appendix.

correlate with majoritarian systems from government attacks and threats, and also non-state attacks. Specifically, Model 1 demonstrates that the probability of government attacks in majoritarian systems is nearly 8 percent higher compared to PR systems. Mixed systems correlate with decreasing odds of violence for government threats, and non-state attacks. The effects of population and GDP are relatively insignificant, but tend to correlate with higher chances of violence in a few cases. When controlling for the presence of armed violence during an election, the odds of violence increase for both government and non-state attacks. GDP lacks any significant results for the electoral system models. In every run, the presence of election violence in the previous month significantly correlates with higher odds of violence.

Table 5.1: Electoral Systems & Government Electoral Violence

	State Attacks		State Threats	
	(1)	(2)	(3)	(4)
PR	0.642^{*}		1.202	
	(-2.01)		(0.94)	
Mixed	0.622		0.500^{**}	
	(-1.92)		(-2.91)	
MDM_{log}		0.755^{***}		0.893^{*}
		(-4.07)		(-1.97)
$Population_{log}$	1.263	1.286	1.592^{***}	1.622^{***}
	(1.59)	(1.74)	(3.36)	(3.53)
GDP_{log}	1.295^{*}	1.389^{**}	1.251^{*}	1.163
	(2.27)	(2.63)	(2.19)	(1.38)
Armed Conflict	3.268^{***}	3.636^{***}	1.031	0.921
	(6.07)	(5.98)	(0.16)	(-0.41)

Dep. Var. *t-1*	3.480***	2.920***	2.833***	2.744***
	(6.32)	(5.17)	(6.17)	(5.76)
N	904	852	904	852

Exponentiated coefficients (odds-ratios); *t* statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

As an additional measure, I test each model replacing electoral systems with mean district magnitude (MDM). In the MDM models the results are much more significant. The results (Models 2 and 4 in the first two tables) indicate that smaller district sizes are associated with higher chances of election violence. Figure 5.1 demonstrates the increasing probabilities of districts with a magnitude of 1, compared to larger, multi-member districts. Altogether, these results are consistent with my hypothesis that election violence is more likely among majoritarian systems (hypothesis 1). However, given the effects of MDM, it is more accurate to say that disproportionality among electoral rules associates with a greater risk for electoral violence. The next set of models examines how these results change when controlling for the timing of violence.

Table 5.2: Electoral Systems & Non-State Electoral Violence

	Non-State Attacks		Non-State Threats	
	(1)	(2)	(3)	(4)
PR	0.723		0.720	
	(-1.62)		(-1.06)	
Mixed	0.563^{*}		0.763	
	(-2.57)		(-0.75)	
MDM_{log}		0.798^{***}		0.776^{*}
		(-3.85)		(-2.35)
$Population_{log}$	1.313^{*}	1.240	1.663^{*}	1.327
	(2.00)	(1.63)	(2.37)	(1.45)
GDP_{log}	1.123	1.203	1.098	1.393^{*}
	(1.13)	(1.69)	(0.62)	(2.09)
Armed Conflict	2.951^{***}	3.307^{***}	1.125	1.049
	(5.41)	(5.53)	(0.45)	(0.17)
Dep. Var. *t-1*	4.145^{***}	3.250^{***}	2.543^{**}	2.751^{**}
	(8.67)	(6.95)	(3.24)	(3.15)
N	904	852	904	852

Exponentiated coefficients (odds-ratios); *t* statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Tables 5.3-5.5 display the results of different systems on the prevalence of election violence during each period of the electoral cycle. Overall, differences in electoral systems appear to be relatively insignificant. Majoritarian systems are more highly correlated with violence for government threats and attacks, but only when compared to mixed systems. This is potentially due to the smaller number of PR elections. Theoretically, my hypothesis is more based on comparisons between PR and majoritarian systems, as the theory behind mixed systems as a broad family is less clear. These models still indicate the importance of previous experiences with election violence, and the presence of armed violence.

Figure 5.1: Marginal Effects of Magnitude on Election Violence

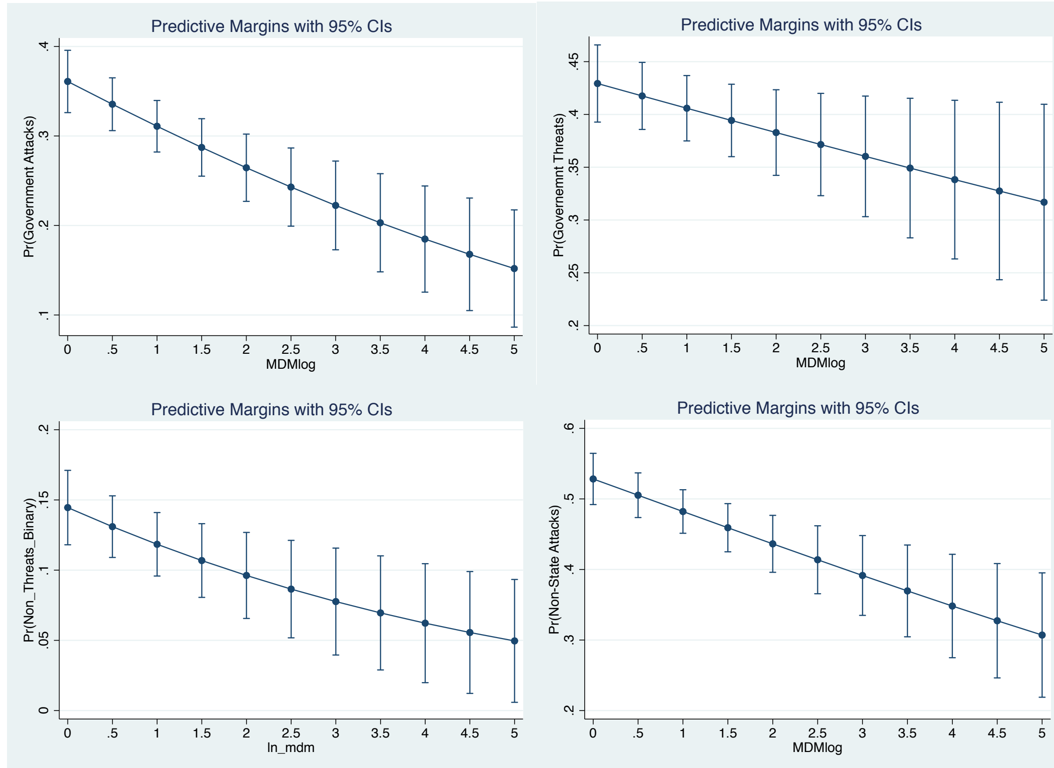


Figure 5.1: The marginal effects of district magnitude demonstrate that as the natural log of MDM increases (when lnMDM = 0, MDM = 1), the probability of violence decreases. This trend is present in each model.

Table 5.3: Electoral Systems and Pre-Election Violence

	State Actors		Non-State Actors	
	Attacks (1)	Threats (2)	Attacks (3)	Threats (4)
PR	0.766	0.964	0.662	0.911
	(-0.94)	(0.24)	(-1.65)	(-0.25)
Mixed	0.822	0.517^{*}	0.731	0.686
	(-0.61)	(-2.11)	(-1.11)	(-0.82)
$Population_{log}$	1.100	1.634^{**}	1.037	1.123
	(0.52)	(2.75)	(0.22)	(0.48)
GDP_{log}	1.433^{*}	1.379^{*}	1.233	1.395
	(2.39)	(2.36)	(1.61)	(1.83)
Armed Conflict	3.503^{***}	1.206	2.535^{***}	1.352
	(5.07)	(0.76)	(3.86)	(0.94)
Dep. Var. *t-1*	5.290^{***}	2.598^{***}	4.858^{***}	2.744^{**}
	(5.62)	(4.13)	(7.20)	(2.58)
N	565	565	565	565

Exponentiated coefficients (odds-ratios); *z* statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5.4: Electoral Systems and Election-day Violence

	State Actors		Non-State Actors	
	Attacks (1)	Threats (2)	Attacks (3)	Threats (4)
PR	0.596	1.779	0.499	0.420
	(-0.83)	(0.97)	(-0.98)	(-0.93)
Mixed	0.290	0.702	0.286	0.402
	(-1.67)	(-0.53)	(-1.60)	(-0.78)
$Population_{log}$	0.871	1.718	1.103	1.606
	(-0.35)	(1.37)	(0.22)	(0.82)
GDP_{log}	1.427	0.876	0.937	0.784
	(1.11)	(-0.44)	(-0.19)	(-0.50)
Armed Conflict	8.699^{**}	0.765	22.03^{**}	1.176
	(3.17)	(-0.45)	(2.77)	(0.22)

Dep. Var. *t-1*	2.465	4.638**	6.710***	3.923
	(1.82)	(3.21)	(3.53)	(1.62)
N	96	96	96	96

Exponentiated coefficients (odds-ratios); *z* statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5.5: Electoral Systems and Post-Election Violence

	State Actors		Non-State Actors	
	Attacks (1)	Threats (2)	Attacks (3)	Threats (4)
PR	0.550	1.195	0.843	0.300
	(-1.50)	(0.51)	(-0.47)	(-1.84)
Mixed	0.460	0.373*	0.323*	0.848
	(-1.57)	(-2.14)	(-2.51)	(-0.26)
$Population_{log}$	1.852*	1.433	1.547	2.061
	(2.24)	(1.51)	(1.78)	(1.90)
GDP_{log}	1.181	1.244	1.115	1.062
	(0.75)	(1.14)	(0.55)	(0.21)
Armed Conflict	2.584*	0.831	3.682***	0.869
	(2.56)	(-0.53)	(3.41)	(-0.30)
Dep. Var. *t-1*	3.468***	3.535***	3.080***	2.662
	(3.42)	(4.11)	(3.72)	(1.95)
N	281	281	281	281

Exponentiated coefficients (odds-ratios); *z* statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Once again, replacing electoral systems with MDM teases out some significant results. Table 5.6 displays the results of mean district magnitude on electoral violence in different periods of the election cycle.[9] Looking at instances of government attacks, MDM is significant for pre-electoral periods. For non-state attacks, MDM is similarly significant in pre-electoral periods, but also in post-electoral periods. The odds of higher

[9] Table 6 excludes "election day" results. The models for this time period featured insignificant results.

violence in pre-election periods is slightly more significant, but the relative effect on the odds of violence is comparable. Moving to the control variables, the results are similar to those found in Tables 5.1 and 5.2. Armed violence tends to correlate with attacks, regardless of timing in the election cycle. Looking at economic development, higher levels of GDP correlate with higher chances of violence in pre-election periods, but more commonly among non-state actors. This result appears counterintuitive, and deserves further explanation in the discussion. Unlike GDP, population is more frequently significant in post-election periods. Similar to the models in Tables 5.2 and 5.3, the effect of the dependent variable is significant and positive.

Table 5.6: District Magnitude and Election Violence

	State Actors				Non-State Actors			
	Attacks		Threats		Attacks		Threats	
Violence Period	Pre (1)	Post (2)	Pre (3)	Post (4)	Pre (5)	Post (6)	Pre (7)	Post (8)
MDM_{log}	0.742**	0.802	0.877	0.849	0.819**	0.782*	0.886	0.588*
	(-3.16)	(-1.76)	(-1.73)	(-1.52)	(-2.69)	(-2.22)	(-0.99)	(-2.02)
$Population_{log}$	1.026	2.407**	1.621**	1.688*	1.041	1.683*	1.058	1.904
	(0.14)	(2.89)	(2.63)	(2.07)	(0.24)	(2.07)	(0.23)	(1.73)
GDP_{log}	1.604**	1.002	1.333	1.044	1.396*	0.968	1.618*	1.237
	(2.86)	(0.01)	(1.96)	(0.21)	(2.38)	(-0.16)	(2.38)	(0.70)
Armed Conflict	3.208***	3.026**	1.126	0.775	2.785***	3.567**	1.464	0.601
	(4.19)	(2.69)	(0.45)	(-0.68)	(3.83)	(3.09)	(1.11)	(-0.98)
Dep. Var. *t-1*	4.327***	3.192**	2.286***	3.947***	3.513***	3.197***	2.858*	2.040
	(4.63)	(3.08)	(3.47)	(4.22)	(5.55)	(3.71)	(2.40)	(1.42)
N	511	255	511	255	511	255	511	255

Exponentiated coefficients (odds ratios); *z* statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
No election-day model is significant

Election Violence and Informal Institutions

To test the effects of informal institutions, I control for levels of clientelism, a main feature of neo-patrimonial systems. Informal institutions are important to consider alongside the formal electoral rules. As an additional condition, I am testing whether or not the degree of clientelism in government matters for election violence. The literature suggests that higher levels of clientelism (neo-patrimonialism), alongside majoritarian systems, will correlate with increasing election violence.

Table 5.7 displays the results of four models using electoral systems as an explanatory variable. Compared to mixed systems, the odds of violence (when controlling for informal institutions) are higher under majoritarian systems in all cases but non-state threats. The trends for armed conflict and previous election violence are consistent with previous models. Clientelism is insignificant in each model.

Table 5.7: Electoral Systems, Informal Institutions, and Election Violence

	State Actors		Non-State Actors	
	Attacks (1)	Threats (2)	Attacks (3)	Threats (4)
PR	0.732	1.229	0.680	0.641
	(-1.45)	(1.07)	(-1.96)	(-1.51)
Mixed	0.595*	0.473**	0.552**	0.646
	(-2.10)	(-3.15)	(-2.66)	(-1.24)
Clientelism	0.238	0.441	1.430	0.338
	(-2.53)	(-1.57)	(0.70)	(-1.44)
$Population_{log}$	1.332*	1.601***	1.168	1.420
	(1.97)	(3.48)	(1.21)	(1.84)
GDP_{log}	1.266*	1.251*	1.169	1.161
	(2.02)	(2.16)	(1.54)	(0.99)
Armed Conflict	3.482***	1.032	3.092***	1.208

	(6.50)	(0.17)	(5.79)	(0.77)
Dep. Var. *t-1*	3.550***	2.894***	4.044***	2.596***
	(6.44)	(6.32)	(8.58)	(3.31)
N	942	942	942	942

Exponentiated coefficients (odds-ratios); *z* statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5.8 runs a variant of the same models in Table 5.7, but with MDM replacing electoral system type. Like the first few tables, higher MDM sizes are correlated with greater odds of election violence. Because patrimonial tendencies alone are not sufficient for provoking violence, I run one further test, controlling for levels of ethnic exclusion. Interestingly, the presence of clientelism is associated with higher odds of violence for non-state attacks with the addition of ethnic exclusion. This model is shown in Table 5.9.[10]

Table 5.8: District Magnitude, Informal Institutions, and Election Violence

	State Actors		Non-State Actors	
	Attacks (1)	Threats (2)	Attacks (3)	Threats (4)
MDM_{log}	0.747***	0.893*	0.798***	0.759*
	(-4.10)	(-1.97)	(-3.85)	(-2.44)
Clientelism	0.244	0.819	0.980	0.207
	(-2.45)	(-0.39)	(-0.04)	(-2.00)
$Population_{log}$	1.327	1.630***	1.240	1.360
	(1.88)	(3.53)	(1.63)	(1.54)
GDP_{log}	1.345*	1.158	1.202	1.317
	(2.33)	(1.33)	(1.68)	(1.68)
Armed Conflict	3.904***	0.929	3.309***	1.210
	(6.25)	(-0.36)	(5.53)	(0.69)
Dep. Var. *t-1*	2.898***	2.745***	3.250***	2.709**
	(5.11)	(5.76)	(6.95)	(3.09)

[10] The full set of models with the additional of ethnic exclusion are available in the appendix.

N	852	852	852	852

Exponentiated coefficients; *z* statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5.9: Electoral Systems, Informal Institutions, and Ethnic Exclusion

	State Actors		Non-State Actors	
	Attacks (1)	Threats (2)	Attacks (3)	Threats (4)
PR	0.574*	0.962	0.391***	0.386*
	(-2.05)	(-0.15)	(-3.63)	(-2.31)
Mixed	0.843	0.657	0.412*	0.678
	(-0.40)	(-1.08)	(-2.24)	(-0.65)
Clientelism	0.471	0.731	4.366*	0.221
	(-1.11)	(-0.49)	(2.29)	(-1.46)
Ethnic Exclusion	0.153	1.058	0.754	0.0282
	(-2.46)	(0.09)	(-0.46)	(-2.40)
$Population_{log}$	1.022	1.449*	1.028	1.068
	(0.15)	(2.51)	(0.20)	(0.31)
GDP_{log}	1.579**	1.395*	1.246	1.386
	(3.24)	(2.56)	(1.70)	(1.79)
Armed Conflict	2.739***	1.057	2.372***	1.175
	(4.49)	(0.25)	(3.66)	(0.59)
Dep. Var. *t-1*	3.098***	3.889***	5.129***	1.805
	(4.51)	(5.81)	(7.21)	(1.54)
N	603	603	603	603

Exponentiated coefficients (odds-ratios); *z* statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

I also test the effect of informal institutions during different election-periods. The results of these tests are largely insignificant, expect for non-state attacks in the pre-election period (for both systems and MDM). Majoritarian systems correlate positively with violence, PR systems correlate negatively, and district magnitude is associated with

less violence as the size increases. Table 5.10 displays these models. A full list of tables is available in the appendix.

Table 5.10: Electoral Institutions, Informal Institutions, and Pre-Election Violence

	State Actor Attacks		Non-State Actor Attacks	
	(1)	(2)	(3)	(4)
PR	0.817		0.601^{*}	
	(-0.70)		(-2.01)	
Mixed	0.802		0.769	
	(-0.68)		(-0.92)	
MDM_{log}		0.727^{**}		0.820^{**}
		(-3.24)		(-2.66)
Clientelism	0.226^{*}	0.197^{*}	4.985^{*}	2.748
	(-2.01)	(-2.14)	(2.47)	(1.56)
$Population_{log}$	1.164	1.045	1.000	1.037
	(0.80)	(0.22)	(-0.00)	(0.21)
GDP_{log}	1.353	1.557^{**}	1.277	1.416^{*}
	(1.95)	(2.62)	(1.86)	(2.47)
Armed Conflict	3.549^{***}	3.533^{***}	2.528^{***}	2.720^{***}
	(5.10)	(4.46)	(3.83)	(3.71)
Dep. Var. *t-1*	5.404^{***}	4.450^{***}	4.841^{***}	3.470^{***}
	(5.65)	(4.68)	(7.16)	(5.49)
N	565	511	565	511

Exponentiated coefficients; *z* statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Election Violence and Mobilization

A final set of tests consider electoral systems in the context of mobilizing factors. Table 5.11 looks at this broadly, and shows that majoritarian systems are associated with higher chances of violence for government and non-state attacks (compared to PR). Looking at the marginal effects, the probability of election violence (state-led attacks) is nearly 10 percent higher in majoritarian systems compared to PR or mixed. This difference is greater than the models excluding mobilization factors. Fraud also correlates with increasing violence for government threats and non-state attacks. For government threats, the presence of international election observers is correlated with greater chances of violence. The competitiveness of elections is generally insignificant, except for non-state attacks. Here, increasing competitiveness decreases the odds of violence. Armed violence and the lagged dependent variable retain effects seen in the previous models.

Running the same tests for district magnitude demonstrates that every model except for non-state threats features declining odds of violence as magnitude increases. The only other difference is that competitiveness loses significance. These results are on display in Table 5.12.

Finally, I look at mobilization factors in the context of timing, and find that there are key differences between pre and post-electoral periods. Table 5.13 displays the results of mobilization factors in pre-electoral periods. This table shows results for MDM runs as the models including systems lack significance. In pre-election periods, government attacks and threats, and non-state attacks have greater chances of emerging as reports of election fraud increase. Interestingly, the presence of election monitors leads to more

government threats. However, this is possibly a reporting effect, where more violent threats are reported because international monitors are present to report such events.

Table 5.11: Electoral Institutions, Mobilization, and Violence

	Government Actors		Non-State Actors	
	Attacks (1)	Threats (2)	Attacks (3)	Threats (4)
PR	0.597*	1.218	0.700	0.562
	(-2.19)	(0.95)	(-1.68)	(-1.60)
Mixed	0.575	0.472*	0.691	0.935
	(-1.77)	(-2.47)	(-1.39)	(-0.15)
Fraud	1.527	2.183***	2.202***	1.301
	(1.84)	(3.79)	(3.69)	(0.85)
International Monitors	1.274	1.894*	1.252	2.125
	(0.71)	(1.96)	(0.77)	(1.30)
Competitive	0.835	1.251	0.440*	1.378
	(-0.56)	(0.77)	(-2.51)	(0.66)
Ethnic Exclusion	0.992	0.994	0.990*	0.994
	(-1.36)	(-1.20)	(-2.07)	(-0.64)
$Population_{log}$	1.032	1.213	0.939	1.444
	(0.17)	(1.19)	(-0.39)	(1.35)
GDP_{log}	1.258	1.207	1.253	1.084
	(1.67)	(1.59)	(1.86)	(0.45)
Armed Conflict	3.515***	1.495	3.663***	1.246
	(5.42)	(1.76)	(5.55)	(0.68)
Dep. Var. *t-1*	3.161***	2.534***	3.535***	2.427**
	(5.44)	(5.16)	(7.26)	(2.80)
N	800	800	800	800

Exponentiated coefficients; *z* statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 5.12: District Magnitude, Mobilization, and Violence

	State Actors		Non-State Actors	
	Attacks (1)	Threats (2)	Attacks (3)	Threats (4)
MDM_{log}	0.739^{***}	0.860^{*}	0.763^{***}	0.818
	(-3.81)	(-2.26)	(-3.94)	(-1.67)
Fraud	1.451	2.235^{***}	2.081^{***}	1.212
	(1.56)	(3.80)	(3.34)	(0.59)
International Monitors	1.121	2.452^{**}	1.052	1.656
	(0.35)	(2.87)	(0.18)	(0.90)
Competitive	1.002	0.961	0.546	1.412
	(0.01)	(-0.12)	(-1.68)	(0.69)
Ethnic Exclusion	0.996	1.002	0.991	0.998
	(-0.70)	(0.30)	(-1.67)	(-0.19)
$Population_{log}$	1.099	1.190	1.052	1.484
	(0.50)	(1.01)	(0.30)	(1.41)
GDP_{log}	1.292	1.187	1.260	1.139
	(1.86)	(1.44)	(1.90)	(0.73)
Armed Conflict	4.585^{***}	1.299	4.828^{***}	1.392
	(5.95)	(1.09)	(6.26)	(0.96)
Dep. Var. *t-1*	2.886^{***}	2.457^{***}	3.108^{***}	2.485^{**}
	(4.94)	(4.89)	(6.39)	(2.78)
N	763	763	763	763

Exponentiated coefficients (odds-ratios); *z* statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The only notable effect of ethnic exclusion is that non-state attacks actually decrease when the size of the largest excluded group increases. However, the odds-ratio is nearly 1 (meaning the chances of increasing or decreasing violence are close to equal), and both positive and negative effects fall within the 95% confidence interval.

The post-election period similarly displays that larger districts are associated with less violent elections, but the other mobilization variables lose their significance. This table is available in the appendix.

Table 5.13: District Magnitude, Mobilization, and Violence in Pre-Election Periods

	Government Actors		Non-State Actors	
	Attacks (1)	Threats (2)	Attacks (3)	Threats (4)
MDM_{log}	0.761*	0.807*	0.809*	0.935
	(-2.46)	(-2.32)	(-2.46)	(-0.49)
Fraud	2.016*	2.286**	2.416**	1.514
	(2.11)	(2.92)	(3.03)	(0.94)
International Monitors	1.180	3.539**	0.786	1.000
	(0.36)	(2.63)	(-0.67)	(0.00)
Competitive	0.917	0.927	0.539	1.483
	(-0.19)	(-0.18)	(-1.41)	(0.61)
Ethnic Exclusion	0.984	1.004	0.981**	0.996
	(-1.87)	(0.60)	(-2.70)	(-0.33)
$Population_{log}$	0.756	1.140	0.887	0.945
	(-1.12)	(0.56)	(-0.55)	(-0.17)
GDP_{log}	1.560*	1.378*	1.522**	1.348
	(2.35)	(1.98)	(2.63)	(1.33)
Armed Conflict	4.904***	1.673	3.989***	2.346*
	(4.63)	(1.58)	(4.37)	(2.03)
Dep. Var. *t-1*	4.452***	1.944**	3.374***	2.485*
	(4.41)	(2.61)	(5.11)	(2.03)
N	457	457	457	457

Exponentiated coefficients; *z* statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

VI. Discussion and Conclusion

<u>*Discussion*</u>

The original question under investigation in this study was whether certain electoral systems are more vulnerable to election violence than others. There is currently a heated debate around the utility of different families of electoral systems (Horowitz, 2003; Lijphart, 1991; Norris, 1997; Reilly, 2006; Reynolds, 2009; Sisk, 2017), yet very little statistical evidence in support of either side (Bogaards, 2013). More recently some have offered preliminary evidence that majoritarian systems are more conflict-inducing than PR or mixed systems (Birch, 2005; Burchard, 2015; Fjelde & Höglund, 2016), but fail to recognize whether these findings remain clear when controlling for the timing of violence in relation to electoral periods. This study demonstrates that even when controlling for timing, informal institutions, and mobilizing factors, majoritarian systems remain the most closely correlated system with violence. Furthermore, I find that PR systems actually decrease the odds that violence will emerge.

Hypotheses 1-3: Effects of Electoral Systems

The overall findings suggest that majoritarian systems create the conditions for violence more than their PR and mixed counterparts. Furthermore, PR and mixed systems tend to reduce the chances that election violence will emerge. These findings support

hypothesis 1: *States with majoritarian electoral systems are at an elevated risk for election violence overall*. This also reinforces previous findings in the literature (Fjelde & Höglund, 2016), and resonates with PR arguments around deeply divided societies (Lijphart, 2004; Reynolds, 2009). While the broad look at systems and violence is unable to capture causality, this correlation is likely linked to the winner-take-all style of rules, creating high stakes for the losers of electoral competition. However, the results above suggest nuance is important.

Turning to the second hypothesis, electoral systems are associated with election violence at different times in the election cycle. I hypothesized: *the probability of pre-electoral violence will be greater with majoritarian systems, while PR systems will lead to higher chances of violence in post-electoral periods*. For state actors, majoritarian systems are only associated with a higher probability of election violence in the pre-electoral period. For non-state actors, the risk of violence is greater regardless of timing. Again, these findings highlight the theory emphasizing the high-stakes of elections as a cause of violence. In pre-election periods, state actors in majoritarian contexts are required to engage in conflictual actions (often violence) to attain a majority of votes. Non-state actors either fearing exclusion or retaliating results of a winner-takes-all election are subject to similar dynamics.

There is some evidence that PR systems associate with greater chances for violence in post-election periods, but the lack of significance suggests otherwise. A more useful comparison might look at the marginal effects of PR systems between pre and post-election periods. This would help link arguments of post-election coalition formation with PR systems to violence (or not).

Noting that PR systems are associated with decreasing chances of violence overall is an important finding and contribution. Whereas other studies confirm the relationship between violence and majoritarian systems, they neglect the nature of PR systems. My analysis leaves room for PR systems. Using MDM as a proxy for rules, I find that PR systems actually decrease the odds of violence. This suggests that the post-election coalition forming process is not necessarily more violent, and greater more proportional representation in government helps reduce the violence-provoking high stakes of elections. I also find in many cases that mixed systems decrease the probability of electoral violence. However, disentangling this effect will require a more detailed look in to the particular type of mixed systems and contexts where this occurs.

Hypothesis 3 states: *The likelihood of violence during election days is higher in majoritarian systems.* This is neither confirmed nor denied in the results.

Hypothesis 4: Informal Institutions

Turning to informal institutions, I find that systems with smaller district magnitudes are at higher risk for election violence when controlling for informal institutions like neo-patrimonialism. This supports hypothesis 4, which states: *The violence inducing effects of majoritarian systems remain when controlling for neo-patrimonialism, which also leads to higher election violence*.

Neo-patrimonialism itself is described as another condition that raises the stakes of elections. Chabal and Daloz explain that when these systems come under threat, violence is more likely (Chabal & Daloz, 1999). When adding ethnic exclusion into the mix, neo-patrimonialism appears to increase violence, but only for non-state attacks.

Hypothesis 5: Mobilization Factors

For my final hypothesis, I consider the role of electoral systems on violence in the presence of noted mobilizing factors. I hypothesized that: *Majoritarian systems will remain associated with increasing election violence when controlling for mobilization-related factors.* The results support this hypothesis. MDM helps make these findings clear, which remain true in both pre and post-electoral periods.

Additionally, fraud and election monitors are positively correlated with violence, while election competitiveness decreases the risk of violence. These effects change with timing for different actors, however. While allegations of fraud promote violence among state and non-state actors in pre-electoral periods, the effects of fraud are only significant with state actors in post-electoral periods. Whereas much of the literature emphasizes the violent reactions of non-state actors to fraud, this finding suggests that state-led efforts in dealing with fraud (preserving legitimacy, ironically through violence), are also important (Claes, 2016; Daxecker, 2012).

The findings also suggest that election monitors increase the odds state actors will engage in violence in pre-electoral periods. Specifically, state actors engage more in threats. This finding contrasts with Smidt (2016), who finds that states are actually less likely to engage in pre-election violence with observers because of the high risks of international exposure. This finding may indicate that state actors still engage in manipulative and violent behavior when monitors are present, but that this behavior is more discrete.

Additional Findings

Outside of the general findings on electoral systems, there are three other notable findings worth mentioning. The first concerns GDP. Counterintuitively, increasing levels of GDP ppp tend to correlate more with higher levels of election violence. This seems to provide evidence against "modernization" theories, but may also be misleading. GDP can often obscure the ways wealth is distributed throughout society. Data limitations on income inequality made its inclusion in this analysis problematic, but controlling for inequality might help explain this finding.

Second, armed violence is a strong predictor of election violence, and specifically attacks, regardless of timing and actor. While this is expected, it also demonstrates how perceptions over the use of violence as a political tool change in conflict prone states.

Third, past experiences with election violence are also key in determining the presence of future violence. This finding may indicate a vicious cycle of election violence.

One final finding worth noting concerns district magnitude (the MDM variable). MDM is an important measure when looking at electoral systems, and is often a more significant predictor of election violence than the electoral system variable. The variation even within electoral systems families may necessitate the use of variables like MDM when assessing the effects of electoral systems in future studies.

Limitations

The main limitation of this study relates to the scope of the data. Given the CREV only covers 24 sub-Saharan states, there is some question over how well these findings

will translate to the continent as a whole, or other regions. Additionally, the limited experience with PR among most states may skew some of the findings. Looking specifically at majoritarian systems, the causal path to violence may come from additional factors, such as its close association with presidentialism.

Furthermore, the high-level quantitative nature of the study and its findings requires a reading that emphasizes correlation over causation. This is true of most statistical studies, but nonetheless a limitation. Without looking more closely at the cases highlighted by this study's findings, a fully comprehensive picture of violence is still unclear. However, the findings do well to complement the existing literature on election violence and electoral systems,

Areas for Future Research

This study begins a broad assessment into the relationship between electoral systems and election violence, but has room to expand. Building on these general findings, future research must begin to look at this relationship on many different levels. To help link causality, GIS mapping of majority coalition-making with areas of election violence could be useful. If coalition formation in pre-electoral periods is truly more conflict inducing, then these maps would augment this finding.

Nearly every analysis on electoral systems and election violence focuses on sub-Saharan Africa. Future studies should investigate if the findings from this region hold up elsewhere. Between countries, a smaller-n, structured focused comparison that investigates the ways electoral systems constrain behaviors would help compliment and add thoroughness to the findings presented here.

Additionally, future research can focus on state experiences with election violence after altering electoral systems. Finally, a rigorous investigation into the effects of mixed systems would compliment the findings presented in this study.

Conclusion

When questioning the role of institutions in election violence, I clearly demonstrate that majoritarian electoral systems have an effect. This effect (increasing probabilities of violence) largely remains regardless of actor and the timing around elections. However, no single electoral system can determine whether elections in a given state will experience violence. The results of this study must not be interpreted through a deterministic lens. Even though majoritarian systems tend to correlate with greater violence, they are not necessarily the primary cause of conflict. Furthermore, the adoption of PR rules does not ensure violence will remain absent. Repeating Reynolds, electoral systems do not come as a "panacea for all ills" (Reynolds, 1999). Policymakers must remain aware of this. Yet at the same time, the rules within certain systems *do* influence how electoral actors behave. Recognizing this balance is invaluable when studying the causes of election violence.

These findings are particularly important for states in transitional periods. In contexts where electoral strife is a problem, more proportional rules may help alleviate violence and instability. Organizational engagement (such as the UN or AU) in at-risk or post-conflict states often involves electoral system design. These interactions should emphasize the importance of adopting PR systems. This will help continue to decrease the conditions conducive to election violence.

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Appendix

Additional tables, figures, and the original dataset I use in this study are in an online appendix available at:
https://drive.google.com/drive/folders/1UsooXfTGF57i_UxTNJCV2bJQSM8mjihn?usp=sharing

Folder A includes every figure listed, as well as unused figures offering more descriptive data from the dataset.

Folder B includes every table in the preceding pages, as well as additional tables that display results for every model in different periods of the election cycle.

Folder C houses the dataset for this study, and an accompanying codebook. The data file is available for Microsoft Excel, and Stata.