

2018

# Violence, political parties and counter-terrorism: three essays on Pakistan

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BOSTON UNIVERSITY  
GRADUATE SCHOOL OF ARTS AND SCIENCES

Dissertation

**VIOLENCE, POLITICAL PARTIES AND COUNTER-TERRORISM:  
THREE ESSAYS ON PAKISTAN**

by

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Submitted in partial fulfillment of the  
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2018



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# **VIOLENCE, POLITICAL PARTIES AND COUNTER-TERRORISM: THREE ESSAYS ON PAKISTAN**

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## **ABSTRACT**

This dissertation uses quantitative methods and archival research to study three aspects of political violence in Pakistan – 1) the effect of political party ideology on political violence, 2) the relationship between the electoral cycle and political violence, and 3) the effectiveness of cellphone shutdowns in reducing political violence. The first essay focuses on whether the political party in power in a region influences the forms of political violence prevalent in that region – i.e. does political violence vary when left-wing, right-wing, religious, ethnic or ethno-nationalist parties come into power? The results show that a) riots increase when ethnic parties come into power in a district, and b) violent demonstrations increase when ethno-nationalist and center-right parties hold seats. Based on newspaper reports from 1988 to 2011, it is argued that ethnic parties in power often create conditions that are conducive for rioting to occur by favoring their own ethnic group with privileged access to public sector jobs, land and other resources and creating resentment amongst other ethnic groups. In addition, it is argued that ethno-nationalist parties engage in a politics of grievance and rely on demonstrations to protest the actions and policies of the national government with regards to their ethnic group. The second essay focuses on the nature and timing of election violence over the course of

six elections in Pakistan between 1988 and 2011. It looks at how four different forms of violence – assassinations, riots, demonstrations and terrorist attacks – vary before, during and after elections. The paper shows that riots and terrorist attacks sharply increase on election day, in line with the existing literature. However, assassinations are not affected by the onset of elections and violent political demonstrations see a slight decline in the week after the election which challenges important work on election violence. My final essay examines the effectiveness of disrupting cellphone networks as a counter-terrorism strategy to tackle terrorist violence. The paper shows that when cellphone shutdowns occur unexpectedly they disrupt terrorist attacks, although the effect is short-term as terrorist groups carry out their attacks when cellphone services resume on the next day.

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## **ESSAY 1 : UNDERSTANDING POLITICAL VIOLENCE IN PAKISTAN: THE ROLE OF INCUMBENT POLITICAL PARTIES**

**Abstract:** This paper examines the often-ignored effect of an increase in electoral seat share of specific political parties on political violence. In particular, it looks at how different forms of political violence vary when left-wing, right-wing, religious, ethnic or ethno-nationalist parties increase their seat share in a district. This paper focuses on the case of Pakistan, a country that has not only seen a high overall level of violence but has also been plagued by various forms of violence (for example, terrorism, violent demonstrations, assassinations, and rioting) across its different districts. Using monthly data on violence and political party seat share across 131 districts of Pakistan from 1988 to 2011, the paper employs a fixed effects negative binomial model as well as a fixed effects OLS model with standard errors clustered by district. These models demonstrate the following: a) riots increase when ethnic parties come into power in a district; and b) violent demonstrations increase when ethno-nationalist and center-right parties win in districts. Based on archival research into newspaper reports from 1988 to 2011, I argue that activists from the incumbent ethnic party are often directly involved in incidents of rioting in order to politicize and harden ethnic divides, which in turn encourage voters to side with their own ethnic group. Ethnic rioting increases the political salience of ethnicity as the dominant cleavage, winning support for the incumbent ethnic party from its co-ethnics in the next election. In explaining the relationship between seat share of ethno-nationalist parties and violent political demonstrations, I argue that ethno-nationalist parties engage in a politics of grievance and rely on demonstrations to protest

the actions and policies of the national government with regards to their ethnic group. Additionally, I show that the relationship between the seat share of center-right parties and violent political demonstrations is tied to the nature of the particular actors – in this case traders and religious groups – that support center-right parties in the context of Pakistan. This analysis finds no link between the seat share of leftist or religious political parties and the kinds of political violence witnessed in a district.

## **1.1 Introduction**

Existing literature on political parties largely presents parties in a positive light, viewing them as an avenue for participation and representation of the concerns of the population in a democratic system. As Weinberg argues, “For a long time parties have been celebrated, if not always by voters then certainly among political scientists, as indispensable components of a democratic political order, as institutions that afford the means by which economic and social differences in society may be resolved peacefully” (Weinberg 1991, 423). This body of literature sees a competitive party system as symbolizing a flourishing democracy, with little discussion of the relationship between political parties and violence. Although some recent literature on political parties does acknowledge the link between political parties and violence (Nellis, Weaver and Rosenzweig 2016), most studies focus on one or two specific parties, pointing, for the most part, to the destabilizing role of religious and ethnic parties in democratic systems. This paper looks at the often-ignored link between political party ideology, seat share, and political violence. Specifically, it examines whether the nature and level of violence in a district is shaped by the political leaning of the party that wins the most seats in that district. In other words, do particular kinds of political violence (such as riots, violent demonstrations or assassinations) increase when specific political parties win office?

I argue that politically driven violence in a region is at least partially shaped by the ideological orientation of the political party that wins the largest seat share in that region. In particular, my paper shows that riots increase when ethnic parties win seats at the district level, while violent political demonstrations increase when ethno-nationalist and

center-right parties win seats. Using quantitative analysis backed by archival research, I show that an important way in which ethnic parties politicize ethnicity and reinforce “us-vs-them” divides is through a process of “othering”, achieved to some extent, by participating in and encouraging rioting. The second key result that this paper presents is the increase in violent political demonstrations when ethno-nationalist and center-right parties win seats in a district.

This paper relies on a key distinction between ethnic parties and ethno-nationalist parties. While ethnic parties are willing to work within the existing political system and have no nationalist ambitions vis-à-vis the state, ethno-nationalist parties seek to challenge the existing political system and demand a fundamental restructuring of the system to accommodate the ethnic group. Ethno-nationalist parties rely on a politics of grievance against the policies of the central government, with protests and demonstrations forming one part of this larger strategy. Ethno-nationalist parties organize and participate in demonstrations to draw attention to the nationalist cause, to garner support and sympathy and to register their protest against the central government. Violent political demonstrations also increase in districts where center-right parties win seats. Unlike the case with ethno-nationalist parties, violent demonstrations in districts where center-right parties have a substantial seat share are tied to the nature of the groups that form the core support base of center-right parties. Traders and religious groups, the two core support groups of center-right parties in Pakistan, possess both the resources and the linkages needed to organize demonstrations. In addition, center-right parties in Pakistan, especially the PML-N, are perceived as being more responsive to demands from voters

than other major parties, which explains why voters in their districts are more likely to demonstrate and protest.

The rest of the paper is as follows. The next section provides a detailed literature review and shows how the present work contributes to the existing literature. After this section, I discuss the data and methods used to draw my conclusions, followed by a presentation of my results. Finally, I wrap up the paper with a detailed discussion of my results and a concluding section.

## **1.2 Overview of the Literature**

There is not much existing work on the relationship between the incumbent political party and political violence. The few existing works on this topic have, for the most part, focused on one kind of political violence, specifically ethnic violence. While there has been significant focus in the post-cold war era on ethnic violence, with literature exploring different aspects of ethnic violence such as ethnic riots (Tambiah 1996; Das 1990; Freitag 1989; Brass 1997; Spencer 1990; Pandey 1992), intra-ethnic group dynamics (Laitin 1995; Simmel 1955; Gagnon 1995; Kaufman 1996), the support base for ethnic groups (Medrano 1995), the psychological aspects of ethnic violence (Miller 1993; Scheff and Retzinger 1991; Kakar 1990) and others, not much has been written on the impact that political parties in power have had on the nature and degree of ethnic violence.

As Nellis, Weaver and Rosenzweig (2016) point out, there is some disagreement in the existing literature about whether incumbent political parties have any effect on ethnic



violence (with the disagreement extending to other forms political violence). One strand of argumentation suggests that, in the context of weak institutions and political wrangling, political parties are incapable of exerting any significant effect on political violence; on the other hand, certain case studies of political parties seem to suggest the opposite (Piombo 2009; Apollos 2001). In addition, Kanchan Chandra (2005) examines the behavior of ethnic parties in the case of India to argue that ethnic parties are not always destabilizing for democracies. She argues that the effect of ethnic politics on democracy is dependent on the institutional context, suggesting that “institutions that artificially restrict ethnic politics to a single dimension destabilize democracy, whereas institutions that foster multiple dimensions of ethnic identity can sustain it” (Chandra 2005, 235). Nellis, Weaver and Rosenzweig’s paper (2016) on the effect of the Indian National Congress’ incumbency on ethnic violence in India also looks at the link between the incumbent political party and political violence. They use a regression-discontinuity design to show that, between 1962 and 2000, Congress incumbency in India reduced incidents of Hindu Muslim rioting. They attribute this to the fact that Congress needed Muslim votes to stay in power and therefore sought to limit rioting and polarization along religious lines. Nellis, Weaver and Rosenzweig’s paper offers important insights into the relationship between incumbent partisanship and Hindu-Muslim violence in the context of India. Nellis and Siddiqui (2018) look at districts in Pakistan where secular parties either narrowly won or narrowly lost the election to see whether secular party rule is associated with changes in religious violence. They find that local religious violence is reduced when secular parties come into power.

Several major studies have offered board insights into how political parties have relied on and benefited from political violence, even when the parties in question are not in power. One major work in this area is Wilkinson's *Votes and Violence*, which uses data from India to provide compelling evidence of how political parties plan, organize and execute riots in order to politicize ethnic divides and put together a winning coalition for elections (Wilkinson 2009). Wilkinson argues that ethnic parties, in order to encourage voters to side with them – especially in elections for the most competitive seats – will use “polarizing anti-minority events” which are “designed to spark a minority counter-mobilization (preferably a violent counter-mobilization that can be portrayed as threatening to the majority) that will polarize the majority ethnic group behind the political party that has the strongest anti-minority identity” (Wilkinson 2009, 4). I find some evidence of this in my data as well, which will be discussed in later sections.

An intersecting body of literature examines why political parties, whether in office or out of office, rely on violence to achieve their political goals. In general, as pointed out by Danzell (2010), two main arguments have emerged in this literature about why certain political parties might resort to violence. The structural argument made by scholars like Crenshaw (1981), Ross (1993), Li (2005), Weinberg and Pedahzur (2003) suggests that parties use violence when institutional arrangements exclude them from acquiring power through normal political contestation. This theory cannot explain why political violence increases when certain political parties do win office. The second theory suggests that political parties engage in a cost-benefit analysis and make strategic use of violence to achieve political goals, especially to gain electoral support (Abrahms 2008). A number of

case study analysis support this view (LeBas 2006, Harik 2004; Piazza 2010; Weinberg and Pedahzur 2003; Acemoglu, Robinson and Santos 2013; Weinberg, Pedahzur and Perliger 2008). An overview of the existing literature suggests that there is some merit to the argument that political parties use violence to further their electoral goals. Yet the effect of the incumbent political party on political violence involves more than just the direct use of violence by the party. Often, even when political parties in power are not directly the perpetrators of violence, they might create the conditions for violence to flourish; in addition, by refusing to intervene to prevent violence, they may implicitly allow it to occur.

While this body of literature is very informative about the ways in which parties can affect the intensity and degree of political violence, it suffers from several shortcomings. First, many of these case studies look at political party violence in general, rather than looking at whether the incumbent party has an effect on the nature of political violence. This would require looking past the argument that political parties excluded from the corridors of power turn to violence (Crenshaw 1981, Ross 1993, Li 2005, Weinberg and Pedahzur 2003). In addition, while the case study format of several studies on political violence provides richness of detail, allowing for a close examination of the factors that affect political violence, it has also led to a focus on a few parties over a short time period, rather than looking at a variety of parties to see how they differ from each other in their relationship with violence over a longer period of time. Third, as Wilkinson (2009), Nellis, Weaver and Rosenzweig (2016) and others point out, one key problem with previous studies of ethnic riots in particular is that much of the literature in this area has

focused on cross-national data rather than looking at variations within countries. Looking at within-country variation can allow us to hold constant in our analysis certain factors that might vary across countries but not within countries (such as the effect of national government policies on levels of violence). In addition, factors that affect political violence across countries are often difficult to measure and quantify. Fourth, as Wilkinson (2009) also argues, a number of existing studies on ethnic violence focus only on areas where ethnic violence has occurred, thereby sampling on the dependent variable, rather than looking at a large sample of all areas in a region to understand the conditions under which ethnic violence breaks out. The analysis in this paper can address some of the above-mentioned shortfalls by focusing on within-country variation in different forms of violence (including assassinations, violent demonstrations, and riots) across a 24-year time period. Keeping in mind Wilkinson's argument that existing studies of ethnic violence have largely focused on areas affected by violence, my data includes all districts of Pakistan – those that have witnessed high levels of violence as well as those that have been relatively untouched by political violence.

Finally, there is hardly any existing literature that compares how different forms of political violence (riots, violent demonstrations and assassinations) vary when specific political parties come into power. The arguments in this paper regarding ethnic party seat share and the number of riots in a district closely agree with the arguments made by Wilkinson (2009). However, to my knowledge, there is no major existing work on the relationship between political party seat share and the number of violent demonstrations and assassinations. Disaggregating political violence and examining how the different

forms of violence vary can help us better understand the root causes of each kind of violence and make sense of the circumstances that allow certain forms of violence to flourish. This analysis is a step in that direction.

### **1.3 Arguments**

The existing literature leads me to a number of hypotheses concerning the relationship between political party seat share and different forms of violence. Borrowing from arguments made by Wilkinson (2009), Chandra (2005) and others, I argue that ethnic parties gain support by politicizing ethnic identity and appealing to their own ethnic group at the expense of opposing ethnic groups. In particular, I hypothesize that ethnic parties reinforce and harden ethnic divides through exclusionary “us-vs-them” politics, which often involves encouraging and inciting riots between ethnic groups. In addition, anecdotal evidence in the context of Pakistan suggests that when ethnic parties win office, they use state resources to benefit their own ethnic group at the expense of other ethnic groups by giving them privileged access to public sector employment, land and other forms of patronage (Gazdar 2008; Gayer 2014; Pildat 2011). This creates the conditions for rioting to occur, as it fuels ethnic resentments and causes conflict over resources. Yet, to date, no quantitative study has looked at this in the context of Pakistan. Overall, I hypothesize that:

*All else being equal, when ethnic parties win seats in electoral constituencies, riots should increase for two main reasons: 1) ethnic parties rely on exclusionary “us-vs-them” politics and often encourage antagonism between ethnic groups which manifests*

*itself in rioting and 2) once in power, ethnic parties use state resources to benefit their own group, causing conflict over resources.*

The literature on ethno-nationalist parties leads me to my second key hypothesis. Several scholars of ethnic nationalism – including Bogdan Denitch (1996), who looks at the effects of ethnic nationalism in the former Yugoslavia, and Aviel Roshwald (2001), who studies ethnic nationalism in the context of Central Europe, the Middle East and Russia – agree in their assessment that ethno-nationalist movements are aimed at challenging a given political order. In addition, as captured by Roshwald, the argument accepted by most scholars of ethno-nationalism is that “most nationalist movements begin as intellectual trends, develop into political organizations that seek to expand their popular base through propaganda and agitation, and in some cases succeed in going on to establish independent nation-states” (Roshwald 2001, 3). Thus, agitation is a key strategy used by ethno-nationalist parties to gain support. Atul Kohli (1997) has examined the progression of ethno-nationalist movements in the context of India, specifically looking at how the Indian state has dealt with agitations and protests by Sikh, Tamil and Muslim nationalist movements. Other scholars have also presented case studies of different ethno-nationalist movements which draw attention to the ways in which these movements agitate and engage in protest politics to pressure the state to meet their demands. Based on existing work on ethno-nationalism, I argue that ethno-nationalist parties rely on protest politics and agitation against the state to have their demands heard. One key way in which ethno-nationalist parties convey their grievances and demands to the state, as well as drawing attention to the nationalist cause, is by organizing and carrying out

demonstrations. When ethno-nationalist parties win seats in the provincial legislature, they possess the resources and political clout needed to mobilize voters and to bring their demands to the central government through demonstrations. Given the literature on ethno-nationalism, I hypothesize that:

*All else being equal, political demonstrations should increase when ethno-nationalist political parties win seats in electoral constituencies because protest politics are a key way in which ethno-nationalist parties draw attention to the nationalist cause and make demands on the central government.*

The existing literature does not shed light on the expected relationship between political party identity and assassinations. However, in the context of Pakistan, there is reason to anticipate a positive correlation between nationalist party seat share and the number of assassinations. In Pakistan, in many districts where nationalist parties win seats and nationalist sentiments are strong amongst the general population, militant nationalist groups also operate. Such groups have rejected all participation in politics and have attacked gas pipelines, railways and government buildings to retaliate against perceived or real injustices meted out by the government. In response, the Pakistani state has also dealt with these groups harshly. Anecdotal evidence from newspaper reports point to the way in which bodies of both government officials and members of nationalist groups have been found at various times in different parts of Balochistan (such as on April 12<sup>th</sup>, 2009 in Kech, Quetta, April 14<sup>th</sup>, 2009 in Mastung, February, 10<sup>th</sup> 2011 in Quetta, June, 3<sup>rd</sup> 2011 in Quetta and others). I anticipate that when nationalist parties win a significant share of seats, nationalist groups (including militant nationalist groups) become

emboldened, increasing the likelihood of assassinations in such districts. Given this, I hypothesize that:

*All else being equal, political assassinations should increase when ethno-nationalist parties win seats in electoral constituencies because militant nationalist groups are emboldened when nationalist parties win seats, increasing the likelihood of confrontation between the state and militant nationalist groups.*

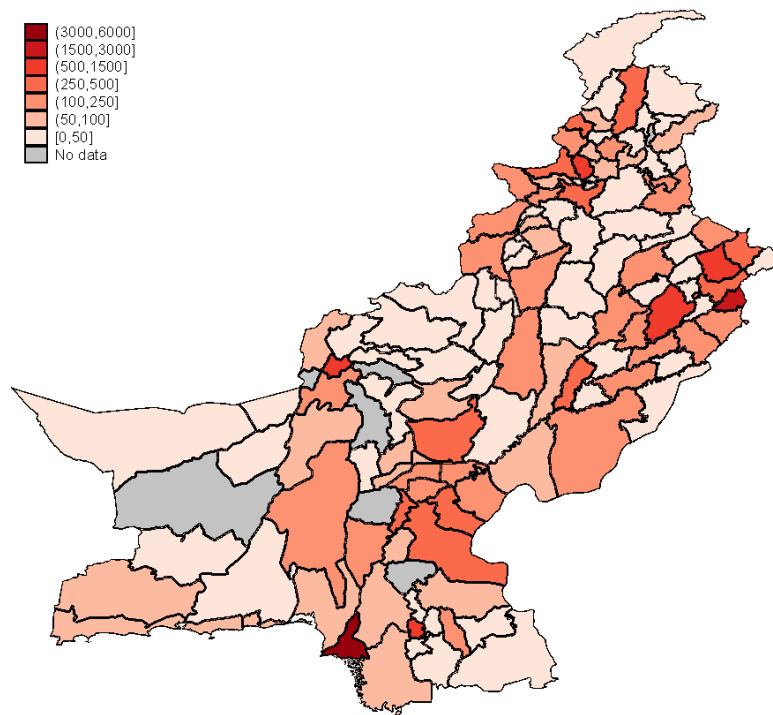
#### **1.4 Background**

Pakistan has seen a fairly high level of political violence in the period that this paper focuses on (1988 to 2011). In fact, in 2010, Pakistan was labelled the “world’s most dangerous country” by *Newsweek* (Moreau 2007). This violence has been fueled in part by the easy availability of weapons in Pakistan after the war against the Soviet Union in Afghanistan in the late 1970s, during which weapons flowed through the Pakistan-Afghanistan border. As documented by a number of sources, political battles between the student wings of different political parties in Pakistan mostly involved fist-fights before the late 1970s; in the 1980s, the Afghan war brought a “drugs and Kalashnikov” culture to some prominent cities of Pakistan (Paracha 2012; Gayer 2014; Hanif 1989). A Washington Post article from 1996 captures this development in these words: “Military assault weapons left over from the Cold War have become so prevalent in Pakistan that they have penetrated the nation's traditions and altered daily life in its cities” (Cooper 1996). Some of the arms and ammunition meant for the mujahideen in Afghanistan ended up in the hands of student activists, drug traffickers and others in Pakistan. This took political violence in Pakistan to a different level – it became deadlier and more visible



(Gayer 2014). The map below shows how the total incidents of political violence between 1988 and 2011 have varied across the districts of Pakistan. Additional maps in the appendix show how specific forms of violence have varied across the districts of Pakistan in this time period.

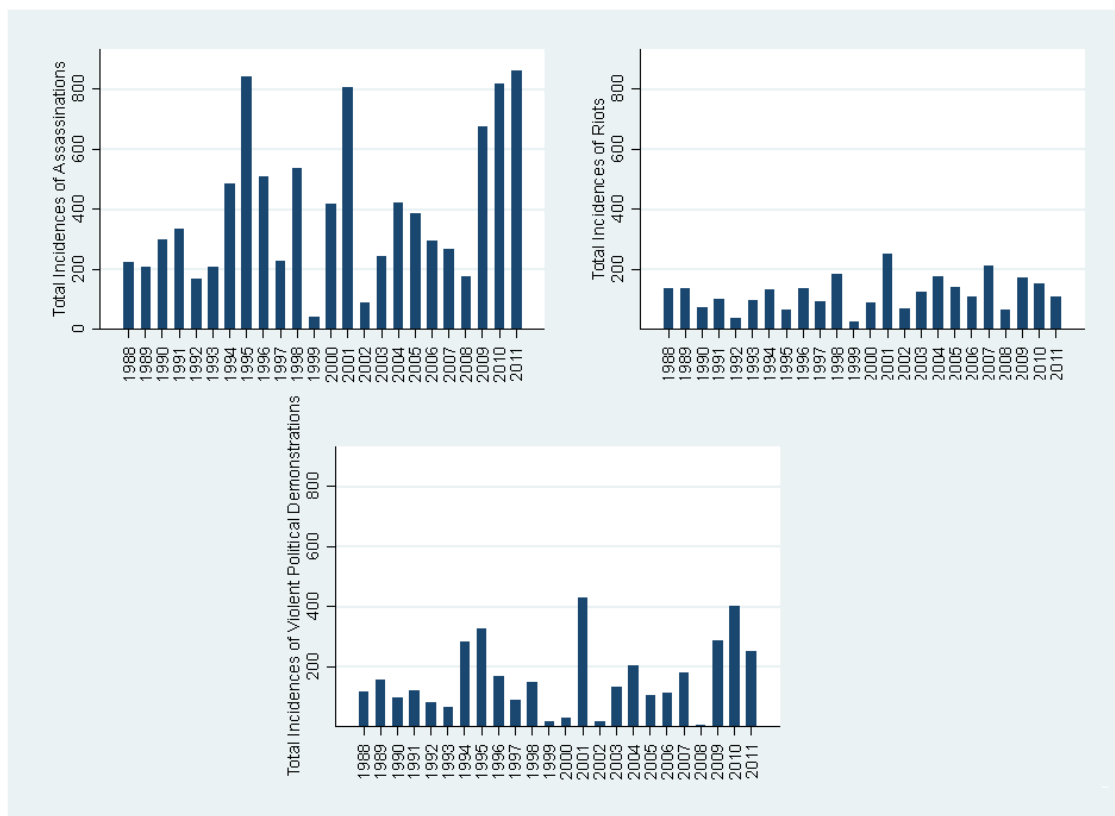
*Map 1-1 Total Incidents of Political Violence Across the Districts of Pakistan from 1988 to 2011 (Source: BFRS dataset)*



As can be seen in the map, there is a fair degree of variation across the districts of Pakistan in the levels of political violence. Below, Graph 1-1 breaks down political violence in terms of three categories – assassinations, riots and demonstrations – and examines how each category of violence has varied over the years in Pakistan. As seen in the graph, Pakistan has seen a very high number of assassinations over the time period that this paper focuses on. Some of the peaks in the assassination data such as the 1995

rise in assassinations can be explained by political turmoil in Karachi, a key district of Pakistan that has seen a volatile mix of ethnic politics, battle over resources such as land and confrontation with the state. There have also been a significant number of riots and violent political demonstrations in Pakistan, although the graphs do not point to any overall yearly trends.

*Graph 1-1 Yearly Trends in the Incidents of Assassinations, Riots, Terrorism and Violent Demonstrations in Pakistan from 1988 to 2011 (source: BFRS dataset)*



The graphs above illustrate the widespread and geographically dispersed nature of different forms of political violence in Pakistan. To what extent can political party seat share in a district help understand the nature and degree of this political violence? The results of my fixed effects regression analysis on the link between political party seat

share and political violence are below. Although my results control for variables such as election competitiveness, in the next section I focus solely on how political party variables are correlated with different forms of violence.

### **1.5 Data and Methods**

To examine the link between the incumbent political party and violence, I rely on monthly data on violence and political control across 131 districts of Pakistan over 24 years, from January 1988 to November 2011. For my violence data, I rely on the *BFRS Political Violence in Pakistan dataset* collated by Jacob Shapiro, Ethan Bueno de Mesquita, C. Christine Fair, Jenna Jordan, and Rasul Bakhsh Rais, sponsored by the United States Department of Homeland Security. This data includes information on 28,731 incidents of violence from 1988 to 2011, with details on the number killed and injured in each incidence of violence as well as the location, type of violence, underlying cause and the actor responsible for the violence. The location includes the relevant district, tehsil (the administrative unit below the district) and province where the incidence of violence occurred. However, as the dataset has incomplete information at the tehsil level, I have focused on the district level. The different types of political violence, categorized as (a) riots, (b) violent political demonstrations and (c) assassinations, are the dependent variables for my regression models.

The BFRS dataset offers the most detailed data on incidents of political violence in Pakistan amongst existing datasets. It is more comprehensive than other datasets, disaggregating incidents of violence in both spatial and temporal categories, as well as labelling different forms of violence. The BFRS dataset relies on data collected from

newspaper reports in *Dawn*, one of Pakistan's major English language newspapers. While the original dataset was collected by a team at the Lahore University of Management Sciences in Pakistan, a reliability check was done by a different team at the University of Chicago which coded a randomly selected ten percent sample of data. Shapiro et al. (2015) argue that there are differences in reporting of incidents of violence between the different local versions of *Dawn*. However, Shapiro et al. (2015) suggest that the bias in reporting can be mitigated by not taking the data as representing exact figures and instead focusing on regression results rather than point estimates. Although there is likely to be error in the data, there is no reason to think that the error in the data is systematic.

To categorize political control, I have also collated data on seats won by different political parties and independent candidates in provincial legislatures in this time period. This data is available through the Election Commission of Pakistan (ECP), which documents, for each provincial election, which party won in each electoral constituency. I have collected, compiled and cleaned this data to create a dataset on political party control of each district from 1988 to 2011. However, since my violence data is at the district level but each district encompasses multiple electoral constituencies (with a range of 1 to 42 electoral constituencies in each district and an average of 5), I have had to aggregate the election data to the district level for every election. Thus, for the provincial assembly elections in 1988, 1990, 1993, 1997, 2002, 2008, I calculate, for each party, the fraction of the seats won by that party in every district. I calculate this by dividing the number of seats won by the party over the total number of seats in each district and create variables for every party to capture this (labelled *ANP*, *PPP*, *PMLN*, and so forth). The

values for these party variables vary between 0 and 1 with a 0 when a party wins no seats and a 1 when it wins all the seats in a district. I group the 15 major parties into a number of categories: center-left, center-right, religious, ethnic and ethno-nationalist parties. This categorization of political parties is commonly used in the existing literature and works well in the Pakistani context, offering the most theoretically interesting and generalizable way to study the link between political parties and violence.

My paper relies on a key distinction between ethnic and ethno-nationalist parties. With the term ethnic parties, I refer to parties that represent an ethnic group but have no nationalist ambitions vis-à-vis the state – i.e. they are willing to work within the existing political system without challenging its existence. In this category, I include ethnic parties whose primary concern is winning seats and gaining a bigger share of resources compared to other ethnic groups. In contrast, ethno-nationalist parties are parties that represent an ethnic group, but are oriented towards the state, seeking to fundamentally challenge and change the institutional status quo to accommodate the ethnic group as a nation with some level of autonomy. Table 1-6 in the appendix lists which political parties are included in each of the five categories of political parties. These categories are the independent variables in my model. There is some disagreement in the existing literature and newspaper accounts regarding which category certain parties fall into. In particular, the ANP has been considered both a leftist political party and an ethno-nationalist party. For my analysis, I included ANP in the leftist party category since the ANP has presented itself as a leftist party for much of its history and has only recently begun to identify with ethno-nationalist politics. However, to be thorough, I also included

ANP in the ethno-nationalist party category and reran the analysis, the results for which are in the appendix (Table 1-8) and are in line with the results presented in the next section. For my analysis, I have also included in my dataset a variable for election competitiveness for each election (labelled *electioncompetitiveness*). Election competitiveness is first calculated at the level of the electoral constituency as the difference between the percentage of votes won by the winner and loser subtracted from 100. This data is then aggregated to the district level by calculating the average election competitiveness across all the electoral constituencies in a district. The value for *electioncompetitiveness* varies between 0 and 100; the higher the value, the more competitive, on average, the different electoral constituencies in a district.

I merged this election data with the violence data to get a panel dataset with monthly observations on incidents of violence as well as political party seat share in districts across Pakistan from 1988 to 2011. Table 1-5 in the appendix contains summary statistics for my dataset. I have excluded certain regions of Pakistan from this analysis – such as the Federally Administered Tribal Areas (FATA), Gilgit Baltistan and Azad Kashmir – as these areas are constitutionally separate from the rest of Pakistan, due to disputes over territory and colonial-era administration arrangements. For example, in FATA, political parties were not allowed to operate for much of the region’s post-independence history. Only under the Extension of Political Parties Order 2002 were political parties given the permission to operate more freely in FATA. In addition, Azad Kashmir and Gilgit Baltistan are not provinces of Pakistan, do not have representation in the National

Assembly, and exist as autonomous regions within Pakistan. This makes it necessary to exclude these regions from the analysis in this paper.

Using this dataset, I look at the effect of political party seat share in a district on different kinds of political violence through several fixed effects regressions. My dependent variable for each regression is a specific kind of political violence: riots, assassinations or violent demonstrations. However, the variables coding these incidents of violence in my dataset (*riots*, *assassinations*, *violdemonstrations*) are highly positively skewed. There are many months where no incidents of violence take place; when violence occurs, it tends to cluster at one or two incidents of violence a month. Incidents of political violence occurred in about ten percent of my monthly data. Table 1-7 in the appendix contains the frequency tables for my key dependent variables. In addition, my data is over-dispersed, with the variance of my dependent variables far exceeding the mean as there are many months in which no incidents of violence occur in the dataset.

To address these problems, I rely on two different models for my analysis. Since my dependent variables (the different kinds of violence) are all count variables, my first model is a fixed effects negative binomial model which is useful for modeling over-dispersed count data. The negative binomial model has the same basic structure as the Poisson model but contains an additional parameter to account for over-dispersion in the data. Even though my dataset contains a large number of zeros, I argue that a fixed effects negative binomial model is better suited for my data than any of the other models commonly used to account for an excess number of zeros, such as the zero-inflated negative binomial model or the rare events logit model. Paul Allison (2012) argues that

simply having a large number of zeros in a dataset is not sufficient reason, by itself, to use a zero-inflated model. In my case, my data does not meet the conditions for a zero-inflated negative binomial model, as there are no “certain” zeros in my data – i.e. incidents of violence can potentially occur on any day at any time. My data also contains sufficient number of events (occurrences) of violence relative to the total number of observations so as not to warrant the use of a rare events logit model. As Paul Allison points out in his discussion of rare events logit models, “the problem is not specifically the rarity of events, but rather the possibility of a small number of cases on the rarer of the two outcomes” (Allison 2012). He goes on to give the example that if you have 100,000 cases and 2000 events, you do not need to use the rare events logit model and can rely on a simple logit model since you have a large number of events. Even though my data contains a lot of zeros, it contains enough events where violence occurred to not require the use of the rare events logit model. Instead, I rely on a fixed effects negative binomial model.

The second model that I have relied on to address the issue of over-dispersion and excess zeros is the fixed effects OLS model with an  $\ln(y+1)$  transformation of the dependent variables to create *lnriots*, *lnassassinations* and *lnvioldemonstrations*. At least to some extent, a logged dependent variable should be able to better fulfill the condition that errors are normal with constant variance (Fletcher, MacKenzie and Villouta 2005). Wooldridge (2012) also points out that logging the dependent variable can mitigate the problem of skewed data. In addition, he argues that a further benefit of logging the dependent variable is that “taking logs usually narrows the range of the variable, in some



cases by a considerable amount. This makes estimates less sensitive to outlying (or extreme) observations on the dependent or independent variables” (Wooldridge 2009, 184). Since I have over-dispersed data, logging my dependent variables can mitigate the problem of skewed data as well as making sure my results are not driven by a few extreme observations. In addition, I cluster the standard errors by district since observations at the level of the district are likely to be correlated. The disadvantage of relying on an  $\ln(y+1)$  transformation of my dependent variables is that adding a one to my observations changes my original dataset and makes it hard to interpret the coefficients. Wooldridge (2009) argues that the estimates from an  $\ln(y+1)$  transformation can be interpreted in much the same way that  $\ln(y)$  coefficients are interpreted except when the  $y$  variable is dominated by zeros. My dependent variables have a large number of zeros and this creates problems in terms of interpreting the estimates of the regression model. Thus, while there are obvious benefits to using a log-transformed dependent variable to address the problem of skewed data and to prevent outliers from driving the results, there are some problems with this approach too. I rely on the fixed effects OLS model to make sense of the trends in my data. However, given the difficulty in interpreting the coefficients of this model, I largely focus on the estimates from the fixed effects negative binomial model in the results section of this paper.

For the fixed effects negative binomial model as well as the fixed effects logit model, I use the number of incidents of rioting, assassinations and violent demonstrations as my dependent variables. For the fixed effects OLS model, I use the log-transformed *lnriots*, *lnassassinations*, and *lnvioldemonstrations* as my dependent variables. The fraction of

seats won by left-wing, right-wing, ethnic, religious and nationalist parties as well as independent candidates in each district are my main independent variables. A variable for the fraction of seats won by independent candidates (*IND*) is included in the analysis to get a better sense of how political violence differs when a candidate not affiliated with any political party wins office as compared to when political parties win office. I control for election competitiveness in my model since certain forms of violence might be higher in districts with more competition, regardless of the political party affiliation of the winning candidate. Finally, I included year fixed effects to account for trends over time in the different kinds of violence that I focus on.

Using these variables, I run a fixed effects negative binomial model, a fixed effects OLS regression model with standard errors clustered by district and a fixed effects logit model. I ran a Hausman test to determine whether a fixed effects model is a statistically better fit for my data than a random effects model and the results show that a fixed effects model is a better fit for my data ( $p=0.00$ ). In the next section, I briefly discuss historical changes in political violence in Pakistan as well as trends in the violence dataset.

## **1.6 Results**

### **1.6.1 Political Party Seat Share and Riots**

Each table shows the results of my analysis for the different kinds of violence. The tables include two models: a fixed effects negative binomial model and a fixed effects OLS regression with logged dependent variables. Table 1-1 shows the results of the relationship between the seat share of different parties and the number of riots, controlling for election competitiveness and year trends. Both the fixed effects negative

binomial model (Model 1) and the fixed effects OLS model (Model 2) show that the seat share of ethnic parties is strongly positively correlated with the number of riots in Model 1 and the logged number of riots in Model 2. In other words, the results show that when ethnic parties control a significant number of seats in a district, the number of riots increase as well. Based on the results from the fixed effects negative binomial model (Model 1), when the fraction of seats controlled by ethnic parties in a district increase from 0 to 1, riots increase by 205 percent (with an incidence rate ratio of 3.05), all else held constant. Since ethnic party seat share does not change from 0 to 1 for the parties in my data, it is more realistic to look at how riots vary when ethnic party seat share changes from 0.25 to 0.75. Riots increase by 75 percent when ethnic party seat share increases from 0.25 to 0.75, with other variables held at their mean values. Graph 1-3 in the appendix shows a margins plot for different values of ethnic party seat share. While the fixed effects OLS model confirms the significance of the ethnic party variable for the number of riots, the coefficient for the ethnic party variable is difficult to interpret (as explained in the data and methods section). These results point to the way in which ethnic parties politicize and harden ethnic divides, creating the conditions for rioting to occur.

While there are additional party variables that are significant in the fixed effects negative binomial model, such as the variables for nationalist parties and independent candidates, these are not significant in the fixed effects OLS model. In this paper, I focus on the results that are consistent across both models, with the recognition that the additional results that appear in the fixed effects (FE) negative binomial model deserve attention in future work on the topic. A comparison of Models 1 and 2 in Table 1-1 also shows that

the number of districts differ between the two models for reasons explained in footnote 1. As a robustness check to determine whether the different results for the FE OLS model and the FE Negative Binomial model are due to the difference in number of districts between the two models, I rerun the FE OLS model including only the observations included in the FE Negative Binomial Model. The results for riots are presented in Table 1-9 in the appendix. These results are in line with the results from the main FE OLS model presented in the table below, so it is clear that the difference in the number of districts between Model 1 and 2 in Table 1-1 is not driving the different results observed from the two models. I ran a similar robustness check with the FE OLS model for the number of assassinations as the dependent variable; again, the results confirmed that the difference in number of districts between FE negative binomial model and the FE OLS model for assassinations is not driving the different results in the two models (Table 1-9 in the appendix).

*Table 1-1 Relationship between Political Party Seat Share and Number of Riots*

	(1) Fixed Effects Negative Binomial Model (DV=Number of Riots)	(2) Fixed Effects OLS (DV=Logged Number of Riots)
Religious Parties	0.377 (0.252)	0.0116 (0.00867)
Leftist Parties	-0.0686 (0.178)	-0.0111 (0.0113)
Ethnic Parties	1.117*** (0.233)	0.0976*** (0.0315)
Nationalist Parties	0.607** (0.307)	0.0226 (0.0142)
Center-right Parties	0.209 (0.165)	0.00647 (0.00685)
Independent	0.574*** (0.215)	0.0162 (0.0106)
Election Competitiveness	0.00530** (0.00248)	0.000594 (0.000364)
Year Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
District Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Constant	-0.660* (0.351)	0.0405 (0.0388)
Observations	25,103	26,554
R-squared		0.013
Number of Districts <sup>1</sup>	99	108

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

I further investigate the relationship between ethnic party seat share and the number of riots by looking at whether ethnic parties are more likely to politicize ethnicity and incite rioting in constituencies with competitive elections, compared to constituencies where

<sup>1</sup> The number of districts has changed between the fixed effects negative binomial model and the fixed effects OLS model. This is because the fixed effects OLS model relies on an  $\ln(y+1)$  transformation which converts 0 values into 1. In the fixed effects negative binomial model, a number of districts were dropped from the analysis because of all 0 observations while these districts were not dropped from the fixed effects OLS model as the 0 was converted into a 1.

elections are not highly competitive. To determine this, I rerun the model in Table 1-1 and include interaction terms between the different party variables and election competitiveness. I run this analysis for two different time periods: 1) for election months only, since election competitiveness is likely to have the greatest effect on levels of violence in election months; and 2) for the entire time period between elections, when specific parties hold seats in different districts.

My analysis shows that the effect of ethnic party seat share on the number of riots is influenced by election competitiveness in different ways during election months and during the entire length of time between elections when specific parties are in power. Table 1-11 in the appendix shows the results for the fixed effects negative binomial model and the fixed effects OLS model when looking at the interaction between party seat share and election competitiveness during election months. The results do not offer any conclusive evidence that election competitiveness affects the relationship between ethnic party seat share and the number of riots. The FE OLS model shows a very weak positive effect of ethnic party seat share on the logged number of riots when elections are highly competitive. In other words, even in the theoretical case of the most competitive districts with election competitiveness at 100, the coefficient for the ethnic party variable is calculated as  $(100 * 0.0241) + (-2.184)$  which gives 0.226. This is not a strong effect. In addition, this result is not confirmed by the fixed effects negative binomial model. Graph 1-2 in the appendix is a margins plot showing how the interaction between election competitiveness and ethnic party seat share influences the number of riots during election months in line with the results of the Fixed Effects Negative Binomial Model. Table 1-10

in the appendix shows the effect of election competitiveness on the relationship between ethnic party seat share and the number of riots for the entire duration between elections when ethnic parties are in power in certain districts. The results in Table 1-10 for both the FE OLS model and the FE negative binomial model show that ethnic party seat share overall is positively correlated with the number of riots (as in the earlier models). However, the more competitive the election through which the ethnic party won seats, the fewer the number of riots during the time the ethnic party is in office, especially compared to times when ethnic parties come into power through less competitive elections. These results suggest that the effect of election competitiveness on shaping the relationship between ethnic party seats and the number of riots is different when we look at election months and when we look at the entire duration between elections when ethnic parties are in office. However, these results are difficult to interpret. The way that election competitiveness is aggregated to the district level for this paper by averaging competitiveness across all the electoral constituencies in a district, provides an average measure rather than an exact measure of election competitiveness. This is especially true for districts where some electoral constituencies are highly competitive and other constituencies are not competitive at all. Further work is needed at the level of the electoral constituency itself to shed light on the exact role of election competitiveness in shaping the relationship between political party seat share and violence.

In addition to this analysis, I further examine whether political party incumbency is what drives my results regarding the relationship between seat share and violence or whether the relationship is driven by the relative strength of different parties at the district level.

In other words, in the context of ethnic parties, the question that arises is whether riots increase when ethnic parties win seats because 1) ethnic parties are able to somehow use their position of power to encourage rioting or 2) the relative strength of the ethnic party, and not its incumbency status, allows it to influence levels of rioting. To test this, I look at whether riots increase when ethnic parties have a strong presence at the district level, compete in the election, but do not win seats. To this end, I collected data on the runner-up political party in each electoral constituency in every election between 1988-2011. Using this data and looking only at election months, I examine the number of riots when ethnic parties are the runner-up party in a district – i.e. when ethnic parties have the largest vote share after the winning party but do not win any seats. The results for election months presented in Table 1-12 in the appendix show that while the variable for runner-up ethnic parties in this analysis is barely significant in the fixed effects negative binomial model, it is not significant in the fixed effects OLS model. In the next section, I show how political party incumbency, rather than simply the strength of the party, affects different forms of political violence.

### **1.6.2 Political Party Seat Share and Violent Demonstrations**

Table 1-2 shows the results of the FE negative binomial model and the FE OLS regression model for the link between political party seat share in a district and violent political demonstrations. In both models, the variables for ethno-nationalist parties and center-right parties are either significant or almost significant and positively correlated with the number of violent demonstrations. The fixed effects negative binomial model shows that violent political demonstrations increase by 43.5 percent when ethno-



nationalist party seat share increases from 0.25 to 0.75 with other variables held at the mean. In addition, when center-right parties increase their seat share in a district from 0.25 to 0.75 with other variables held at the mean, violent political demonstrations increase by 38.9 percent. I argue that ethno-nationalist parties win support by mobilizing voters against the policies of the national government and by reinforcing a sense of grievance for the perceived wrong done to the ethnic group. Once they win office, ethno-nationalist parties use various avenues to protest national government policies with regard to their ethnic group, one of which is through organizing demonstrations. Center-right parties on the other hand draw on a core support base that comprises of trading and religious groups, who possess both the resources and the linkages needed to effectively organize demonstrations. I will delve into greater detail about this in the next section.

*Table 1-2 Relationship between Political Party Seat Share and Number of Violent Political Demonstrations*

	(1) Fixed Effects Negative Binomial Model DV=(The Number of Violent Political Demonstrations)	(2) Fixed Effects OLS Model DV=(Logged Number of Violent Political Demonstrations)
Religious Parties	1.067*** (0.321)	0.0107 (0.00757)
Leftist Parties	0.530** (0.235)	0.00176 (0.00901)
Ethnic Parties	0.156 (0.296)	0.00132 (0.0370)
Nationalist Parties	0.891* (0.510)	0.0238*** (0.00670)
Center-right Parties	0.561** (0.221)	0.0129* (0.00679)
Independent	0.534*	-0.00195

	(0.277)	(0.00823)
Election Competitiveness	0.00741***	0.000309
	(0.00264)	(0.000442)
Year Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
District Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Constant	-4.515***	-0.0142
	(0.705)	(0.0428)
Observations	26,554	26,554
R-squared		0.031
Number of District1	108	108

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### 1.6.3 Political Party Seat Share and Assassinations

Table 1-3 shows the results for my analysis of the effect of political party seat share on the number of incidents of assassinations. Both the FE negative binomial model (Model 1) and the FE OLS model (Model 2) show that the variable for ethno-nationalist party is either statistically significant or almost significant and positively correlated with the incidents of assassinations in a district. Focusing on the FE negative binomial model, when ethno-nationalist parties increase their share of seats from 0.25 to 0.75 in a district with other variables held at the mean, assassinations increase by 42.6 percent.

*Table 1-3 Relationship between Political Party Seat Share and Number of Incidents of Assassinations*

	(1) Fixed Effects Negative Binomial Model (DV= Number of Assassinations)	(2) Fixed Effects OLS Model (DV=Logged Number of Assassinations)
Religious Parties	0.235	0.00835
	(0.185)	(0.0130)
Leftist Parties	0.112	-0.0133
	(0.131)	(0.0231)
Ethnic Parties	-0.0368	-0.0474
	(0.171)	(0.0900)
Nationalist Parties	0.712***	0.0391*

	(0.227)	(0.0214)
Center-right Parties	0.186	-0.00786
	(0.123)	(0.0111)
Independent	0.575***	0.0247
	(0.151)	(0.0175)
Election Competitiveness	-0.00299*	-0.000616
	(0.00178)	(0.000707)
Year Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
District Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Constant	-0.337	0.162***
	(0.268)	(0.0551)
Observations	26,047	26,554
R-squared		0.033
Number of Districts	102	108

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Overall, a number of results emerge from my analysis of the relationship between political party seat share and the different forms of violence in the districts of Pakistan. Riots increase when ethnic parties win seats in a district, while violent political demonstrations increase in districts where ethno-nationalist and center-right parties win seats. In addition, there is a statistically significant and positive correlation between the fraction of seats controlled by ethno-nationalist parties in a district and the number of incidents of assassinations. As an additional robustness check, Table 1-13 in the appendix also shows the results of the FE negative binomial model for each of these forms of violence when only the statistically significant variables from the main model and year fixed effects are included. The results largely confirm the results from the main models, although the correlation between violent demonstrations and nationalist party seat share is no longer statistically significant in the reduced model.

However, further analysis is needed to understand the correlation between the share of seats won by ethno-nationalist parties and the increase in different forms of violence. Ethno-nationalist parties, unlike the other political party categories that this paper uses, are exclusively concentrated in one province of Pakistan, Balochistan. Balochistan differs from the other provinces of Pakistan in a number of crucial and complicated ways; it has seen a separatist insurgency for more than a decade and has witnessed “hundreds of mutilated bodies dumped on roadsides, thousands of people [gone] missing and revenge killings” (Economist 2012). Since the ethno-nationalist parties that I examine in this paper are exclusively political parties based in Balochistan, the correlation between ethno-nationalist parties winning seats in a district and different forms of violence could be a result of Balochistan’s unique political situation and the ongoing insurgency in the province. To test whether this is the case, I rerun my analysis of the relationship between the seat share of different political parties and the various forms of violence, this time only for Balochistan. Since a number of Pakistan’s major political parties, such as the PML-N, have also competed in electoral constituencies in Balochistan and have won seats between 1988-2011, limiting my analysis to Balochistan will allow me to compare ethno-nationalist parties to other mainstream parties that also operate in Balochistan. The results of this analysis are presented below in Table 1-4.

*Table 1-4 Relationship between Political Party Seat Share and Different Forms of Violence in Balochistan*

	(1) FE Negative Binomial Model (DV=Number of Riots)	(2) FE OLS Model (DV= Logged Number of Riots)	(3) FE Negative Binomial Model (DV=Number of Assassinations)	(4) FE OLS Model (DV=Logged Number of Assassinations)	(5) FE Negative Binomial Model (DV= Number of violent demonstrations)	(6) FE OLS Model (DV=Logged Number of violent demonstrations)
Religious Parties	0.0164 (0.540)	0.00320 (0.00661)	0.110 (0.499)	-0.0218 (0.0169)	0.294 (0.967)	-0.00162 (0.00574)
Leftist Parties	0.957* (0.561)	0.00543 (0.00894)	-0.492 (0.422)	0.0596 (0.0636)	0.625 (0.742)	0.0139 (0.0117)
Ethnic Parties	0.362 (0.633)	0.0460** (0.0182)	0.998 (0.856)	-0.00226 (0.0607)	1.465 (1.279)	-0.0249 (0.0265)
Ethno-Nationalist Parties	-0.0386 (0.423)	0.00599 (0.0105)	0.340 (0.344)	0.0352* (0.0203)	1.400** (0.695)	0.0166** (0.00657)
Center-right Parties	-0.386 (0.454)	-0.00533 (0.00774)	-0.662* (0.392)	-0.0427 (0.0354)	0.317 (0.630)	-0.00453 (0.00643)
Independent	-0.388 (0.469)	-0.00525 (0.00642)	0.192 (0.403)	0.00879 (0.0304)	0.223 (0.686)	0.00994* (0.00524)
Election Competitiveness	-0.00852 (0.00917)	-0.000116 (0.000191)	0.00319 (0.00760)	-0.000250 (0.00106)	0.0117 (0.0163)	0.000122 (0.000129)
Year Fixed Effects	☑	☑	☑	☑	☑	☑
District Fixed Effects	☑	☑	☑	☑	☑	☑
Constant	-15.92 (2,388)	0.00705 (0.0164)	-14.46 (1,322)	0.0200 (0.0783)	-17.05 (1,326)	-0.0135 (0.0169)
Observations	5,578	6,442	6,396	6,442	4,143	6,442
R-squared		0.015		0.099		0.020
Number of Districts	22	27	26	27	17	27

Standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

As the analysis shows, incidents of assassinations and rioting are not significantly correlated with the seat share of nationalist parties. Nationalist parties do not differ from other, more mainstream parties in this way. However, even when I limit my analysis to Balochistan, there is still an increase in violent political demonstrations linked to the seat share of ethno-nationalist parties in a district, confirming the significance of this finding. The next section of my paper focuses on explaining this relationship between the seat share of ethno-nationalist parties and the number of violent demonstrations in a district.

## **1.7 Archival Evidence**

### **1.7.1 Ethnic Party Seat Share and Riots**

In the previous section, my results show that, in a panel dataset of political party seat share and violence, when ethnic parties increase their seat share from 0.25 to 0.75, riots increase by 75%, all other variables held constant at the mean. As my literature review illustrates, while a number of scholars have offered theories to explain variations in ethnic riots over time and over a geographical region (Tambiah 1996; Das 1990; Freitag 1989; Brass 1997; Spencer 1990; Pandey 1992), little work has been done on the relationship between the seat share of a political party and ethnic riots. I argue that the factors mentioned in the existing literature that lead to ethnic violence – such as the changing demographic balance in a district, a history of violence, and economic competition between ethnic groups – all play a part in creating the broader conditions conducive for riots to occur. However, these factors cannot by themselves explain who initiates ethnic violence and why riots increase when certain parties are in power. To understand the nature of rioting when specific parties come to power in a district, it is

necessary to look at the actors involved at the ground level – i.e. those who are at the forefront of initiating violence. In other words, to what extent are activists from the incumbent ethnic party directly responsible for promoting certain forms of violence and to what extent can these variations in violence be explained by other political factors?

Archival research into newspaper reports from 1988 to 2011 documenting incidents of riots show that in districts where ethnic parties win seats, party workers, both from the incumbent ethnic party and other ethnic parties, are frequently involved in some capacity in the rioting that takes place. In many cases, particularly in the 1980s and 1990s in a number of districts, violence was initiated and organized by the student wings of different political parties with the All Pakistan Mohajir Students Organization (APMSO), Jeay Sindh Students' Federation (JSSF), Sindh Peoples Student Federation (SPSF), Islami Jamiat Taleba (IJT), National Students Federation (NSF), People's Students Federation (PSF) and Muslim Students Federation (MSF) being the major perpetrators. In the news reports that I examined often a minor issue of contention would spark rioting, leading to numerous injured or dead. Not uncommonly, arguments about which political party could hoist its flag in a certain area became the cause of numerous riots. In other cases, incidents such as someone tearing up an Eid card with a picture of MQM leader, Altaf Hussain, led to three days of rioting and armed violence between Sindhi-Muhajir groups, with 19 killed and 110 injured. In other cases, riots broke out when the political party student wings, IJT and APMSO, argued over the use of a notice board at a university in Karachi (such as on May 9<sup>th</sup>, 1988). All these are examples of incidents where seemingly

minor issues of contention between different ethnic groups exposed underlying ethnic tensions and sparked rioting.

Kanchan Chandra defines an ethnic party as one that “appeals to voters as the champion of the interests of one ethnic category or set of categories to the exclusion of others and makes such an appeal central to its mobilizing strategy” (Chandra 2005, 236). As Chandra (2005) points out, the key element that this definition draws attention to is the way in which ethnic parties rely on a politics of exclusion. Riots often play a role in reinforcing antagonisms between ethnic groups and politicizing ethnic divides. Yet, as Paul Brass argues convincingly in the case of India, “Far from being spontaneous occurrences, the production of such riots involves calculated and deliberate actions by key individuals, the conveying of messages, recruitment of participants, and other specific types of activities, especially provocative ones, that are part of a performative repertoire” (Brass 1997, 4839). Wilkinson (2009) also makes a similar point in the context of India, showing that the majority ethnic group will seek to mobilize voters along ethnic lines through what he calls “anti-minority events” which are meant to provoke a reaction from the minority group thereby justifying portrayals of the minority as being hostile to the majority. Some of these incidents of rioting that I mentioned, such as hoisting a party flag in a neighborhood dominated by another ethnic group, could conceivably be seen in this light – as incidents where the majority ethnic party deliberately attempts to provoke a reaction from other ethnic groups to provide a justification for subsequent violence and vilification of these groups. Muhammad Waseem, one of the most well-known scholars of ethnic politics in Pakistan, argues that



Brass's conceptualization of the Institutionalized Riot System (IRS) explains the nature of rioting that the MQM in Pakistan has been involved in. He argues that "the mohajir violence has been planned and organized, rooted in a social matrix of sustained tension between communities" (Waseem 2010, 283). A *Dawn* news report about ethnic rioting in 1988 makes a similar argument about the pre-planned nature of rioting, suggesting that the miscreants behind the rioting wanted to undermine Sindhi-Muhajir unity and cause a "confrontation between the two people" (*Dawn*, 1988). The point is also reinforced by Gayer (2014) who, describing in detail the 1986 ethnic riots in Karachi, points out that "the meticulous planning recalled above attests of their premeditation and of their irreducibility to a spontaneous response..." (Gayer 2014, 46). This argument has also been made by other scholars in the context of Pakistan (Hussain 1990, Pildat 2011). More recently, news reports have pointed to the pre-planned nature of riots by MQM activists in Pakistan (*Dawn* 2016).

I argue that in situations where parties can hope to gain a substantial number of supporters from politicizing ethnicity – such as when an ethnic group is a bare majority or near-majority of the population – parties will have an incentive to use ethnic appeals to mobilize voters. In such cases, ethnic parties will attempt to make ethnicity the dominant cleavage, reinforce ethnic divides, and create an "us-vs-them" mentality to encourage voters to side with their own ethnic group. One way in which ethnic parties have undertaken this project of othering is through organizing and initiating riots. Riots, as Wilkinson astutely demonstrates, are not spontaneous outbursts of violence and instead should be viewed as "a solution to the problem of how to change the salience of ethnic

issues and identities among the electorate in order to build a winning political coalition” (Wilkinson 2009, 1). Once in office, ethnic parties ensure that political debate remains focused on ethnicity, and through riots, reinforce ethnic polarization so as to maintain their support base.

Rioting also increases when ethnic parties win seats because winning office provides ethnic parties with access to state resources that are used to promote ethnic polarization and favor their own ethnic party. Laurent Gayer (2014) in his seminal in-depth case study of Karachi offers numerous examples of the way in which political parties such as the PPP and the MQM, who win seats in Karachi, use state jobs (such as jobs in the police) and resources to win favor with their own ethnic group. There is significant case study evidence that ethnic parties, such as the MQM, have used state power to further the interests of their own ethnic group by providing them with greater access to public sector jobs, land, and other economic opportunities while denying these to other ethnic groups (Pildat 2011, Gayer 2014, Waseem 2010). For example, when the MQM dominated seats at the local government in Karachi in 2005, it pursued policies based on ethnic discrimination and was accused by the Pashtuns of organizing a “planned ethnic annihilation” (Guzdar 2008). Similarly, Pashtuns in Balochistan have argued that the resources of Balochistan should be equally shared between the Balochis and Pashtuns, a demand rejected by Baloch parties (*The News* 2012). Haris Gazdar (2008), Laurent Gayer (2014), Pildat (2011) and others have documented the use of state power by specific ethnic parties in Pakistan to further the interests of their own ethnic group. Such discriminatory policies harden ethnic divides, causing ethnic resentment and creating the

conditions for rioting by opposing ethnic groups. Newspaper accounts illustrate how opposing ethnic parties in Pakistan have used riots to challenge the incumbent ethnic party.

These factors together explain why rioting increases when ethnic political parties win power in a district. However, this does not mean that all ethnic parties encourage violent politics. Since my paper looks at the relationship between the seat share of political parties and different forms of violence, the nature of my research excludes ethnic parties that are too small to win any seats in the provincial assembly. Instead my paper looks at ethnic parties that represent a sizeable ethnic group – i.e. a bare majority or near-majority ethnic group. These constitute parties that can benefit from mobilizing along ethnic lines to win seats. My conclusions apply to this category of ethnic parties only. In the next section, I look at the effect of ethno-nationalist party incumbency in a district on violent demonstrations.

### **1.7.2 Ethno-Nationalist Party Seat Share and Violent Demonstrations**

Ethno-nationalist parties are similar to ethnic parties in so far as they claim to advance the goals favorable to specific ethnic groups and they use ethnic appeals to win support. However, unlike ethnic parties, ethno-nationalist parties are oriented towards, as Beissinger puts it, “challenging a given order” (Beissinger 1998, 402). They do so by demanding a fundamental change in government policies, as well as greater autonomy from the national government for their ethnic group. At the extreme, these parties demand complete territorial independence. In the case of Pakistan, the ethno-nationalist parties in my data are concentrated in Balochistan, a province which has had strained ties

with the center. Balochistan has witnessed the marginalization of Baloch rights, slow economic development, unfair distribution of resources between the provinces, and the use of resources found in Balochistan, such as natural gas, for the benefit of other provinces. These are some of the issues that have given birth both to militant Baloch organizations as well as Baloch nationalist parties who challenge the existing order. While Baloch militant organizations have rejected all participation in government and attacked gas pipelines, railways, and government buildings, Baloch nationalist parties have participated in elections, seeking to bring about change through participation in the political process (Ahmer 2016, Syed 2013). I focus solely on Baloch nationalist parties, which have taken part in elections and won seats in the provincial assembly, rather than looking at violence more generally by all Baloch nationalist organizations. In addition, as mentioned previously, the ANP in Khyber Pakhtunkhwa has been considered both a leftist political party and an ethno-nationalist one. In the analysis in the previous section, I have included the ANP in the category of leftist political parties since the ANP has been a leftist political party for much of its history and has only more recently taken on a more ethno-nationalist character. However, I have also included the ANP in the category of ethno-nationalist parties and rerun my analysis, the results of which are in the appendix and confirm the hypothesis that violent political demonstrations increase when ethno-nationalist parties come into power.

My results show that violent political demonstrations increase by 43.5 percent when ethno-nationalist parties increase their seat share in a district from 0.25 to 0.75, all other variables held at the mean. Since ethno-nationalist parties seek to challenge the existing

political system, they mobilize voters in ways that are distinctive from how other ethnic parties appeal to voters. Ethno-nationalist parties gain support by highlighting and emphasizing the grievances of their ethnic group vis-à-vis the national government, challenging the government on key issues, as well as promising policy changes regarding greater rights for the ethnic group. Ethno-nationalist parties employ tactics that highlight and reinforce nationalist grievances, such as organizing and public demonstrations. Once ethno-nationalist parties win office, they rely on demonstrations to protest the actions and policies of the national government with regards to their ethnic group and to draw attention to issues that concern the group. In other words, demonstrations are a key element of the politics of grievance that ethno-nationalist parties engage in. Other scholars have also looked at the link between support for ethno-nationalist parties and political protest in different contexts (Rydgren 2004). In addition, even when the incumbent ethno-nationalist party is not directly involved in organizing demonstrations, it is often sympathetic to the views of the ethno-nationalist groups that protest government action through demonstrations. Relatedly, the rhetoric and grievance-based politics of ethno-nationalist parties reinforce resentments against the national government, creating conditions that are ripe for popular protest and violence. Incumbent ethno-nationalist politicians have often openly criticized national government policy, sat in the opposition in the provincial assembly and threatened to boycott future elections to register their disagreement with the national government. For example, one of the most prominent nationalist parties, the Balochistan National Party-Mengal (BNP-M) exited from parliament in 2006 when the prominent Baloch leader Nawab Akbar Bugti was murdered

and boycotted the next elections in 2008 to register their protest against government treatment of the Baloch. In office, not only has the BNP-M staged demonstrations against the killing of Baloch activists, it has also been sympathetic to protests organized by other nationalist groups.

As with rioting by ethnic parties, newspaper archives shed light on the nature of the political demonstrations that occur when ethno-nationalist parties control a district, as well as the actors involved in these demonstrations. A thorough examination of newspaper reports from 1988 to 2011 shows that violent demonstrations in districts where ethno-nationalist parties have won seats often occur in response to three kinds of events. In response to national government action that resulted in the death, arrest or harassment of ethno-national activists, ethno-nationalist parties (including the incumbent ethno-nationalist party) planned, organized and carried out demonstrations. This forms the first category of demonstrations, which were a significant proportion of all demonstrations in these areas. There are many examples of this in the newspaper archives from this period. For example, after the assassination of the secretary general of the BNP-M, the party leadership called for three days of strike in the province. All markets and businesses were closed in Quetta and demonstrations were taken out by BNP-M with protestors blocking highways and railways, and attacking vehicles and government buildings. Such incidents are not uncommon. The BNP-M organized demonstrations in December 2010 in Quetta to protest the treatment of their activists by Pakistan's security forces; protests were organized across a number of districts by nationalist parties in 2009 when three Baloch leaders were killed; the BNP-M also held demonstrations in August

2010 to protest the assassination of their party worker, Attaullah Baloch; demonstrations were also held in October of the same year to protest the killing of Mir Nooruddin Mengal and so on. These demonstrations are always organized by nationalist parties, who rely on this form of protest to pressure the government to address certain issues, highlight nationalist concerns, focus public attention on the grievances of nationalist parties, and mobilize voters behind the ethno-nationalist cause.

Interestingly, as documented by Muhammad Waseem (2010) and others, the Pakistani state has attempted to counteract the popularity of ethno-nationalist parties amongst voters by supporting Islamist parties in Balochistan. This ties into the second kind of demonstrations seen in districts where ethno-nationalist parties have a foothold – i.e. demonstrations organized and carried out by Islamist parties who seek to draw attention to religious issues and mobilize voters along religious lines. However, Islamist parties do not yet have a substantial presence in regions where ethno-nationalist parties are strong and they have only organized a few demonstrations in the time period that I examine from 1988 to 2011.

The third kind of demonstrations seen in districts controlled by ethno-nationalist parties are those taken out by student organizations and nationalist groups. To cite a few examples from a long list: Baloch Students Organization (BSO-Azad) carried out demonstrations in March 2009 to protest the arrest of their leader; the BSO-Azad also demonstrated in June of the same year when its vice chairman was arrested; and BSO-Azad carried out multiple demonstrations in 2010 and 2011 to protest the treatment of

their activists by security forces. The Baloch National Front, an alliance of several different nationalist groups, has also taken out demonstrations such as the one in September 2009. Incumbent ethno-nationalist parties have been sympathetic to these demonstrations.

It is important to note that in the cases where ethno-nationalist political parties organize demonstrations, these demonstrations might not have been intended to be violent. In fact, in some cases, repression by security forces turns peaceful demonstrations into violent ones. Since my dataset only records violent demonstrations, it might appear that in the districts where ethno-nationalist parties have a significant seat share, they purposefully engage in violence through demonstrations. However, in at least some cases in my dataset, peaceful demonstrations turned violent when security forces attempted to repress them.

In this section, I have argued that violent demonstrations have served an important purpose for the incumbent ethno-nationalist parties. As mentioned earlier, ethno-nationalist parties are primarily oriented towards the national government, demanding greater rights and recognition from the state, unlike other ethnic parties that are often focused on mobilizing voters against opposing ethnic groups. In their confrontation with the national government, ethno-nationalist parties rely on demonstrations to draw attention to grievances, to emphasize specific collective identities, mobilize voters and – most importantly – to put specific issues on the public agenda and frame public discourse and debate.



### **1.7.3 Center-right Party Seat Share and Violent Political Demonstrations**

The major center-right parties in Pakistan that this paper examines, the PML-N, PMLQA and IJI, have largely drawn on two main groups of voters for support, the religious class as well as the industrialists and traders. The largest center-right party in Pakistan, the PML-N, has successfully appealed to the religious class by taking a conservative stance on political and social issues and by maintaining cordial ties with different seminaries including both Deobandi and Bareilvi seminaries. The PML-N has also accepted into the party several political leaders who have ties to peers and important religious figures. In addition, the PML-N has also presented itself as a business-friendly party and historically had the support of traders and the business class.

Interestingly, an examination of the newspaper archives between 1988 and 2011 shows that the groups usually involved in carrying out violent demonstrations in districts where center-right parties have a high seat share are religious groups and traders. For example, on February 18<sup>th</sup> and 19<sup>th</sup>, 1989, several religious parties and groups including the IJI, Tehrik-i-Nifaz-i-Fiqah Jafria, the Imamia Students Organisation and the International Muslim Organization held a demonstration in Lahore against the publication of Salman Rushdie's "Satanic Verses." Another example is the July 4<sup>th</sup>, 2007 protests in Abbottabad where religious groups attacked a number of banks and damaged cars in anger against the government handling of the Lal Masjid situation. The government had earlier engaged in an armed confrontation with the religious clerics of the Lal Masjid, which religious groups protested in the weeks that followed. Another example is that of Dera Ghazi Khan where religious groups came out to protest the destruction of Babri Mosque in Ayodhya

on December 9<sup>th</sup>, 1992. Protests against the demolition of the Babri Mosque also took place in a number of other districts where center-right parties had a large seat share such as Faisalabad, Lahore, Sialkot, Jhang, Kasur, Rahimyar Khan and other places. Similarly, from January 20<sup>th</sup> to 22<sup>nd</sup>, 1991, several demonstrations were held by religious parties in districts such as Lahore, Rawalpindi, Sialkot, Gujranwala and others against the attack by the US and its allied forces on Iraq. However, religious parties in these districts have not just been involved in protesting issues of religious or ideological significance; in some cases, they have also held demonstrations to protest issues concerning public service provision. For example on September 3<sup>rd</sup>, 1993, in Faisalabad, protestors from the Jamaat-i-Islami attacked a bus and other vehicles because of a strike arranged by the Pakistan Islamic Front against the increase in price of fuel and price hike on other commodities.

However, an overwhelming number of protests in districts where center-right parties have a large seat-share are organized and held by traders. Archival research shows that traders have held demonstrations to protest a range of issues including police brutality, increase in taxation, inadequate and defective public services, the electricity crisis and the threat to the lives of traders from armed robberies. A typical example of these protests is the Jan 3<sup>rd</sup>, 1994 demonstration in Faisalabad where traders blocked one of the main roads of Faisalabad, burned tires and chanted slogans against the police for not stopping robberies in the area and allowing criminals to operate without fear. Such protests against the police are not uncommon in center-right districts: on April 14<sup>th</sup>, 2010, in Faisalabad, traders protested against the police for not being able to apprehend the killers of a trader

who had been murdered; on November 4<sup>th</sup>, 1989 traders in Lahore protested against police inability to apprehend robbers; on March 21<sup>st</sup>, 1994, shopkeepers and traders closed their shops and blocked a major road to protest police inability to arrest robbers; on January 14<sup>th</sup>, 1998, shopkeepers in Faisalabad came out to protest police brutality by blocking the main highway and burning tires. Similarly, traders in center-right districts have also protested inadequate provision of public services, including electricity and gas load-shedding. For example, on January 4<sup>th</sup>, 2009, traders called a strike to protest the electricity crisis as well as gas load-shedding in Faisalabad. Similarly, demonstrations against electricity and gas load-shedding occurred on 2<sup>nd</sup> January 2<sup>nd</sup>, 1990, in Sialkot, January 4<sup>th</sup>, 2009 in Kasur, January 4<sup>th</sup>, 2009 in Lahore, July 9<sup>th</sup>, 2009 in Sialkot, January 21<sup>st</sup>, 2010 in Gujrat, and on many other days, too numerous to list here.

The propensity of traders and religious groups to carry out demonstrations in districts where center-right parties have a significant seat share can be understood in terms of two political realities. First, center-right parties draw support from groups that have the resources and linkages needed to organize demonstrations. Religious groups in Pakistan are more easily able to rally support for demonstrations through emotional appeals to religion, compared to non-religious groups, especially given the significance of religious symbols for the general population. A number of existing studies on the role of religion in mobilizing protest movements point at the “identity-construction, solidarity-building functions of religion” (Mirola 2003, 444). As these studies point out, religion plays an important role in mobilizing people through appeals to a common set of ideals. In addition, “religious leaders can lend their extensive knowledge and training to a

movement, as well as use their network ties to assist movements, either through mobilizing public opinion or by putting religious and moral pressure on target elite to cooperate” (Mirola 2003, 447). Thus, religious groups, which are the amongst the core support base of center-right parties, possess significant advantages in terms of their ability to organize and carry out demonstrations.

Traders, the other main group that center-right parties in Pakistan rely on for support, cannot mobilize people in the same way as religious elites. However, they are still able to draw on their networks and associations to organize demonstrations. Traders also face a lower cost for protesting compared to other groups in society, such as daily wage-earners whose day-to-day survival is precariously dependent on the meagre amount they earn every day. Traders can, at least financially, afford to shut their businesses for a day to carry out demonstrations against government policies.

This can explain why the core supporters of one of Pakistan’s largest center-right political party – the PML-N – protest more often than the supporters of Pakistan’s other mainstream party – the PPP – whose supporters consist of the working class. In addition, protests by traders, especially those involving shutter-down strikes, are more likely to hinder economic activity and attract the notice of the media and the government. I argue that the groups that center-right parties in Pakistan mobilize and empower in order to win support are the very groups that are likely to use that sense of empowerment to make demands on the government and carry out demonstrations. The second reason why center-right party districts are associated with a higher number of political demonstrations is because center-right parties in Pakistan, specifically the PML-N, are

often viewed as being more open to acknowledging and accommodating protest politics (Manan 2014).

## **1.8 Conclusion**

This paper has looked at the effect of political party seat share on the nature and levels of political violence in districts across Pakistan from 1988 to 2011. My analysis, using a fixed effects OLS regression model as well as a fixed effects negative binomial model, shows that when the fraction of seats controlled by ethnic parties in a district increase from 0 to 1, riots increase by 205 percent, all other variables held constant. In addition, I also find that violent political demonstrations increase by 144 percent when the fraction of seats won by ethno-nationalist parties in a district increase from 0 to 1. Violent demonstrations increase by 75 percent when center-right parties win all the seats in a district, all else held constant.

I argue that ethnic parties that represent a group that is significant enough in size to win the election will seek to politicize ethnicity, harden ethnic divides, and mobilize their co-ethnics in order to win electoral support. One way in which ethnic parties have reinforced “us-vs-them” divides is through organizing and participating in riots against other ethnic groups. Rioting draws attention to ethnic divisions and blatantly reinforces the us-vs-them divide; in addition, it creates a situation of insecurity, pushing members of different ethnic groups to band together. I look at newspaper archives from 1988 to 2011 to show that activists from the major ethnic parties often initiate rioting over seemingly minor issues to force their co-ethnics to side with the party. The incumbent ethnic party uses

such tactics to maintain its support base, and to reinforce the significance of ethnicity as the dominant cleavage. In addition, the incumbent ethnic party has access to state resources that are used to favor their own ethnic group such as access to jobs, land and opportunities for advancement. These benefits are discriminately granted to their own ethnic group at the expense of opposing ethnic groups, further reinforcing ethnic resentment and creating the conditions for rioting between ethnic groups.

The second main argument of this paper is focused on the relationship between ethno-nationalist party seat share and the increase in violent demonstrations. I argue that ethno-nationalist parties rely on support from voters disillusioned with the policies of the national government and therefore engage in a politics of grievance to win support. Demonstrations serve as a vehicle for ethno-nationalist parties to increase the political salience of nationalist concerns and grievances, shape existing political discourse, and draw the attention of voters. I look at newspaper archives to show that when ethno-nationalist parties have won office, they have organized demonstrations to protest government excesses, to highlight government failures and to reinforce the significance of nationalist concerns. Even when the incumbent ethno-nationalist parties are not directly involved in carrying out demonstrations, they are often sympathetic to protests by other ethno-nationalist groups. In addition, I show that violent political demonstrations also increase when center-right parties win seats, and this result is tied to the nature of the groups that form the core support base for center-right parties in Pakistan.

While a unique set of factors – such as the increased access to weapons in Pakistan after the Soviet war in Afghanistan – have shaped the link between political parties and violence in Pakistan, I hope that my analysis in the context of Pakistan can be replicated in other countries to determine whether the trends I have identified hold in other contexts and countries. Further research is needed not just on the use of violence by political parties but also on whether such violence has been effective in helping parties achieve their political aims.

## Appendix (Essay 1)

*Table 1-5 Summary Statistics*

<b>Variables</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
Logged Riots	0.045	0.200	0	3.178
Logged Terrorism	0.073	0.282	0	4.143
Logged Assassinations	0.102	0.343	0	5.037
Logged Violent Demonstrations	0.049	0.229	0	3.850
Center-right Parties	0.209	0.332	0	1.000
Religious Parties	0.045	0.174	0	1.000
Left Parties	0.167	0.295	0	1.000
Ethnic Parties	0.011	0.080	0	1.000
Nationalist Parties	0.024	0.140	0	1.000

*Table 1-6 Political Party Classification*

<b>Political Party Categories</b>	<b>Parties Included</b>
Leftist parties	PPP, PDA, ANP
Center-right parties	PMLN, PMLQA, IJI
Nationalist parties	BNP-M, BNP-Awami, JWP, NP
Ethnic parties	MQM, HPG, PKMAP
Religious parties	JUIF, MMAP



*Table 1-7 Frequency Table for Demonstrations, Assassinations and Riots*

Number of Events	Violent Demonstrations		Assassinations		Riots	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
0	1,138,393	99.74	1,134,122	99.36	1,138,765	99.77
1	2,662	0.23	6,057	0.53	2,484	0.22
2	193	0.02	777	0.07	106	0.01
3	64	0.02	221	0.02	26	0.00
4	35	0.00	94	0.01	9	0.00
5	18	0.00	50	0.00	1	0.00
6	9	0.00	30	0.00	6	0.00
7	7	0.00	19	0.00	1	0.00
8	5	0.00	11	0.00	1	0.00
9	4	0.00	6	0.00	1	0.00
10	1	0.00	5	0.00	2	0.00
11	1	0.00	1	0.00	1	0.00
12	2	0.00	6	0.00	0	0.00
13	2	0.00	0	0.00	0	0.00
14	1	0.00	1	0.00	0	0.00
15	0	0.00	1	0.00	0	0.00
16	2	0.00	0	0.00	0	0.00
17	0	0.00	1	0.00	0	0.00
18	0	0.00	0	0.00	0	0.00
19	1	0.00	0	0.00	0	0.00
20	0	0.00	0	0.00	0	0.00
21	0	0.00	1	0.00	0	0.00
22	0	0.00	0	0.00	0	0.00
23	0	0.00	0	0.00	0	0.00
24	1	0.00	0	0.00	0	0.00
	1,141,403	100.00	1,141,403	100.00	1,141,403	100.00

*Table 1-8 Regression Analysis with ANP as a Ethno-Nationalist Party*

	(1) Fixed Effects OLS Regression (DV=Logged Violent Demonstrations)	(2) Fixed Effects OLS Regression (DV=Logged Riots)
Religious Parties	0.0126 (0.00764)	0.0153* (0.00869)
Leftist Parties	0.00107 (0.0112)	-0.0181 (0.0150)
Nationalist Parties	0.0150** (0.00637)	0.0166 (0.0101)
Ethnic Parties	0.00518 (0.0380)	0.100*** (0.0318)
Center-right Parties	0.0123* (0.00666)	0.00496 (0.00693)
Independents	-0.00261 (0.00822)	0.0155 (0.0107)
Election Competitiveness	0.000295 (0.000448)	0.000592 (0.000368)
Year Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
District Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Constant	-0.0131 (0.0436)	0.0427 (0.0389)
Observations	26,446	26,446
R-squared	0.032	0.013
Number of Districts	108	108

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Table 1-9 Fixed Effects OLS Regression with the Same Number of Districts as the Fixed Effects Negative Binomial Model in Tables 1-1 and 1-3*

<b>VARIABLES</b>	<b>(1) Fixed Effects OLS (DV=Logged Number of Riots)</b>	<b>(2) Fixed Effects OLS (DV=Logged Number of Assassinations)</b>
Religious Parties	0.0119 (0.00937)	0.00715 (0.0134)
Leftist Parties	-0.0111 (0.0122)	-0.0139 (0.0232)
Ethnic Parties	0.0994*** (0.0319)	-0.0477 (0.0900)
Nationalist Parties	0.0262 (0.0168)	0.0391* (0.0214)
Center-right Parties	0.00737 (0.00737)	-0.00815 (0.0112)
Independent Candidates	0.0193 (0.0126)	0.0248 (0.0179)
Election Competitiveness	0.000631 (0.000384)	-0.000619 (0.000709)
Year Fixed Effects	☑	☑
District Fixed Effects	☑	☑
Constant	0.0415 (0.0410)	0.165*** (0.0554)
Observations	25,103	26,047
R-squared	0.014	0.033
Number of Districts	99	102

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Table 1-10 FE OLS Model and FE Negative Binomial Model for the Effect of Election Competitiveness on the Relationship between Party Seat Share and Riots for Time Period between Elections*

<b>VARIABLES</b>	<b>(1) Fixed Effects OLS Model DV= (Logged Number of Riots)</b>	<b>(2) Fixed Effects Negative Binomial Model DV= (Number of Riots)</b>
Religious Parties	0.0501 (0.0709)	-1.493 (2.895)
Election Competitiveness	0.00122** (0.000612)	0.0223*** (0.00605)
Religious Parties Interacted with Election Competitiveness	-0.000472 (0.000840)	0.0226 (0.0344)
Leftist Parties	-0.0809 (0.0902)	0.404 (0.687)
Leftist Parties Interacted with Election Competitiveness	0.000820 (0.00107)	-0.00552 (0.00827)
Ethnic Parties	0.348*** (0.0666)	3.347*** (0.623)
Ethnic Parties Interacted with Election Competitiveness	-0.00308*** (0.000855)	-0.0301*** (0.00854)
Nationalist Parties	0.123*** (0.0292)	2.501*** (0.708)
Nationalist Parties Interacted with Election Competitiveness	-0.00135*** (0.000339)	-0.0321*** (0.0101)
Center-right Parties	0.0699* (0.0376)	1.704*** (0.625)
Center-right Parties Interacted with Election Competitiveness	-0.000810* (0.000459)	-0.0194** (0.00766)
Independent	0.188 (0.118)	4.132*** (0.708)
Independent Candidates Interacted with Election Competitiveness	-0.00209 (0.00131)	-0.0452*** (0.00862)
Year Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
District Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Constant	-0.00509 (0.0430)	-1.991*** (0.568)
Observations	26,554	25,103
R-squared	0.016	
Number of Districts	108	99

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Table 1-11 FE OLS Model and FE Negative Binomial Model for the Effect of Election Competitiveness on the Relationship between Party Seat Share and Riots during Election Months*

	(1) Fixed Effects Negative Binomial Model (DV=Number of Riots)	(2) Fixed Effects OLS Model (DV=Logged Number of Riots)
Religious Parties	-8.903 (21.60)	-0.294 (0.537)
Election Competitiveness	-0.0571 (0.0593)	-0.00150 (0.00457)
Religious Party interacted with Election Competitiveness	0.0582 (0.247)	0.000944 (0.00633)
Leftist Parties	-5.963 (5.449)	-0.0228 (0.489)
Leftist Party interacted with Election Competitiveness	0.0537 (0.0632)	0.000334 (0.00559)
Ethnic Parties	-8.078 (5.309)	-2.184*** (0.669)
Ethnic Party interacted with Election Competitiveness	0.0871 (0.0631)	0.0241*** (0.00838)
Nationalist Parties	-9.206 (12.34)	-0.249 (0.235)
Nationalist Party interacted with Election Competitiveness	0.0958 (0.138)	0.00263 (0.00275)
Center-right Parties	-9.952* (5.752)	-0.591 (0.404)
Center-right Party interacted with Election Competitiveness	0.0891 (0.0670)	0.00555 (0.00478)
Independent	-3.610 (5.332)	-0.310 (0.371)
Independent interacted with Election Competitiveness	0.0199 (0.0648)	0.00220 (0.00435)
Year Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
District Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Constant	6.512 (5.179)	0.334 (0.378)
Observations	290	557
R-squared		0.083
Number of Districts <sup>2</sup>	51	108

<sup>2</sup> As in the previous analysis, the number of districts differ between the FE OLS model and the FE Negative Binomial Model because the FE OLS model uses an  $\ln(y+1)$  transformation of the dependent variable so zeros are converted into ones and districts with all zero observations that are dropped in the FE negative binomial model are not dropped in the FE OLS model. Since the different results between the two models could be attributed to the different number of observations, I tried to run a FE OLS model with only the

Standard errors in parentheses \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Table 1-12 Relationship between Runner-up Political Party and the Number of Riots during Election Months*

	(1) Negative Binomial Model (DV=Number of Riots)	(2) Fixed Effects OLS Model (DV=Logged Number of Riots)
Leftist Runner-Up Party	0.152 (0.907)	0.0343 (0.0545)
Center-right Runner-Up Party	0.493 (0.832)	0.0659 (0.0642)
Nationalist Runner-Up Party	2.297* (1.273)	0.341* (0.178)
Ethnic Runner-Up Party	3.342* (1.885)	0.287 (0.223)
Religious Runner-Up Party	-2.021 (1.490)	-0.103* (0.0590)
Independent Runner-Up	-0.0837 (0.816)	-0.000835 (0.0536)
Election Competitiveness	0.0111 (0.0113)	0.00302* (0.00182)
Year Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
District Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Constant	-1.296 (1.206)	-0.128 (0.150)
Observations	290	557
R-squared		0.061
Number of Districts	51	108

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

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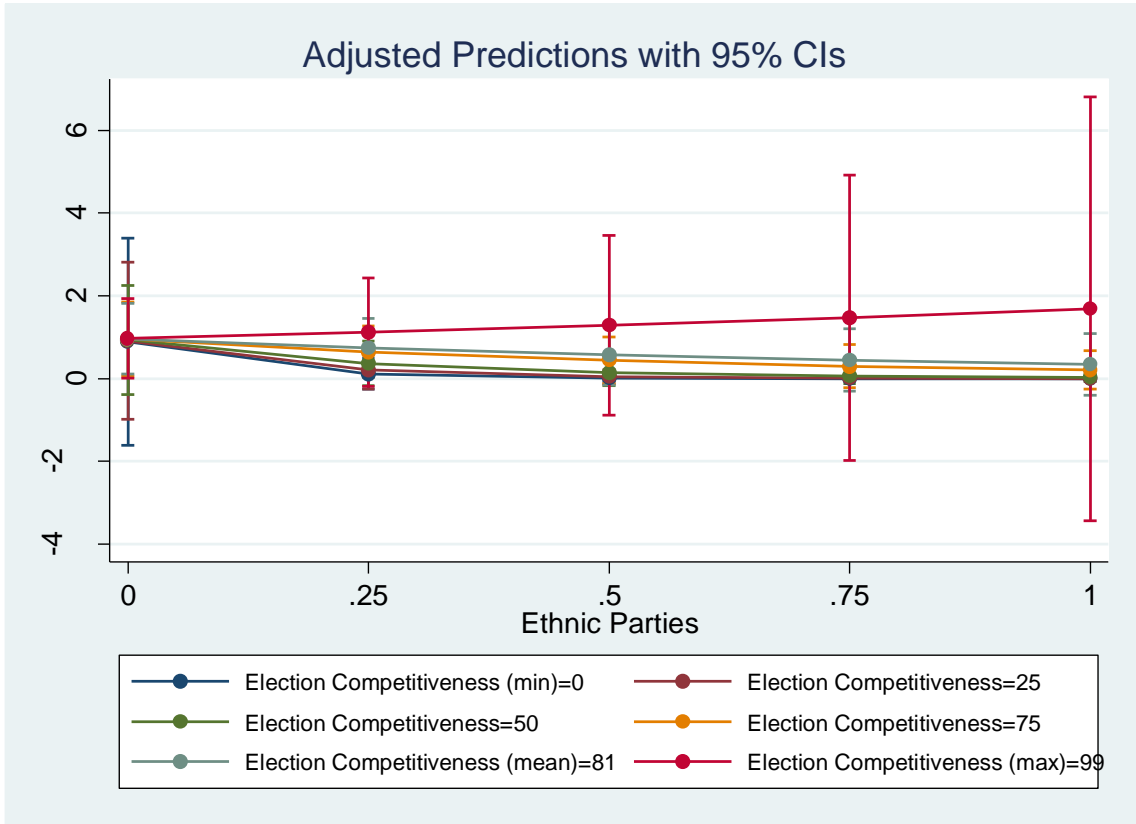
observations that were included in the FE Negative Binomial model. However, Stata was unable to estimate the FE OLS model on such a small number of observations.

*Table 1-13 Reduced FE Negative Binomial Model with only Statistically Significant Variables from the Main Model*

<b>VARIABLES</b>	<b>(1) Fixed Effects Negative Binomial Model (DV=Numb er of Riots)</b>	<b>(2) Fixed Effects Negative Binomial Model (DV=Numb er of Riots)</b>	<b>(3) Fixed Effects Negative Binomial Model (DV=Num ber of Riots)</b>	<b>(4) Fixed Effects Negative Binomial Model (DV=Numbe r of Violent Demonstratio ns)</b>	<b>(5) Fixed Effects Negative Binomial Model (DV=Numbe r of Violent Demonstratio ns)</b>	<b>(6) Fixed Effects Negative Binomial Model (DV=Numbe r of Violent Demonstratio ns)</b>	<b>(7) Fixed Effects Negative Binomial Model (DV=Num ber of Assassinati ons)</b>
Ethnic Parties	0.715*** (0.171)						
Nationalist Parties				0.523 (0.441)			0.857*** (0.207)
Center-right Parties						0.434*** (0.0986)	
Election Competitiveness		0.00296 (0.00242)			0.00824*** (0.00232)		
Independent			0.402** (0.165)				
Year Fixed Effects	☑	☑	☑	☑	☑	☑	☑
District Fixed Effects	☑	☑	☑	☑	☑	☑	☑
Constant	-0.918*** (0.126)	-0.324 (0.306)	-0.846*** (0.125)	-1.078*** (0.135)	-2.135*** (0.441)	-1.087*** (0.136)	-0.743*** (0.0939)
Observations	33,579	25,103	33,579	32,144	23,085	32,144	35,875
Number of Districts	117	99	117	112	90	112	125

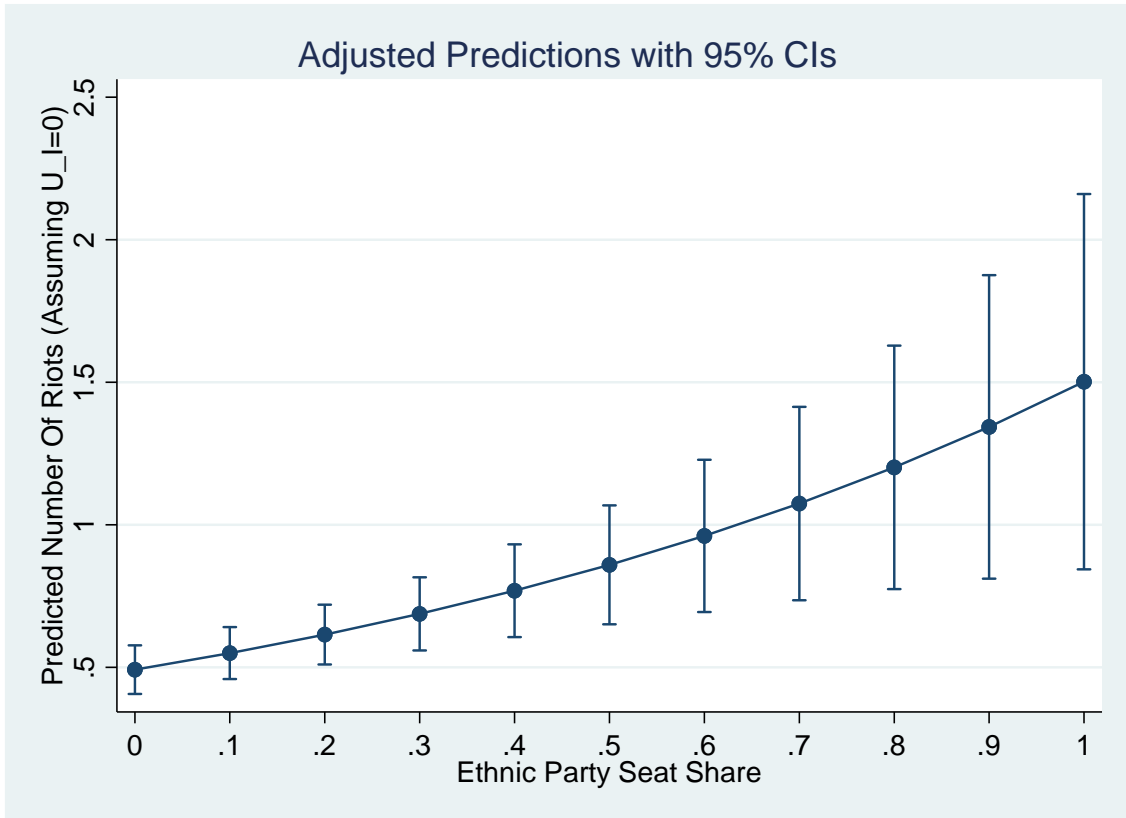
Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Graph 1-2 Margins Plot for the Effect of Ethnic Party Seat Share on the Number of Riots at Different Levels of Election Competitiveness*

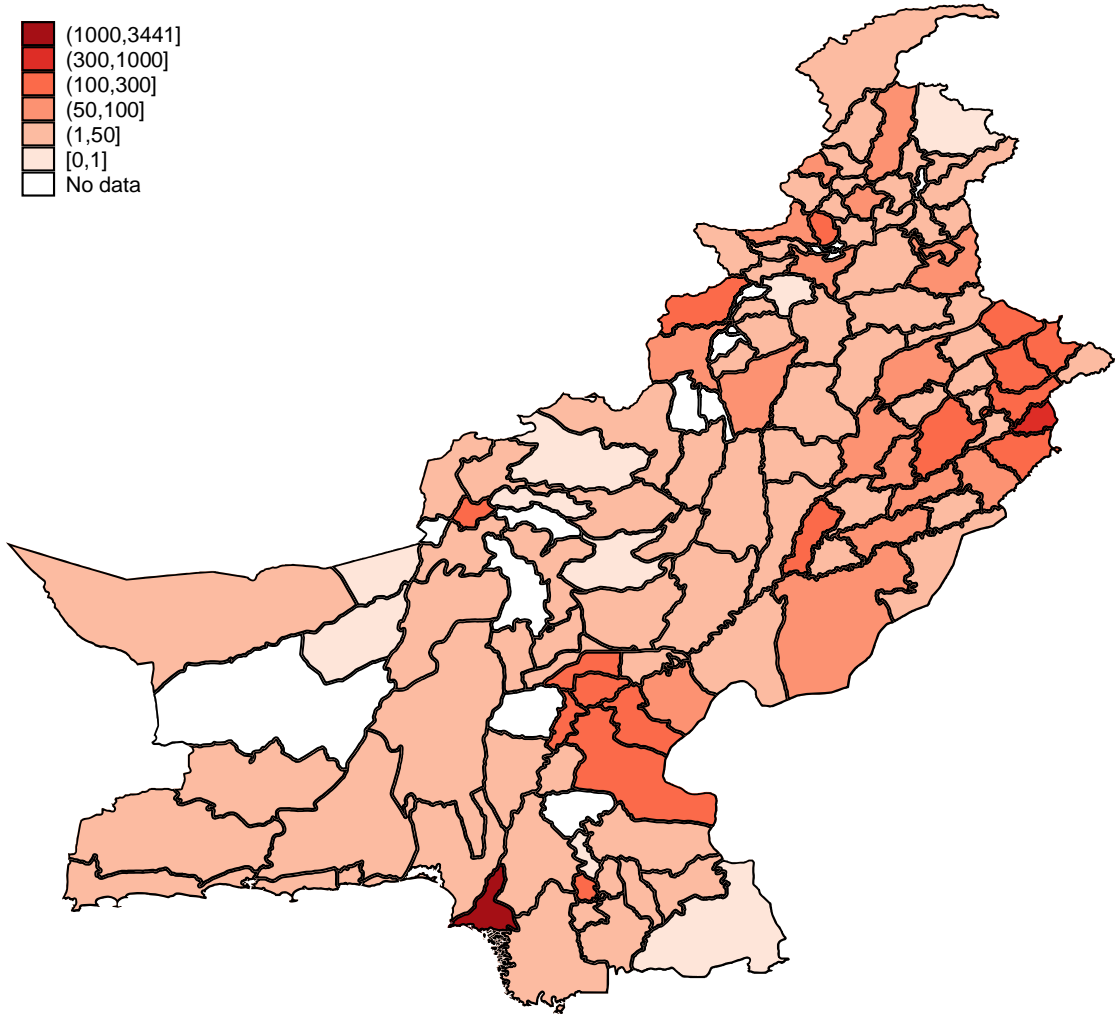




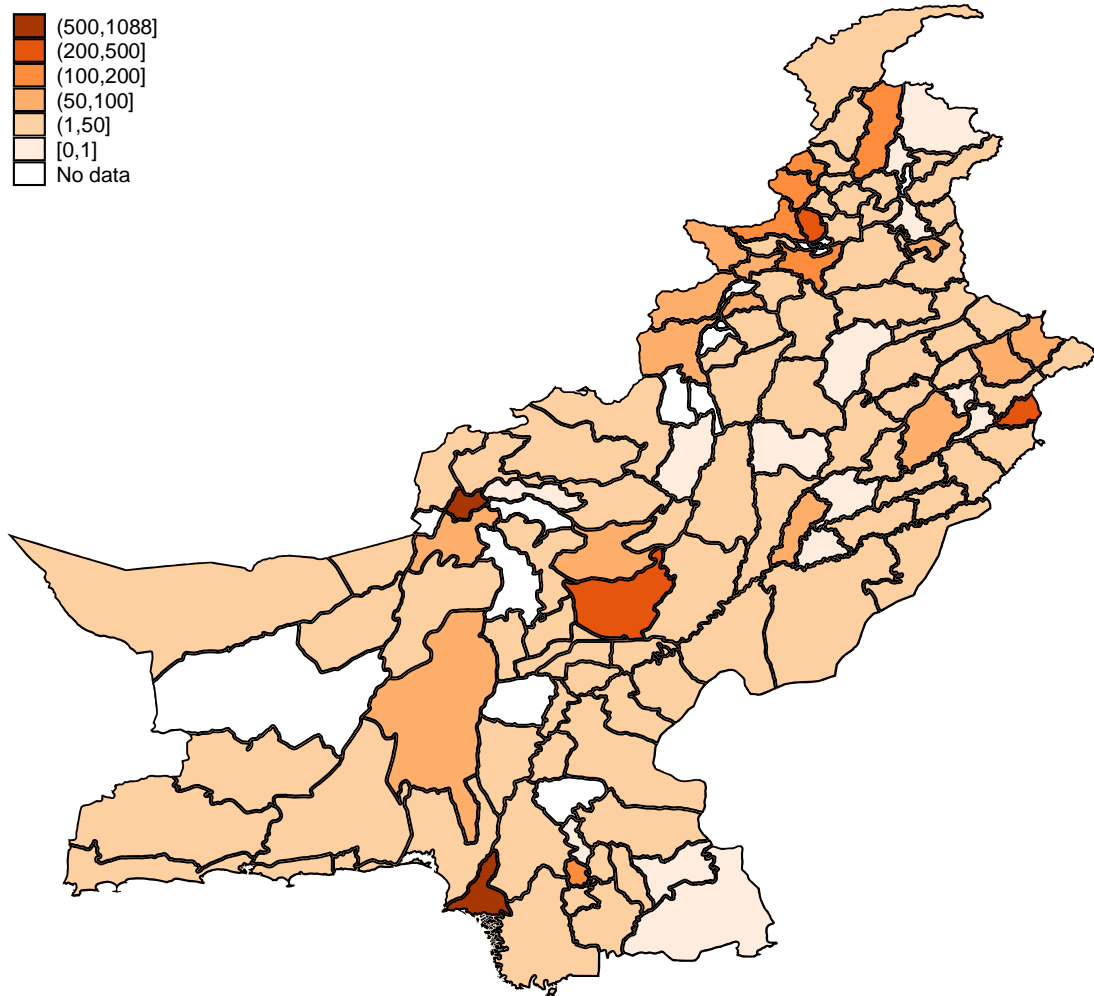
*Graph 1-3 Margins Plot with 95% CI for the Relationship between Ethnic Party Seat Share and Number of Riots*



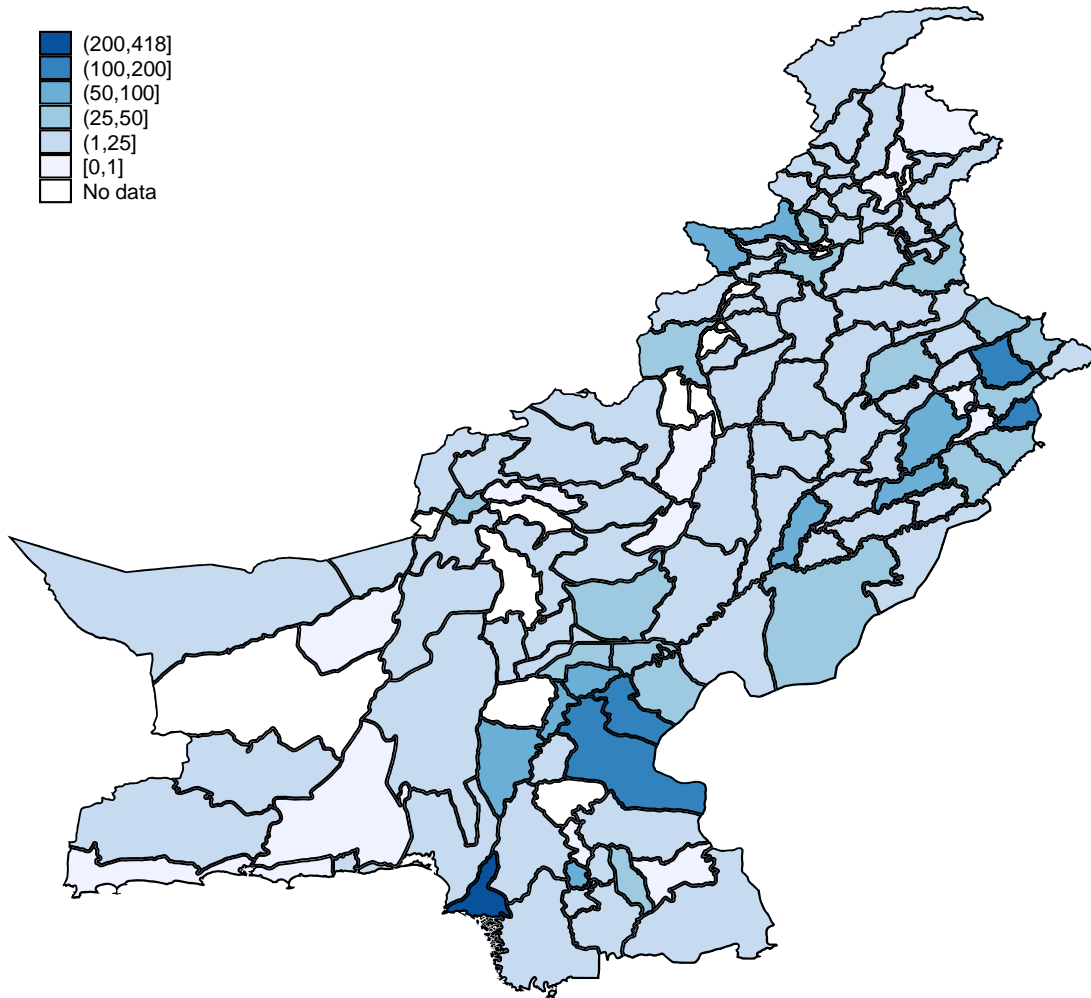
*Map 1-2 Total Incidents of Assassinations in Pakistan from 1988 to 2011 (Source: BFRS dataset)*



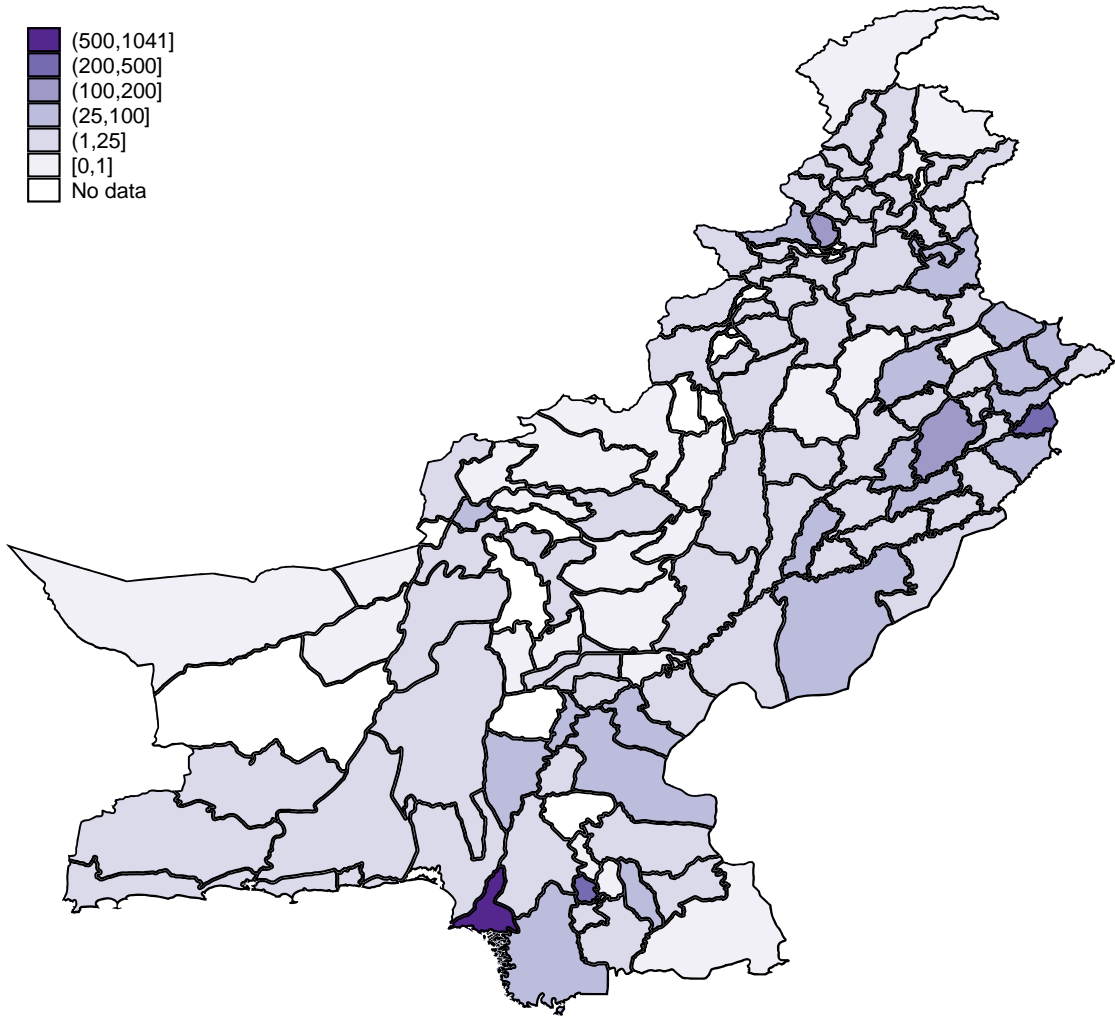
*Map 1-3 Total Incidents of Terrorism in Pakistan from 1988 to 2011 (Source: BFRS dataset)*



*Map 1-4 Total Number of Riots in Pakistan from 1988 to 2011 (Source: BFRS dataset)*



*Map 1-5 Total Number of Violent Demonstrations in Pakistan from 1988 to 2011 (Source: BFRS dataset)*



## **ESSAY 2 : BREAKING DOWN ELECTION VIOLENCE: A FOCUS ON PAKISTAN**

**Abstract:** This paper examines the nature and timing of election violence over the course of six elections in Pakistan, between 1988 and 2011. In particular, it looks at how four different forms of violence – assassinations, riots, demonstrations and terrorist attacks – vary before, during and after elections and whether variations in these forms of violence can be explained by looking at the ideological orientation of the specific parties that compete in each district in the election. Using the BFRS dataset on daily incidents of election violence across 131 districts of Pakistan between 1988-2011, I show that election violence in Pakistan is concentrated on election day, with some violence in the week before and after the election. I also find that riots and terrorist attacks peak on election day with a smaller increase in riots in the weeks before and after the election. While my results on riots and terrorist attacks conform to the arguments in the existing literature, my analyses of variations in assassinations and violent political demonstrations around election time challenge the prevailing wisdom on the topic. Contrary to the existing literature, which largely shows that assassinations increase in the months leading up to the election, my results show that, in the context of Pakistan, assassinations are not affected by the onset of elections. In addition, violent political demonstrations do not increase in the months after the election in my dataset, which contradicts a significant body of literature that argues that demonstrations and protests are likely to increase after an election, especially when the election is perceived to have been rigged. Finally, while much of the existing literature associates ethnic and religious parties with political

violence and views them as being destabilizing to democracy, I find no link between the ideological orientation of a political party and the level of election violence in the districts in which that party is a top contender. I look in depth at newspaper archives between 1988 and 2011 to further shed light on these findings and to understand the actors involved in the different forms of violence, the motivations for each form of violence and the way in which these forms of violence influence the electoral process.

## **2.1 Introduction**

My paper looks at violence over the course of six elections in Pakistan between 1988 and 2011 to understand the nature, intensity and timing of election violence and the role of specific political parties in shaping this violence. Specifically, my paper seeks to address two main questions regarding election violence in Pakistan: a) what forms of violence (e.g. assassinations, riots, demonstrations, terrorism) increase before, during and after an election? and b) to what extent does political party ideology influence the nature and degree of election violence? I argue that disaggregating election violence is key to understanding the motivations, causes, intensity and consequences of election violence. Incidents of wide-spread rioting, for example, should not be put in the same category as a high-level political assassination – the two not only differ in terms of the scale of the violence, but also in terms of the motivations behind the violence and the consequences of the violence for the electoral process. My paper aims to provide a deeper understanding of election violence by delving into the different types of violence that occur around elections as well as the motivations for this violence and the key actors involved.

The existing literature on election violence has largely focused on the institutional and political differences between countries that might explain why election violence is more common in some contexts and not others (Hafner-Burton, Hyde and Jablonski 2014; USIP 2015; Wallsworth 2015; Markussen and Mbuvi 2011; Fjelde and Hoglund 2014; Dunaiski 2015). Much less has been written on how, even within the same country, different forms of violence vary with the election cycle. Overall, the few studies that have



examined these different kinds of violence have mostly concluded that the number of riots, assassinations and terrorist attacks increase in the months leading up to the election (Perliger 2015; Perliger 2017; Aksoy 2015; Newman 2014; Wilkinson 2009) while political demonstrations and protests increase after the election (Beaulieu 2014; Manukyan 2011; Tucker 2007; Bunce and Wolchik 2006; Thompson and Kuntz 2006; Schedler 2006). With regards to the effect of political party ideology on election violence, little work exists on the topic, although literature on the link between political parties and violence more generally suggests that ethnic and religious parties are associated with exclusionary politics and increased levels of violence (Tambiah 1996; Das 1990; Freitag 1989; Brass 1997; Spencer 1990; Pandey 1992).

This paper tests the hypothesis, drawn from the existing literature, that riots, assassinations and terrorist attacks increase in the months before the election, while the number of political demonstrations increase after the election. I find that, in the context of Pakistan and contrary to the existing literature, not all forms of violence increase around elections. The most significant increase in violence occurs on election day itself, with incidents of rioting and terrorism spiking on election day. There is also a slight increase in rioting in the week before and after the election. Yet, violent political demonstrations decline on election day with a very slight decline in violent demonstrations in the week after the election. The onset of elections has no effect on the number of assassinations. My findings regarding violent political demonstrations and assassinations contradict theoretical expectations based on the existing literature. Relying on extensive evidence from newspaper archives between January 1988 and November 2011, I show that while

pre-election rioting is aimed at disrupting the election campaigns of competing parties, election day rioting largely occurs at polling stations and is aimed at preventing voters in opposition strongholds from voting. Post-election rioting occurs when supporters of the losing party attack supporters of the winning party. In contrast to rioting, I show that terrorist attacks on election day are not primarily about hindering the opposing party from gaining votes, they are largely aimed at creating chaos by killing people, terrorizing voters and politicians and trying to sabotage the electoral process. While politicians and their supporters are primarily responsible for provoking and participating in riots, political parties and Islamic militants play a key role in carrying out terrorist attacks. The two forms of violence differ in their aims and the key actors involved. Violent political demonstrations also differ from other forms of violence as they are usually organized to challenge election results, with supporters of the losing candidates playing an important role in holding demonstrations.

I argue that there are several key reasons why demonstrations decline on election day and the week after the election. First, between 1988-2011 in Pakistan, there was a huge seat share difference between the majority party and the primary opposition party in each election in the National Assembly. Consequently, demonstrations against the results for specific seats were unlikely to overturn the winning party's majority. Therefore, there was little motivation to hold demonstrations. Second, scholars have argued that post-election violence is much more likely when elections are perceived to have been rigged. While it is common in Pakistan for the state to use public resources to help certain candidates and harm others before the election, widespread election day rigging itself was

uncommon in the time period that I examined (Pildat 2008). This would explain why we do not see an increase in violent demonstrations after elections in my dataset. In addition to this analysis, my paper looks at whether election violence is affected by the political ideologies of the main parties competing in the election. My results show that, contrary to the conclusions drawn by a number of existing studies, political parties in Pakistan do not differ from each other in terms of their effect on election violence. In fact, I find no evidence that districts where ethnic or religious parties are key contenders in the election see more violence. Overall, my findings suggest that election violence in Pakistan manifests differently from election violence in the countries that existing studies have disproportionately focused on, such as African countries. Further research is needed to understand the reasons behind these differences.

Finally, while existing work on election violence has largely focused on cross-country variation in levels of violence, I look at within-country variation over time. This focus allows me to hold constant factors that vary across countries and affect election violence (such as a country's electoral system). The dataset that I use for this paper – the BFRS dataset on political violence in Pakistan – documents day-to-day incidents of political violence between 1988 and 2011. The dataset offers a much more fine-grained view of political violence than available in many of the existing studies of election violence, which tend to focus on aggregated monthly data on violence.

The rest of the paper is structured as follows: in the next section, I offer a brief overview of the existing literature on election violence and describe the key insights provided by

this body of literature. I also discuss how my work fits into the existing literature. In the section after that, I state the definitions for the key terms used in this paper and lay out my hypotheses. The next section describes my data and analysis methods, followed by a section that details the results of my analysis. The second last part of my paper draws extensively on newspaper archives to offer a detailed interpretation of my results. The final section, the conclusion, provides a summary of my findings in this paper.

## **2.2 Literature Review and Hypotheses**

In this paper, I use the following definition of election violence: “all forms of organized acts or threats – physical, psychological, and structural – aimed at intimidating, harming, blackmailing a political stakeholder before, during and after an election with a view to determining, delaying, or otherwise influencing an electoral process” (Albert 2007, 133). While my data focuses on incidents of physical rather than psychological or structural violence, the acts of physical violence that I examine are aimed at influencing the outcome of the election, as the definition above suggests.

There is a growing body of literature on election violence, how it affects young democracies, and the conditions under which election violence occurs. In one of the most comprehensive works on election violence, Scott Straus and Charlie Taylor have developed the African Electoral Violence Database (AEVD) in which they document election violence from 1990 to 2008 in Sub-Saharan Africa. They look at pre-election, election and post-election violence to argue that significant electoral violence only occurs in 19% of elections in sub-Saharan Africa; most of the violence occurs in the months

leading up to the election, rather than on election day itself. They show that post-election violence is typically perpetrated by opposition parties and can be particularly severe (Straus and Taylor 2009). On similar lines, Hafner-Burton, Hyde, and Jablonski (2016) argue that incumbent political parties use pre-election violence to gain votes while post-election violence takes the form of mass protest against the incumbents. Based on this literature, I hypothesize that:

*In terms of the timing of election violence, election-related violence is likely to be concentrated in the months leading up to the election with the greatest increase in violence on election day itself.*

Several scholars have focused specifically on how different political parties have made use of violence around elections. Andreas Mehler (2007) offers the most in-depth examination of the way in which parties in various African countries have relied on election violence to achieve their political ends. Mehler lists some of the reasons why parties rely on violence at election time: parties use violence to gain political power, to protest election results, to help the incumbent party stay in power, to undermine the opposition, and finally – in situations where election violence is deliberately provoked – to discredit the opposition entirely by making them appear non-democratic. In addition, as Collier (2009), Snyder (2000) and others point out, election violence is also aimed at influencing voter turnout and the preferences of voters. Klopp and Zuern (2007) show, in the context of Africa, that electoral violence can sometimes be used to interrupt the electoral process and prevent elections from being held. Finally, Straus and Taylor (2007) argue that in some cases election violence is employed to force supporters of the

opposing party to flee from an electoral constituency. In still other cases, it is used to discipline party members and prevent defection (Straus and Taylor 2007). However, as Mehler (2007) points out, sometimes political party activists and sympathizers engage in “spontaneous” acts of violence that the party leadership has not organized. A Human Rights Watch report (2003) focused on election violence across Nigeria, reinforces the argument made by Mehler. The HRW report points out that political party workers have been involved in various incidents of election violence in Nigeria, and political parties have not disciplined their workers for acts of violence. Instead, party leaders often encourage and incite violence by making false claims about opposing parties. Although the HRW report focuses on Nigeria, it offers useful insights into the way that parties sometimes encourage violence.

While there is some existing literature on election violence overall, only a few scholars have looked at how specific forms of violence, such as assassinations, riots, violent demonstrations and terrorist attacks vary around elections. With regard to the study of assassinations, Arie Perliger (2015, 11) argues that “despite the apparently significant influence of political assassinations on political and social realities, this particular manifestation of political action is understudied and, as a result, poorly understood.”

There has only been a rudimentary interest in studying political assassinations (Berkowitz and Macaulay 1971; Orren and Peterson 1967; Perliger 2017; Iqbal and Zorn 2008). Arie Perliger (2017) looks directly at how political assassinations vary around elections by analyzing a cross-country dataset on assassinations, concluding that political assassinations increase in election years. She points at several reasons for this finding: 1)

political leaders gain more visibility and publicity during elections, which makes it easier to assassinate them, 2) elections are often marked by political tensions which can escalate and lead to violence, and 3) parties that anticipate electoral loss can change the odds against them by assassinate opposing candidates. In addition to Perliger's work, anecdotal evidence from news reports also indicates that in a number of different contexts, assassinations have marred the electoral process, such as in Iraq in 2013 after the withdrawal of American forces (*New York Times* 2013) and in Kenya in 2017 (*Al Jazeera* 2017), among other cases.

Similarly, little work exists on how incidents of rioting, terrorism and political demonstrations vary around election time. A key work that has examined rioting at election time is Steven Wilkinson's *Votes and Violence*, which focuses on India to show how specific parties organize and execute riots around elections to reinforce ethnic divides and create "us-vs-them" politics. This form of politics is in turn used to put together a winning coalition. A few scholars have also looked at how terrorist violence changes with the onset of elections. In particular, Deniz Aksoy (2015) looks at terrorist violence in Western Europe from 1950 to 2004 to argue that terrorist attacks do not always increase in the months leading up to the election. She shows that terrorist violence does not increase during elections in political systems that provide marginalized groups the opportunity to participate in politics, such as in democracies with proportional representation systems. On the other hand, when political institutions are not able to accommodate marginalized groups, incentives for the use of violence increase. In such cases, as elections approach, Aksoy (2015) demonstrates a spike in terrorist violence.

However, it is not clear why only terrorist violence, and not other forms of violence, would increase in cases where political institutions do not accommodate marginalized groups. In contrast, Lindsay Shorr Newman (2014) looks at a cross-country dataset of terrorist violence to show that there is an increase in terrorist violence around election day (i.e. right before the election, on election day and right after the election).

Apart from these key works, however, there has been little focus on how different forms of violence vary around elections. Based on this literature, I hypothesize that:

*Riots, terrorist violence and assassinations should increase in the months leading up to the election as well as on election day.*

Several scholars have studied election-related protests and demonstrations, particularly focusing on protests after an election, when losing parties or candidates might challenge the results of the election (Beaulieu 2014; Tucker 2007; Bunce and Wolchik 2006; Thompson and Kuntz 2005; Schedler 2006). As Alla Manukyan (2011) points out, many of these scholars of post-election protests look at the outcome of such protests and whether protests against election results have any influence on a country's quality and level of democracy. In particular, scholars of post-election protests have looked at whether incumbents accept the demands of the protestors, negotiate with the protestors on power-sharing or electoral reforms, or finally, repress the protest movement. In particular, Emily Beaulieu (2014) looks at elections in 118 countries between 1975 and 2006 and shows that 9% of the elections in her dataset were followed by mass demonstrations. She explains the occurrence of post-election demonstrations in terms of a



bargaining game involving the incumbent and the opposition. She argues that once the incumbent decides to hold elections, a series of decisions are made by both the incumbents and the opposition. The opposition can choose to participate in the elections or boycott them based on the extent of the electoral fraud they anticipate in the election. The incumbent can then decide on the degree of electoral fraud to engage in. In response to this, the opposition decides whether to hold demonstrations after the elections or not. In line with this literature, I hypothesize that:

*Protests and demonstrations should increase after the election, especially when elections are perceived as being fraudulent or unfair.*

Finally, I also examine whether ideologically different political parties differ in their use of violence around elections. To my knowledge, one of the few scholars who has looked at this question directly is Rohit Ticku (2016). As Ticku (2016) puts it, “Is violence the fief of a particular political ideology, and by extension the operationalizing political outfit?” He addresses this question in the context of India and shows that the Indian National Congress as well as India’s communist parties are associated with more violence than the other Indian parties. He does not offer much of an explanation as to why this is the case. My paper examines the same issue in the context of elections in Pakistan to see whether different parties are associated with different levels of election violence. More generally, outside of elections, the existing literature on political parties and violence tends to associate ethnic and religious parties with the use of violence (Tambiah 1996; Das 1990; Freitag 1989; Brass 1997; Spencer 1990; Pandey 1992). Much of this literature views ethnic parties as responsible for promoting exclusionary and polarizing politics,

creating the conditions for political violence. In particular, arguments about the harmful effects of ethnic mobilization center on the notion of “outbidding” – when one ethnic party emerges, it leads to a downward spiral as more and more ethnic parties emerge to mobilize ethnic groups by engaging in ever more exclusionary politics. However, more recently, a few scholars such as Kanchan Chandra (2005) have challenged this view, suggesting that ethnic politics is not always destabilizing. Chandra argues that ethnic politics is not destabilizing when political institutions allow the politicization of different aspects of ethnic identity and in such cases, ethnic parties that start off at one extreme slowly become moderate and move to adopt centrist policies. In Chandra’s view, ethnic politicization becomes destabilizing when political institutions impose a rigidity on ethnic identity. However, given that the literature on ethnic politics overwhelmingly views ethnic (and religious) parties as destabilizing to democracy and to some extent, violent, I hypothesize that:

*Districts where ethnic and religious parties are amongst the top contenders in the election are more likely to see violence at election time.*

The arguments in the existing literature are helpful in understanding the wide range of reasons why parties rely on election violence, from influencing voter turnout to forcing supporters of opposing parties to flee from a region. In addition, the sparse literature on how different forms of violence vary at election time offers useful preliminary insights into the nature and purpose of election violence. This literature forms the basis for my hypotheses in the next section.

My work adds to the existing literature in several ways. Existing studies of election violence largely assume that all forms of violence increase around elections. My paper challenges this assumption and shows that while certain forms of violence – such as riots – increase around election time, other forms of violence (for example, assassinations) are not affected by the onset of elections. Other forms of violence (such as violent demonstrations) show a decline on election day. I also look at an issue that has received insufficient attention in the existing literature: the effect of political party ideology on parties’ use of violence around elections. In other words, do ideologically different parties use violence in different ways to alter the outcome of the election? In addition to its theoretical contribution to the literature, my paper seeks to offer a much more disaggregated view of election violence than available in previous work– disaggregated in terms of space (looking at district-level variation in Pakistan), time (daily) and the types of violence I examine (assassinations, violent demonstrations, riots and terrorism). Most existing studies of election violence are cross-national in scope, view election violence as an aggregate, undifferentiated category, and rely on monthly data. In the next section, I present key definitions of the terms that I use and lay out my main hypotheses.

### **2.3 Key Definitions**

Before delving into the key hypotheses of this paper, I will state the definition of riots, violent political demonstrations, assassinations and terrorism that I will rely on in the rest of this paper. For the purpose of this paper, I use the BFRS dataset on political violence between 1988-2011 and therefore rely on the BFRS dataset’s definitions of these various forms of violence. The BFRS dataset defines terrorism as “premeditated, politically

motivated violence against non-combatant targets by subnational groups of clandestine agents” (Mesquita, Fair, Jordan, Rais & Shapiro 2015, 544). In the context of Pakistan, many of the incidents of terrorism that are recorded in the dataset are acts of violence perpetrated by extremist Islamist organizations, and sometimes political parties as well. In some cases, it is unclear who is responsible for particular acts of terrorism. Riots are defined as “a violent clash between two or more non-state groups” (Mesquita, Fair, Jordan, Rais & Shapiro 2015, 544). In the dataset, these often refer to clashes between political parties or tribal groups. In addition, these riots could be pre-planned or spontaneous – both forms of rioting are included in this definition. In the dataset, assassination refers to the “attempt by a non-state entity intended to kill a specific individual” (Mesquita, Fair, Jordan, Rais & Shapiro 2015, 544). The assassinations recorded in the dataset often occur against government officials, ordinary citizens and members of political parties. The perpetrators are often not identified in the case of assassinations. Finally, violent political demonstrations are defined as “a violent mobilization of crowds in response to a political event” (Mesquita, Fair, Jordan, Rais & Shapiro 2015, 544). This definition would include, for example, political events such as the mass protests against the suspension of Chief Justice Iftikhar Muhammad Chaudhry by President Pervez Musharraf in 2007, but would not include election rallies. It would also not include clashes between different groups, which would be included in the definition of riots. However, in some cases, the distinction drawn by the BFRS dataset between riots and demonstrations is not entirely clear – for example, in cases where the losing party after the election attacks members of the winning party, which is now also

the party that forms the government. In such cases, it is not entirely clear whether violent demonstrations or riots is a more appropriate category for classifying these acts of violence. Despite these definitional problems, I rely broadly on these definitions and on my literature review to formulate several testable hypotheses about how different forms of violence vary at election time.

## **2.4 Data and Methods**

For the analysis in this paper, I rely on two main sources of data. The data on daily incidents of political violence between January 1988 and November 2011 across 131 districts of Pakistan comes from the BFRS dataset collected by Jacob Shapiro, Ethan Bueno de Mesquita, C. Christine Fair, Jenna Jordan, and Rasul Bakhsh Rais, sponsored by the United States Department of Homeland Security. This dataset spans a twenty-four-year period, during which six elections have occurred (in 1988, 1990, 1993, 1997, 2002 and 2008) and there have been 28,731 incidents of violence. For each incident of violence, the dataset records the number of people killed and injured as well as the type of violence that occurred, the location of the violence (at the tehsil, district and province level), the actor accountable and the underlying cause of the violence. This dataset classifies each incident of violence into one of several categories. These categories include drone strikes, state action against non-state actors, conventional attacks on state security forces, violent political demonstrations, threats of violence, assassinations, terrorism and a few others. For the purpose of this paper, I focus on how four specific forms of political violence – riots, violent political demonstrations, terrorism and assassinations – vary around election time. In terms of my geographical unit of analysis, I

look at district-level divisions since the data for location is incomplete at the *tehsil* level in Pakistan (the administrative level below the district).

The second source that I rely on for my data is the Election Commission of Pakistan (ECP). In order to examine the link between political party ideology and violence at election time, I have collected data on the winners and losers in each national assembly election in every electoral constituency between 1988 and 2011. For each of the six elections in this time period, I have collected, cleaned and organized data from the ECP, including data on the names of the top competing candidates and their party affiliations, as well as the number of votes that each candidate won. This election data is at the level of the electoral constituency, while my violence data is recorded at the district level, with each district encompassing multiple electoral constituencies. In order to combine my violence and election data, I have aggregated the election data to the district level. For each district in each of the six elections that I look at (1988, 1990, 1993, 1997, 2002 and 2008 elections), I calculate the fraction of seats that different parties won in that district. In other words, I have created party variables (labelled *ANP*, *PPP*, *JWP*, *IJI* and so on). The values for these party variables are calculated by dividing the number of seats won by a specific party in a district by the total number of seats in the district. These party variables have values between 0 and 1 for each district in every election. Furthermore, I classify the major political parties into a number of ideological categories: center-left, center-right, ethnic, religious and ethno-nationalist. I calculate election competitiveness (labelled *electioncompetitivenesscon*) at the level of the electoral constituency by subtracting the percentage of votes won by the runner-up party from the percentage of

votes won by the winner (*votesharediff*) and subtracting this *votesharediff* variable from 100. However, as with the other election data, I have had to aggregate the election competitiveness variable to the district level from the level of the electoral constituency. To do this, I have documented for each district, the lowest, highest and average value of election competitiveness for the constituencies that are a part of the district. For my analysis I rely on the average election competitiveness in a district (labelled *electioncompetitiveness*), a variable which varies between 0 and 100. For this variable, a higher value indicates that, on average, a district witnessed more competitive elections in its electoral constituencies. I have also created several dummy variables for specific time periods before, during and after the elections (such as a week before and after the election) in order to examine how political violence varies around election time and whether certain forms of violence peak at specific times.

I merged the violence dataset with the election data that I compiled to form a single panel dataset of daily incidents of political violence along with election data from 1988 to 2011 across 131 districts of Pakistan. The appendix contains Table 2-5 with the summary statistics for my key variables in this dataset. This dataset excludes regions of Pakistan that are constitutionally separate from the rest of the country, including the Federally Administered Tribal Areas (FATA), Gilgit Baltistan and Azad Kashmir.

I use the combined violence-election dataset to examine election violence, specifically looking at how violence varies before, during and after an election and which forms of violence (for example, riots, assassinations, terrorism, violent demonstrations) peak at

specific times in the election cycle. Given that my violence variables are very positively skewed with zero incidents of violence in over 90% of the observations in my dataset, I have used an  $\ln(y+1)$  transformation of these variables to better meet the condition that the errors are normal with constant variance (Fletcher, MacKenzie and Villouta 2005). These logged violence variables (*lnriots*, *lnassassinations*, *lnvioldemonstrations* and *lnterrorism*) are my key dependent variables. The dummy variables for the different time periods before and after the election as well as the *electioncompetitiveness* variable are my key independent variables of interest. With these variables, I run a fixed effects OLS regression model with standard errors clustered by district. I include year fixed effects to control for any trends in the violence data over time. However, the coefficients for this model should be interpreted with caution since  $\ln(y+1)$  transformed variables are hard to interpret in cases where the y variable has a large number of zeros. Wooldridge (2009) argues that  $\ln(y+1)$  transformed dependent variables can be interpreted in the same way that  $\ln(y)$  coefficients are interpreted except in cases where the y variable has a large number of zeros. Since my violence data contains a large number of zeros, my interpretation of the coefficients from the fixed effects OLS regression should be considered as broad estimates. As a robustness check, I also run a fixed effects logit model with binary dependent variables for riots (*riotbinary*), assassinations (*assassinationbinary*), demonstrations (*demonstrationbinary*) and terrorist attacks (*terroristbinary*), with a 1 when an act of violence occurs and a 0 otherwise.



In addition to this analysis, I look at the relationship between political party ideology and election violence. I specifically examine the following: 1) whether the ideological orientation of the top contending parties in each district affects the nature and level of the pre-election violence seen, and 2) whether the ideological orientation of the losing party affects the nature of post-election violence. For this analysis, as with the previous analysis, the logged violence variables form my dependent variables. I focus on three specific forms of political violence: assassinations, riots and violent political demonstrations. I exclude incidents of terrorism from this analysis; political parties in Pakistan are not the only, or even primary actors, involved in terrorist violence – in fact, my data contains many cases of terrorist violence by militant groups. Terrorist organizations in Pakistan have sought to sabotage the democratic process by launching terrorist attacks around election time. Thus, any correlation between the ideological leaning of the top competing parties in a district and levels of terrorist violence would be difficult to interpret.

To capture the ideological orientation of the top two competing parties in each district in every election, I create additional variables. These variables – labelled, for example, *leftistpartiescompete*, *ethnicpartiescompete*, *religiouspartiescompete* – are calculated by dividing the number of electoral constituencies in a district where a party with a particular ideological orientation competed by the total number of electoral constituencies. For example, to calculate the values for *leftistpartiescompete* I divide the number of electoral constituencies in a district where leftist parties were amongst the top two contenders by the total number of electoral constituencies in the district. This

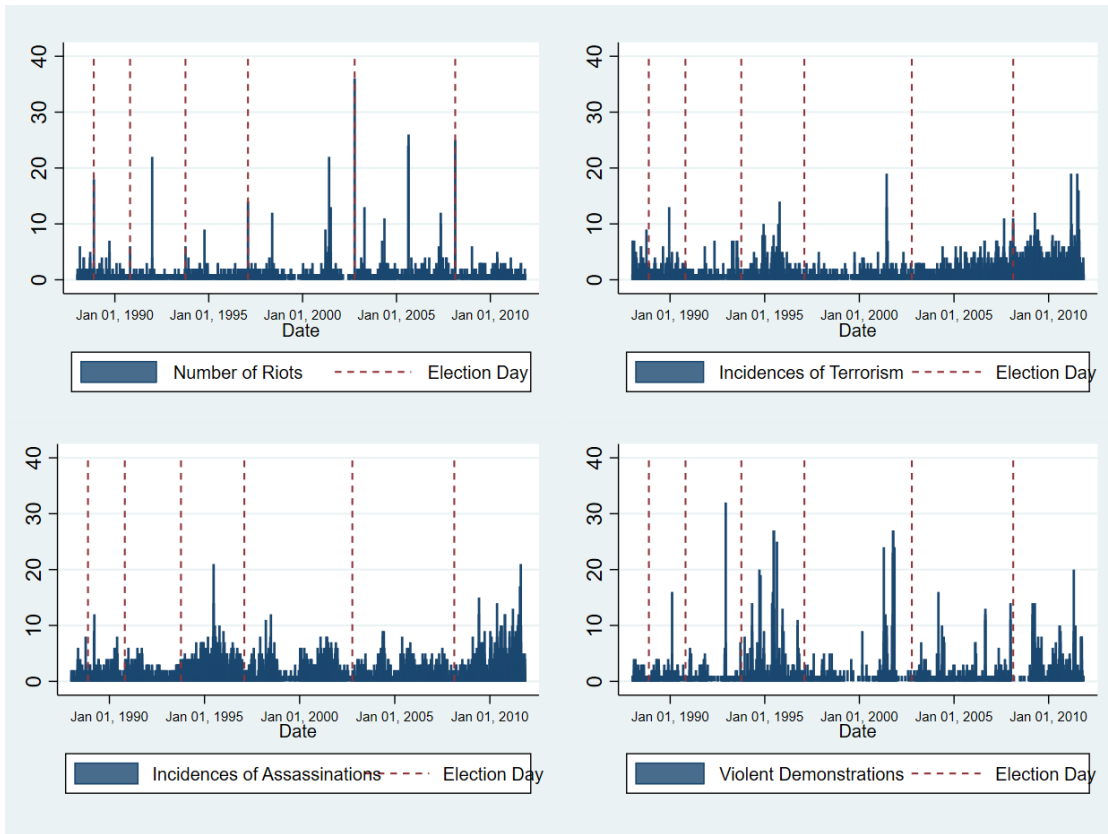
variable allows me to capture the extent to which leftist (or center-right, religious, ethnic or ethno-nationalist) parties are amongst the top electoral contenders in a district. Similarly, for each election and district, I create variables to capture the fraction of electoral constituencies in the district where parties with a specific ideological orientation have lost the election. These variables (labelled *leftistpartieslose*, *ethnicpartieslose*, and so on) are fractions calculated by dividing the number of electoral constituencies in which particular ideological parties are the runner-up by the total number of electoral constituencies in the district. With these variables, I run two main analyses. First, I run a fixed effects OLS regression model to look at whether certain forms of violence increase in the month before the election when parties with a specific ideological orientation are amongst the top contenders in a district. For this analysis, the logged violence variables are my dependent variables and *leftistpartiescompete*, *ethnicpartiescompete*, *religiouspartiescompete*, *nationalistcompete* and *centerrightcompete* are my key independent variables. I control for election competitiveness and include year fixed effects as well as clustering standard errors by district. In my second analysis, I look at whether the nature or degree of post-election violence changes when a party with a specific ideological orientation loses the election and is the runner-up. Once again, the logged violence variables are my dependent variables for this analysis. The variables *leftistpartieslose*, *ethnicpartieslose*, *nationalistlose*, *centerrightlose* and *religiouspartieslose* are my key independent variables. As with the previous analysis, I use a fixed effects OLS regression model with standard errors clustered by district and control for election competitiveness. I also include year fixed effects.

Finally, in order to understand the motivations for the different types of violence as well as the actors involved, I rely on extensive archival work. I look at newspaper archives from January 1988 to November 2011, exploring every incident of election violence to understand the nature and intensity of this violence as well as the specific context in which election violence occurs. In particular, I look at the newspaper archives for two of Pakistan's leading English newspapers – The Express Tribune and Dawn News – to interpret my results.

## **2.5 Results and Main Argument**

My analysis disaggregates election violence in terms of time (looking at daily incidents of violence), space (looking at cross-district variation) and the types of violence that occur around elections (specifically looking at riots, violent political demonstrations, assassinations and terrorism). Graph 2-1 below shows how these different forms of violence have varied in Pakistan between 1988 and 2011, with the red dotted lines representing the six elections in this period. Certain trends stand out in the graphs. The graph of the number of riots over time clearly shows that the peaks in the riot data coincide with the red dotted lines that show election days – i.e. riots increase sharply on election day. Similarly, in the graph for violent political demonstrations, the dips in the graph coincide with the red lines for election day, showing that violent political demonstrations decline on election day. My analysis shows additional trends that will be discussed in the rest of this section.

*Graph 2-1 Election Days and Yearly Trends in the Incidents of Assassinations, Riots, Terrorism and Violent Demonstrations in Pakistan from 1988 to 2011 (source: BFRS dataset)*



The results of my fixed effects OLS regression analysis for the link between my dependent variables – the logged violence variables (*lnriots*, *lnassassinations*, *lnvioldemonstrations* and *lnterrorism*) – and my independent variables, which include dummy variables for different time periods, are included in Table 2-1 below. I control for election competitiveness, include year dummies in my regression and cluster standard errors by district. My analysis shows that not all forms of political violence increase around election time. While riots and incidents of terrorism increase sharply on election day (as well as riots increasing slightly in the week before and after the election), violent political demonstrations decline on election day as well as the week after the election.

Still other forms of violence, such as assassinations, are not affected by the onset of elections. Table 2-1 shows that riots increase by 7.45 percent on election day, 0.37 percent the week before the election and 0.21 percent the week after the election. In addition, incidents of terrorism increase by almost 1 percent on election day. On the other hand, violent political demonstrations decline by 0.1 percent on election day and a miniscule 0.07 percent the week after the election. By far, the strongest effect of the onset of elections is on the number of riots that happen on election day itself, with a smaller increase in the number of riots in the weeks before and after the election. In fact, it is clear from these results that election violence is largely concentrated on election day, rather than in the weeks before and after the election. As an additional exercise, I run a reduced version of my main model with only the variables that were statistically significant in the full model. The results are presented in Table 2-2 and confirm the findings from Table 2-1, with coefficients that are similar or identical to those in the main model. For robustness checks, I run a fixed effects logit model with binary dependent variables *riotbinary*, *assassinationbinary*, *demonstrationbinary* and *terroristbinary* with a 1 representing an act of violence and a 0 representing the absence of an attack. Table 2-6 in the appendix shows the results for this analysis which largely confirm the results from the fixed effects OLS model. As in the fixed effects OLS model, riots and terrorist attacks have a higher probability of occurring on election days than on other days, as well as riots being more likely to occur in the week before and after the election. Additionally, assassinations are not affected by the onset of elections in both models. However, one minor difference between the results for the fixed effects OLS model and the fixed effects

logit model is that riots and terrorist attacks also have a higher probability of occurrence two weeks before the election in the logit model. In addition, the results for violent political demonstrations are not significant in the logit model.

*Table 2-1 Relationship between Different Forms of Violence and Elections*

VARIABLES	(1) Fixed Effects Regression (DV=Logged Riots)	(2) Fixed Effects Regression (DV=Logged Violent Demonstrations)	(3) Fixed Effects Regression (DV=Logged Assassinations)	(4) Fixed Effects Regression (DV=Logged Terrorism)
4 Weeks Before Election	-0.000599 (0.000323)	-0.000291 (0.000508)	0.000904 (0.000895)	-0.00115 (0.000718)
3 Weeks Before Election	-0.00106*** (0.000210)	0.00125 (0.000751)	-0.00161** (0.000801)	0.000683 (0.00105)
2 Weeks Before Election	0.00114 (0.000841)	-0.000425 (0.000487)	-0.00115 (0.000615)	0.00118 (0.000805)
Week Before Election	0.00367*** (0.00125)	-0.000667 (0.000424)	0.000961 (0.00135)	0.00255 (0.00141)
Election Day	0.0745*** (0.0116)	-0.00107*** (0.000374)	0.00331 (0.00261)	0.00995*** (0.00371)
Week After Election	0.00205** (0.000783)	-0.000701** (0.000297)	-0.000231 (0.000733)	-9.27e-05 (0.00103)
2 Weeks After Election	0.000491 (0.000639)	9.02e-05 (0.000585)	0.000659 (0.00106)	0.00157 (0.000964)
3 Weeks After Election	-0.000166 (0.000420)	0.000457 (0.000446)	0.000109 (0.000795)	-2.01e-06 (0.000933)
4 Weeks After Election	0.000751 (0.000623)	-9.32e-05 (0.000337)	-0.000227 (0.000807)	0.00142 (0.000996)
Election Competitiveness	1.39e-05 (1.20e-05)	7.45e-07 (1.06e-05)	-7.61e-05 (6.07e-05)	-4.63e-06 (2.77e-05)
Year Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
District Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Constant	-0.00110 (0.00142)	0.000872 (0.00119)	0.00979*** (0.00334)	0.00306 (0.00269)
Observations	777,889	777,889	777,889	777,889
R-squared	0.004	0.001	0.003	0.002
Number of Districts	108	108	108	108

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05

*Table 2-2 Reduced Model for Relationship between Different Forms of Violence and Elections*

VARIABLES	(1) Fixed Effects Regression (DV=Logged Riots)	(2) Fixed Effects Regression (DV=Logged Violent Demonstrations)	(3) Fixed Effects Regression (DV=Logged Terrorism)	(4) Fixed Effects Regression (DV=Logged Assassinations)
3 Weeks Before Election				-0.00165** (0.000791)
Week Before Election	0.00366*** (0.00126)			
Election Day	0.0745*** (0.0116)	-0.00109*** (0.000382)	0.00973** (0.00374)	
Week After Election	0.00202** (0.000775)	-0.000820** (0.000333)		
Election Competitiveness	1.40e-05 (1.20e-05)	7.60e-07 (1.06e-05)	-4.34e-06 (2.76e-05)	-7.61e-05 (6.07e-05)
Year Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
District Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Constant	-0.000930 (0.00135)	0.000927 (0.00122)	0.00360 (0.00269)	0.0100*** (0.00325)
Observations	777,889	777,889	777,889	777,889
R-squared	0.004	0.001	0.002	0.003
Number of Districts	108	108	108	108

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05

My findings do not support a few of the hypotheses that I drew from the existing literature. First, I find that much of election violence in Pakistan occurs in a very short time-span. Violence is largely concentrated on election day itself, with some violent incidents in the week before and after the election. Contrary to my hypothesis, election violence in my data does not increase several months before the election. My analysis in the next section, based on extensive archival work, suggests that Pakistani politicians engage in violence on the day of the election to prevent supporters of the opposing party from voting and to manipulate voter turnout. Pre-election violence takes the form of attacks on election campaigns and rallies of opposing politicians, while post-election violence results from spontaneous clashes between supporters of the winning and losing

parties. Additional work needs to be done to understand why politicians in different contexts rely on different strategies when it comes to election violence – i.e. why is it that election violence in Pakistan peaks on election day while in sub-Saharan Africa much of the violence occurs before the election rather than on election day itself? My findings suggest the need for more in-depth study of the way in which politicians in different settings use election violence.

Second, contrary to my hypothesis about assassinations drawn from the existing literature, I find that political assassinations in Pakistan are not affected by the onset of elections. Although it is difficult, from newspaper archives, to determine the exact reason why assassinations do not increase around election time, I argue in the next section that this is because of the high risk involved in carrying out assassinations and the uncertain benefits of such a strategy for winning elections. I also do not find an increase in the number of violent demonstrations in the weeks after the election as my hypothesis predicted. Instead my data shows a decline in violent demonstrations on election day and in the week after the elections. I show that this result can partly be explained in terms of the large seat share difference between the majority party and the opposition party in the national assembly, which has meant that protests against election results for specific seats are unlikely to overturn the winning party's majority, reducing the motivation for such demonstrations. In addition, while elections between 1988 and 2011 were not held on a level playing field, with some parties having greater access to state resources and patronage than others, there was no wide-spread rigging or overt manipulation of election



results on the actual days of the elections (Pildat 2008). This reduced the likelihood of demonstrations.

In addition to this analysis, I also look at the relationship between political party ideology and election violence. I specifically examine whether certain forms of violence increase in the month before the election and on election day when specific parties (ethnic, left-wing, right-wing, nationalist or religious parties) are amongst the top two contenders for office in a district. In addition, I look at whether certain forms of post-election violence increase when particular parties lose office. The results of my fixed effects regression show no relationship between the ideological identity of the parties competing in the election and pre-election violence and no relationship between the ideological identity of the losing party and post-election violence. Tables 2-3 and 2-4 below show these results.

*Table 2-3 Relationship between Different Forms of Pre-Election Violence and Ideological Orientation of Competing Parties in the Month before the Election*

<b>VARIABLES</b>	<b>(1) Fixed Effects Regression (DV=Logged Riots)</b>	<b>(2) Fixed Effects Regression (DV=Logged Violent Demonstrations)</b>	<b>(3) Fixed Effects Regression (DV=Logged Assassinations)</b>
Leftist parties compete	-0.00103 (0.00112)	1.03e-05 (0.000975)	0.00193 (0.00186)
Center-right parties compete	0.000492 (0.000637)	0.000848 (0.000879)	0.00115 (0.00127)
Nationalist parties compete	0.00125 (0.000701)	-0.000510 (0.000878)	-0.00102 (0.00107)
Ethnic parties compete	-0.00132 (0.00108)	-0.00556 (0.00359)	-0.000450 (0.000981)
Religious parties compete	-0.000435 (0.00111)	0.000598 (0.000832)	0.000472 (0.00198)
Year Fixed Effects	☑	☑	☑
District Fixed Effects	☑	☑	☑
Election competitiveness	1.73e-05 (4.07e-05)	-4.24e-05 (2.86e-05)	2.77e-05 (5.53e-05)
Constant	-0.000191 (0.00350)	0.00335 (0.00171)	-0.00180 (0.00470)

Observations	13,178	13,178	13,178
R-squared	0.001	0.002	0.002
Number of Districts	102	102	102

Robust standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05

*Table 2-4 Relationship between Different Forms of Post-Election Violence and Ideological Orientation of Losing Parties in the Month after the Election*

VARIABLES	(1) Fixed Effects Regression (DV=Logged Riots)	(2) Fixed Effects Regression (DV=Logged Violent Demonstrations)	(3) Fixed Effects Regression (DV=Logged Assassinations)
Leftist parties lose	-9.99e-05 (0.00121)	0.000648 (0.000504)	0.000668 (0.00150)
Center-right parties lose	-0.00124 (0.00116)	0.00111 (0.000621)	-0.00157 (0.00116)
Nationalist parties lose	-8.26e-05 (0.00106)	0.000558 (0.000338)	0.000577 (0.000671)
Ethnic parties lose	-0.00370 (0.00224)	0.000407 (0.000521)	0.00147 (0.00140)
Religious parties lose	-0.00268 (0.00156)	-0.000632 (0.00123)	-0.00225 (0.00140)
Year Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
District Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Election Competitiveness	3.92e-05 (3.16e-05)	-1.51e-05 (1.73e-05)	-3.28e-05 (4.04e-05)
Constant	0.00215 (0.00267)	0.00280 (0.00190)	0.00712** (0.00290)
Observations	16,163	16,163	16,163
R-squared	0.002	0.001	0.001
Number of Districts	108	108	108

Robust standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05

These results do not support my hypothesis that districts where ethnic and religious parties are the top contenders in the election are likely to see more violence. Instead, the results suggest that there is no systematic difference between types of political parties in terms of their relationship with election violence. The next section offers a more in-depth interpretation of the results presented in this section.

## **2.6 Archival Research**

My results show that riots increase in the week before the election, on election day, and in the week after the election, while violent political demonstrations decline on election day as well as the week after the election. In addition, incidents of terrorism increase on election day. The number of assassinations is not affected by the onset of elections.

Furthermore, my analysis shows that, in the case of Pakistan, most election violence takes place on election day itself rather than in the weeks before or after the election – although a limited degree of violence does occur before and after the election. In addition, I find that the ideological identity of the parties involved in the election at the district level has no effect on the forms of violence prevalent before, during or after the election.

In this section, I lay out my main argument, relying on the results from the previous section and evidence from newspaper archives, specifically Dawn news archives. I argue that political party activists use pre-election and election day violence strategically to gain votes and to undermine competing parties. Newspaper archives show that while pre-election rioting is aimed at preventing opposing parties from campaigning effectively, parties use violence on election day to prevent voters of the opposing party from voting and in some cases, to prevent voting from happening at all when they foresee imminent defeat. With regards to post-election violence, I show that this usually takes the form of individual acts of violence against members of the winning party, not specifically as a coherent strategy by a political party to challenge the election results but more commonly as a disorganized expression of anger by supporters of the losing candidate in various electoral constituencies. This is contrary to the argument made by several scholars of

election violence such as Hafner-Burton, Hyde and Jablonski (2016) who see post-election violence as a form of anti-government protest.

I also rely on newspaper archives to offer a more in-depth interpretation of my other two results – an increase in incidents of terrorism on election day and a decline in violent demonstrations on election day (with a very slight decline in demonstrations the week after the election). I argue that while political party activists have sometimes engaged in terrorist violence to harm – and sometimes even kill – their opponents, a significant degree of terrorist violence on election day is carried out by terrorist groups that seek to sabotage and undermine the democratic process through violence. In contrast to terrorism and rioting, violent demonstrations decline on election day largely because politicians and the electorate are focused on the election and therefore organizing demonstrations is not a priority. In addition, it is difficult to draw attention to a cause through demonstrations when the national attention is focused on the election. Protests and demonstrations do not increase in the week after the election for two reasons that will be discussed in greater detail in this section: 1) wide-spread rigging on election day was uncommon in the time period that I examined, which reduced the motivation for post-election demonstrations; and 2) the large seat share difference in the national assembly between the majority party and the opposition party made post-election protest unattractive as a strategy for changing the distribution of power. Some of these results contradict the hypotheses I drew from the existing literature, especially the decline in demonstrations in the week after the election and the fact that assassinations are not affected by the onset of elections in my dataset.

An examination of the newspaper archives from the week leading up to the election provide insight into the nature of the rioting that occurs before the election. In an overwhelming majority of cases, rioting before the election erupted when party workers attempted to disrupt rallies and meetings of the opposing party or attack activists from the opposing party as happened in the following cases from the archives: “A public meeting organized by the PPP and addressed by the party’s provincial minister...was allegedly disturbed by the ANP supporters who resorted to violence to stop the leaders from addressing the people” (*Dawn* 26 January 1997); “Four PPP activists were injured in an armed attack on a PPP rally between Khipro and Hathungo, in district Sanghar on Thursday” (*Dawn* 14 February 2008); “As a result of indiscriminate firing between supporters of Mian Abdur and Haji Muhammad Nawaz...a young man...was killed and three persons were seriously injured” (*Dawn* 21 October 1990); “A clash between PPP and PMLN workers took place...in Mohallah Farooqpura, resulting which seven person were injured” (*Dawn* 3 October 1993); “At least four people were injured and seven vehicles damaged in a clash between workers of two political parties...in Naseerabad early Saturday morning” (*Dawn* 5 October 2002); “Five PPP workers and a PML(Q) worker were injured in a clash between PPP and PML(Q) activists in Radhan town on Saturday night” (*Dawn* 6 October 2002); and “A man was shot at and injured in an exchange of fire between two candidates in PP-169, Farooqabad city, on Friday evening” (*Dawn* 15 February 2008). In several cases, pre-election rioting started when one party tried to prevent the other from hoisting party banners or flags in certain areas, as these cases from the archives show: “Police have registered a case against six workers of

PML(N) who allegedly removed PPP flags and caused injuries to two PPP workers...meanwhile police have also registered a case against PPP candidate Begum Shahnaz Javed and seven workers...for allegedly removing PML(N) flags and hoisting PPP flags instead” (*Dawn* 29 September 1993); “A case was registered against at least 25 PPP workers after PML-F workers clashed with them over flag hoisting in Ghund Rasoolpur village.” (*Dawn* 6 October 2002); and “Political activists of two parties...exchanged hot words on hoisting of party flags which later turned into a scuffle” (*Dawn* 8 October 2002). In summary, newspaper archives show that incidents of pre-election rioting are often aimed at hindering the ability of the opposing party to campaign effectively. This is done by disrupting rallies, preventing the opposing party from hoisting election banners, and intimidating opposing party workers by attacking them.

On the other hand, election day rioting differs in its aims from pre-election rioting. Election day rioting is largely aimed at manipulating voter turnout and disrupting polling, especially through violence at polling stations in areas where the opposing party has a strong presence or through attacks on polling agents of the opposing party. Examples of this abound in the archives: “More than 20 people were injured in disturbances at polling stations...Reports said some workers resorted to stoning, shooting and used lathis outside the polling stations...Polling was suspended in many polling stations in Sukkur City” (*Dawn* 24 October 1990); “Polling was suspended for more than two hours, following a clash between the supporters of two political parties at Aliabad polling station, in Dadu district” (*Dawn* 24 October 1990); “The polling agent of an independent candidate in Pishin was killed at a polling station...” (*Dawn* 27 October 1990); “Polling had to be

suspended in Ada Shaikh Jalil in NA-50 for half an hour following a scuffle between the supporters of PML(N) and PPP on Wednesday” (*Dawn* 6 October 1993); “A clash took place at the polling station of Waddehwali in NA-56 resulting in injuries to a number of workers” (*Dawn* 3 February 1997); “The polling was suspended in Nusrat Colony No 4, Sukkur, after a clash between the workers of the Muttahida Majlis-e-Amal and the Muttahida Qaumi Movement” (*Dawn* 10 October 2002); “Police also registered a case against PPP’s candidate from PP-125, Tahir Mahmood Hundali, and his 12 armed accomplices for firing on a polling station set up at the Government Primary School, Variyo” (*Dawn* 13 October 2002); “Up to 17 people were injured in Sultanpur, Mannah and Muhammad Musa polling stations. Six people were injured in Sultanpur Union Council in Alipur, when PML-Q supporters allegedly opened fire at PPP workers” (*Dawn* 17 February 2008); “Two people were killed and two dozen others injured while police arrested 75 miscreants, including a former MPA’s son and three naib nazims, for disrupting the poll process.” (*Dawn* 17 February 2008); and “At least, five firing incidents took place at polling stations in Panju and Jhullky, Suiay Asal, Attu Aasil and Lakhu Dahar villages in Kahna” (*Dawn* 17 February 2008). In other cases, an election candidate has attempted to stop polling when it seems that he might lose. On November 20<sup>th</sup>, 1988, the IJI candidate in Lahore, foreseeing his imminent defeat, tried to stop polling. This led to a clash between the winning party, PPP, and the IJI. In addition, election day violence also frequently involves attacks on the polling agent of the opposing party, such as when IJI supporters stormed a polling station on the day of the election on November 19<sup>th</sup>, 1988 to harass and abuse the polling agent of a PPP

candidate. Other examples of this from the archives include: “The tension [between supporters of two candidates for PF-43] started when the supporters of Qasim Shah, an independent candidate of the constituency, reportedly forced the polling agents of the rival candidate Mian Waliur Rahman of the IJI out of 10 polling stations in Kaghan Valley” (*Dawn* 29 October 1990); “A polling agent and brother of a Mohajir Qaumi Movement (MQM) candidate was beaten to death by the activists of the rival Haqiqi faction” (*Dawn* 3 February 1997); “The PPP candidate from PS-3, Jam Saifullah Dharejo, accused the PML (F) candidate, Haji Khan Chachar, of denying access to the PPP polling staff at six polling stations” (*Dawn* 10 October 2002); and “PPP candidate for PS-46, Syed Fayaz Shah said that MQM had taken over physical control of all the polling stations and thrown out their agents” (*Dawn* 19 February 2008). As with other forms of election day violence, attacks on polling agents are meant to disrupt polling, prevent the opposing party’s polling agents from monitoring the election, and scare away voters.

In a few select cases, party workers even tried taking ballot boxes away from the polling station, as described in these cases: “An unidentified armed gang looted ballot papers at gun point from the Custody of presiding officers of NA-152 and NA-153” (*Dawn* 24 October 1990); “Three persons, including a patwari, allegedly seriously injured an officer and other persons who were appointed at a polling station of PP-193...[they] allegedly forced the officer, Atta Mohammad to allow their supporters to cast bogus votes in favour of their candidate” (*Dawn* 11 October 1993); “Naushera Virkan police late Thursday night registered a case against a dozen PML-J supporters on the charges of snatching ballot papers and boxes from polling officers and for casting bogus votes” (*Dawn* 11



October 2002); and “Armed PML-Q workers kidnapped a presiding officer and his staff with ballot boxes from Tala Sharif in Naushera Virkan. Some other PML-Q supporters took away ballot boxes from Thatha Gulab Singh polling station in NA-99.” (*Dawn* 18 February 2008). While some rioting also occurs more generally on election day (aside from polling station violence), much of election day violence occurs in polling stations. This is a prominent feature of election violence in Pakistan.

Post-election rioting in the week after the election takes the form of the losing candidate’s supporters attacking the winning candidate’s supporters. Some examples from the archives include: “A PPP victory caravan...was attacked with stones by the PML supporters in Tando Mir Muhammad” (*Dawn* 12 October 1993); “Saddar police have registered a case against three dozen MMA activists including the defeated candidate for NA-67, Shams Naveed Cheema, and his elder brother, ex-MNA Chaudhry Javed Iqbal Cheema, on charges of beating up PML-Q activists at Chak No 103/NB” (*Dawn* 14 October 2002); “Three political workers were injured in firing by opponents in a post-election violence in Nadirabad in the South Cantonment area on Wednesday” (*Dawn* 20 February 2008); and “An uncle of the Haripur tehsil nazim was shot dead and eight other people were injured when armed bodyguards of former provincial minister...allegedly opened fire on supporters of Zulfiqar Ahmed Khan, a PML-N candidate who lost the election for PF-51 Haripur, in the Khalabat township on Wednesday” (*Dawn* 20 February 2008). Such incidents of post-election violence are often not part of a larger effort by the losing political party to challenge the election results. Instead, these incidents are individual, uncoordinated acts of violence by angry supporters of different losing

candidates. This differs from the way in which scholars such as Hafner-Burton, Hyde and Jablonski (2016) describe post-election violence as a form of widespread protest against the outcome of the election.

In addition to rioting, incidents of terrorism also increase on election day. Much of the terrorism on election day in Pakistan has been carried out either by political parties or, in many cases, unknown actors (most likely terrorist groups). An examination of the newspaper archives suggests that incidents of terrorism around election time are mostly aimed, unlike riots, at either killing off members of the opposing party or at least strongly intimidating them. Some examples include the following incidents of terrorism on election day: “PML-N workers on Monday afternoon set ablaze the locked house of PML-Q supporter Adil at Aadha-Daska, (NA-112 Sialkot-III)” (*Dawn* 18 February 2008); “Ghulam Haider Soomro registered an FIR with the Shadi Palli police, accusing Waheed Dilbar, Peeral, Sikandar and Mohammad Hassan of attacking MQM activists and supporters with axes at a polling station, near Pithoro” (*Dawn* 12 October 2002); “PPP candidate for NA-266, Munawar Khosa, was speaking at a rally when two persons in a car fired shots towards the gathering and dispersed it” (*Dawn* 5 October 2002); and “The biggest manslaughter was reported on Aug 31<sup>st</sup> from Jhal Magsi, a tribal area in Balochistan, where a former chief minister of the province and a tribal elder, Nawab Zulfiqar Ali Magsi, was attacked when his caravan was ambushed [on the way to filing his election nomination papers]” (*Dawn* 10 October 1993). In particular, terrorist groups in Pakistan have in the past openly declared their intention to target election-related activity and warned voters to stay away as this news report describes: “A radical cleric of

the area, Maulana Fazlullah, had warned the people to stay away from the elections or be ready for dire consequences. The militant leader had also threatened the contesting candidates of ‘terrible results’. Most of the contenders have confined their election campaign to indoor activities or installing billboards, pasting posters, hanging banners and wall chalking at various points in Swat” (*Dawn* 15 February 2008). In a few cases, incidents of terrorism are – like incidents of rioting – aimed at disrupting polling, such as incidents in which a terrorist indiscriminately fires at a polling station. However, for the most part, incidents of terrorism around election time differ from rioting. Unlike rioting, which is aimed at both hindering the opposing party from campaigning effectively before the election and manipulating voter turnout on election day, terrorism during the election is largely aimed at creating chaos and sabotaging the democratic process. Terrorist acts achieve these aims by killing people, terrorizing voters, and intimidating politicians.

My analysis also shows that violent political demonstrations decline on election day. A look at the newspaper archives suggests that one key reason why violent political demonstrations decline on election day is that political parties prioritize electioneering and campaigning in this time period over organizing demonstration. Much of the violence on election day is geared towards winning the election and in that context, it makes sense that violent political demonstrations would decline on election day. There is a very slight decline in violent political demonstrations in the week after the election. I argue that there are two main explanations for this result. First, much of the literature on post-election protests suggests that such protests are more likely when elections are perceived to have been rigged (Beaulieu 2014; Tucker 2007; Bunce and Wolchik 2006; Thompson and

Kuntz 2005; Schedler 2006). While elections in Pakistan between 1988-2011 did not occur on a level playing field – with some parties having privileged access to state resources and the caretaker government and election commission lacking neutrality – wide-spread election day rigging itself was not common (Pildat 2008). This explains why protests did not erupt after elections in the time period that I examine, especially since the absence of a level playing field and the lack of state neutrality towards the different political parties is a regular feature of politics in Pakistan and often does not rouse strong opposition. It is possible that protests might have erupted if elections had been openly manipulated and the state had engaged in wide-spread rigging. The second factor that explains the absence of protests in the aftermath of the election is the large seat share difference between the majority party and the opposition parties in the national assembly in the time period that I look at. This meant that parties could not hope to overturn the winning party's majority even if they did manage to challenge the results for a few seats through organizing protests and demonstrations. This reduced the motivation for organizing protests or demonstrations as a way to change the distribution of power.

In addition to this finding, my analysis also shows no relationship between the number of assassinations and the onset of elections. I argue that this is linked to the high risk involved in carrying out political assassinations and the uncertain benefits of such a strategy. Carrying out political assassinations is a high-risk activity given the personal security details of important political figures and candidates, especially at election time when security is increased. There is a significant chance of failure and of being apprehended by the authorities. In addition, assassinations carried out to prevent a party

from winning can backfire by creating a sympathy vote-bank for the party with the assassinated politician, as happened in Pakistan when Benazir Bhutto was assassinated before the 2008 elections. As a number of analysts and newspaper reports pointed out, Benazir Bhutto's assassination won her party, the PPP, a large sympathy vote which brought the PPP to power (Birsal 2008). A look at the newspaper archives shows that while some political assassinations have occurred at election time in Pakistan, there is no noticeable spike in assassinations in the months before the election or on election day. Assassinations have occurred at a similar rate in non-election months – for example, ex Minister of Sindh, Dost Muhammad Faizi was stabbed in his house on January 23<sup>rd</sup>, 1988; a member of the provincial assembly was targeted outside his house on May 4<sup>th</sup>, 1988; an assassination attempt was made on the life of MQM chief Altaf Hussain on March 12<sup>th</sup>, 1989; and Benazir Bhutto's cousin was kidnapped and assassinated on October 7<sup>th</sup>, 2000. Many more such examples exist.

In the final part of my analysis, I look at the relationship between election violence and the ideological orientation of the top parties competing in a district, as well as the relationship between post-election violence and the identity of the runner-up party. Contrary to my hypothesis and the arguments in the existing literature about the destabilizing effect of ethnic and religious parties, my analysis does not find any statistically significant effect of religious or ethnic parties on election day or post-election violence. In other words, ideologically different parties do not systematically differ from each other in their use of violence around election time. I argue that ideologically

different parties use violence in similar ways, i.e. parties use violence strategically to alter voter turnout and win support, as this section highlights.

Overall, these findings contradict a number of previous studies on election violence by showing the following: 1) not all forms of violence increase around election time, with political demonstrations decreasing on election day and in the week after the election; 2) assassinations are not affected by the onset of elections; 3) election violence, at least in the context of Pakistan, is concentrated on election day itself, with some violence in the week before and after the election; and 4) ethnic and religious parties are not associated with more election violence than other parties in the context of Pakistan. My paper points to the need for additional research to understand why politicians in different contexts rely on varying electoral strategies when it comes to violence. My paper lays the framework for future work on this topic.

## **2.7 Conclusion**

This paper has looked at election violence in Pakistan, specifically the nature and timing of the violence that occurs around elections. The paper examines whether the nature and degree of election and post-election violence is affected by the ideological orientation of the parties that compete or lose in the election. Using quantitative analysis, backed by archival work, the paper argues that election violence is largely concentrated on election day, with some violence in the week before and after the election. In particular, rioting increases in the week before the election (by 0.37%), on election day (by 7.5%) and in the week after the election (by 0.21%). Terrorism also increases on election day (by 1%) while violent political demonstrations see a slight decline on election day (0.1%) and an

even smaller decline in the week after the election (0.07%). Assassinations are not impacted by the onset of elections.

Several of these results challenge the existing literature, in particular the finding that political demonstrations decline in the week after the election, that assassinations are not affected by elections, and that election violence is largely concentrated on election day. Using newspaper archives, I show that election day violence, specifically rioting, is aimed at manipulating voter turnout and preventing voting in areas where the opposing party has a stronghold. In addition, I argue that election violence is strategically employed by political parties, regardless of ideological orientation, to manipulate voter turnout and win votes. In particular, I show that, contrary to the existing literature, ethnic and religious parties are not associated with greater levels of election violence than other parties.

## Appendix (Essay 2)

*Table 2-5 Summary Statistics for Key Variables*

<b>Variable</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Min</b>	<b>Max</b>
Logged Riots	0.0016787	0.0356361	0	2.484907
Logged Violent Demonstrations	0.0020342	0.0416877	0	3.218876
Logged Assassinations	0.0050608	0.0664198	0	3.091043
Logged Terrorism	0.0031961	0.0512895	0	2.833213
Election Competitiveness	81.62417	13.9533	15	99.999



*Table 2-6 Fixed Effects Logit Model for the Relationship between Different Forms of Violence and Elections*

<b>VARIABLES</b>	<b>(1) Fixed Effects Logit Model (DV=Number of Terrorist Attacks)</b>	<b>(2) Fixed Effects Logit Model (DV= Number of Assassinations)</b>	<b>(3) Fixed Effects Logit Model (DV= Number of Violent Demonstrations)</b>	<b>(4) Fixed Effects Logit Model (DV= Number of Riots)</b>
Week Before Election	0.6839*** (0.2084)	0.3366 (0.2200)	-0.8292 (0.7155)	1.3232*** (0.2304)
Week After Election	-0.0041 (0.2707)	-0.0728 (0.2604)	-1.4983 (1.0099)	0.8255*** (0.2709)
2 Weeks Before Election	0.3828 (0.2519)	-0.2723 (0.3110)	-0.3571 (0.5853)	0.7102** (0.3429)
2 Weeks After Election	0.5141** (0.2204)	0.2200 (0.2276)	-0.0816 (0.4637)	0.2992 (0.3872)
3 Weeks Before Election	0.3195 (0.2591)	-0.4814 (0.3420)	0.6415* (0.3662)	-14.5350 (676.9344)
3 Weeks After Election	0.0710 (0.2679)	0.0637 (0.2430)	0.3962 (0.3741)	-0.2639 (0.5070)
4 Weeks Before Election	-0.3958 (0.3602)	0.3618 (0.2358)	-0.3571 (0.5853)	-0.8039 (0.7117)
4 Weeks After Election	0.4192 (0.2296)	-0.1181 (0.2627)	-0.0816 (0.4637)	0.5528 (0.3438)
Election Day	1.5270*** (0.3243)	0.7438* (0.4051)	-23.1200 (100272)	4.4700*** (0.1761)
Year Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
District Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Election Competitiveness	0.0039*** (0.0015)	-0.0029** (0.0013)	0.0067*** (0.0020)	0.0032 (0.0021)
Constant	-8.6280	-15.3405	-7.5854	
Observations	777889	777889	777889	777889
Number of Districts	108	108	108	108

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \*p<0.1

### **ESSAY 3 : COUNTER-TERRORISM IN PAKISTAN: CAN CELLPHONE SHUTDOWNS REDUCE TERRORIST VIOLENCE?**

**Abstract:** How effective is the disruption of communication networks as a counter-terrorism strategy? In the present study, I rely on data from Pakistan to examine the effect of government mandated cellphone shutdowns on the ability of militants to coordinate and carry out terrorist attacks. I rely on the Pakistan Institute of Peace Studies (PIPS) panel dataset on daily incidents of terrorism in Pakistan from January 2001 to February 2014, across 132 districts, along with data on cellphone shutdowns collected from newspaper archives to look at the correlation between the suspension of cellphone services and the number of terrorist attacks. My fixed effects Poisson model for the years when cellphone services were suspended (2012-2014) shows that the effect of cellphone shutdown on the number of terrorist attacks varies depending on whether terrorist groups have prior knowledge of the shutdown or not. When cellphone shutdowns occur on holidays, terrorist groups anticipate them, since the government often announces such shutdowns a day or two in advance and cellphone services are usually suspended on the same holidays each year. In such cases, there is no correlation between a cellphone shutdown and the number of terrorist attacks. Terrorist groups are able to adapt to the anticipated cellphone shutdown by planning attacks that do not rely heavily on the use of cellphones. However, when the government unexpectedly shuts down cellphone services on a non-holiday, based on intelligence about a possible terrorist attack, terrorist groups are caught off-guard and at least some terrorist attacks are foiled. Terrorist groups carry out the foiled attacks at the next possible opportunity, usually the day after cellphone

shutdown. In line with this, my analysis finds a negative correlation between cellphone shutdown and the number of terrorist attacks on non-holidays, and an increase in the number of attacks on the day after cellphone shutdown. Cellphone shutdowns on non-holidays simply displace terrorist violence from the day of the shutdown to the next day. The analysis in this paper concludes that cellphone shutdowns are not effective as a long-term counter-terrorism strategy for reducing overall levels of terrorist violence.

### **3.1 Introduction**

In light of the huge toll that terrorist violence has taken on Pakistan and other countries, there has been a great deal of focus on trying to understand the causes of terrorist violence (Fair, Malhotra and Shapiro 2010; Fair and Shepherd 2006; Jo 2011; Von Hippel 2008; Abadie 2006; Piazza 2007; Tessler and Robins 2007). Yet relatively little work has been done on evaluating the effectiveness of various counter-terrorism policies employed by governments to deal with terrorist violence. A report by the Campbell Collaboration (Lum *et al* 2006) indicates that out of 20,000 studies of terrorism only 1.5% touch on the topic of counter-terrorism strategies. Of these, only a handful of studies present methodologically rigorous findings.

One increasingly common strategy for reducing violence and repressing dissent is to block cellphone or internet access on selected days, and perhaps in selected areas of a country. This strategy has been employed in Bangladesh, Egypt, India, Iraq, Ireland, Kazakhstan, North Korea, Syria, and Turkey (Institute for Human Rights and Business 2015; West 2016). The suspension of cellphone and internet services has carried incredible financial costs for such governments according to various estimates (*Dawn* 2015) and yet, despite the costly nature of such tactics, governments continue to rely on them to both control their populations and reduce violence. However, very little academic work exists on the effectiveness of cellphone shutdowns as a counter-terrorism strategy.

This study focuses on the suspension of cellphone services and its effect on terrorist attacks. Pakistan provides a good case study for evaluating the effectiveness of cellphone

shutdowns as a counter-terrorism strategy. Pakistan has seen increasing levels of terrorist violence post-2001 and has, at one point, been considered the center of a network of terrorist organizations as well as the “most dangerous nation in the world” (Moreau 2007). Terrorists groups in Pakistan – and elsewhere – have increasingly relied on modern communication technology to carry out attacks with the “rapid diffusion of decentralized communications technologies...becoming a critical component in the operation and organization of terrorist networks” (Powers 2005, 1). The Pakistani government has sought to tackle terrorist violence through a number of measures, such as increased security, several military operations against terrorist groups, and the suspension of cellphone networks on specific days when violence is anticipated. The high level of terrorist violence that Pakistan has seen, along with the Pakistani government’s policy of suspending cellphone coverage on specific days to prevent violence, provides an ideal opportunity to examine the effect of cellphone shutdowns on the level of terrorist violence.

The most prominent existing study on the link between cellphone services and violence argues that the lack of cellphone coverage in certain regions reduces the likelihood of violent conflict (Pierskalla and Hollenbach 2013). However, this study draws its conclusions by comparing violence in regions with cellphone services to those that lack cellphone coverage. This approach leaves their analysis open to a key confounder – the factors that help explain the prevalence of violence in a region might also explain the availability or unavailability of cellphone coverage in that area. My paper tests the hypothesis that the absence of cellphone coverage reduces incidents of violence by using

daily data on incidents of terrorist violence between 2001-2014 acquired from the Pakistan Institute of Peace Studies (PIPS), combined with data on cellphone shutdowns collected from newspaper archives. My analysis shows that, overall, cellphone shutdowns are ineffective in reducing the number of terrorist attacks over the long-term, although in the short-term, they might displace terrorist violence from one day to the next. In particular, this paper demonstrates that the effect of cellphone shutdowns on terrorist violence varies depending on whether terrorist groups anticipate cellphone shutdowns or not. When cellphone shutdowns occur on holidays, they are usually announced a day or two in advance by the government. Even when shutdowns are not announced, terrorist groups anticipate them, since cellphone shutdowns occur predictably on specific holidays (such as Eid). However, on non-holidays, the government normally suspends cellphone services unexpectedly based on intelligence about a possible terrorist attack, catching terrorist groups off-guard. Given this distinction, during the years in which cellphone shutdowns occurred (2012-2014), I find no correlation between cellphone shutdowns on holidays and the number of terrorist attacks on those holidays. Nor is there any effect on the levels of violence in the days before or after the shutdown. However, in the same period, when the government unexpectedly suspends cellphone services on a non-holiday for security reasons, there is a significant decline in terrorist attacks on the day of the cellphone shutdown and a significant increase in attacks on the day after the shutdown.

I argue that cellphone shutdowns have no effect on terrorist violence on holidays because terrorist groups anticipate that cellphone services will be suspended. They are therefore able to plan their attacks in a fashion that does not depend upon cell phone coverage.

When the government unexpectedly suspends cellphone services on a non-holiday (usually based on intelligence information), terrorist groups are caught off-guard and are often unable to coordinate without the use of cellphones; likewise, cellphones cannot be employed to detonate bombs. Consequently, attacks are delayed until the next feasible opportunity, usually the next day (when cellphone service is typically restored). Thus, cellphone shutdowns on non-holidays simply displace terrorist violence from the day of the shutdown to the next day with cellphone coverage. More generally, the evidence suggests that suspending cellphone services is an ineffective counter-terrorism strategy. Violence may be postponed, but it is not deterred.

The rest of the paper will be structured as follows: in the next section, I discuss the existing literature on cellphone use and how it relates to various political outcomes, particularly violence. This paper lies at the intersection of two bodies of literature: the literature on counter-terrorism and the literature on the effect of technology on political outcomes (including violence). I show how this paper contributes to both bodies of literature, by presenting an argument concerning the link between cellphone use and political violence. The third section provides a detailed description of the data used in this paper, followed by a section where I discuss my methods and present the results of my analysis. I then offer an interpretation of my results, drawing on newspaper archives and government reports. The final section concludes the paper by summarizing the key arguments.

### 3.2 Existing Literature

This paper lies at the intersection of two main bodies of literature: counter-terrorism and communications technology.

While public funds in countries like the United States and Pakistan are increasingly dedicated to fighting terrorism, there is a dearth of work that examines the effectiveness of different counterterrorism strategies in reducing terrorist violence. The Campbell Collaboration (Lum *et al* 2006), which published an exhaustive review of work on counterterrorism, showed that out of 20,000 works on terrorism, only 1.5% even touched on the problem of evaluating counterterrorism strategies. In all, only seven studies “contained evaluations of anti-terrorism strategies (often examining the same strategies) using at least moderately strong evaluation designs to ensure some internal validity and believability in the findings” (Lum *et al* 2006, 4). My review of the literature published on terrorism reinforces this view; I find that, with a few exceptions, there has been an emphasis in the existing literature on understanding the causes and motivations for terrorism, as opposed to looking at the effectiveness of strategies for dealing with terrorist violence. The small body of literature that does focus on evaluating counter-terrorism strategies looks at measures such as additional security checks at airports (Landes 1978; Enders and Sandler 1993; Enders, Sandler and Cauley 1990; Cauley and Im 1988), greater security at US embassies (Enders and Sandler 2000) and increased police and military spending (Barros 2003; Omotola 2008), among others. Some of the most promising studies on counter-terrorism focus on the effectiveness of repression as a counter-terrorism strategy (Brophy-Baermann & Conybeare 1994). Scholars disagree on



the effectiveness of repression; some scholars argue that it can lead to an increase in terrorist violence (Dugan and Chenoweth 2012; Byman 2006), others suggest it can affect the resilience of terrorist organizations (Jenna Jordan 2009; Price 2012) and still others argue that it has no effect on terrorist violence (Langdon et al. 2004).

In recent years, several governments, think tanks and universities have begun to show greater interest in projects that evaluate different counterterrorist strategies. One major effort in this area is the project “Assessing Success and Failure in Terrorism and Counterterrorism” led by Rashmi Singh under the National Consortium for the Study of Terrorism and Responses to Terrorism at the University of Maryland. This project seeks to evaluate the achievements and failures of the War on Terror between 2001-2009 using indicators on the number and nature of attacks by terrorist groups, as well as efforts made by the US to fight terrorism. It concludes that the Arab and western media have evaluated the War on Terror in completely different ways with the western media viewing the War on Terror as damaging to America’s position in the world and the Arab media criticizing it because a military option was chosen over efforts at social reform (Singh 2011).

Similarly, an on-going project at the University of Utrecht entitled “History of Counterterrorism 1945-2005” seeks to expand our knowledge of counter-terrorism strategies and move beyond those employed by western governments to include examples from the non-western world, which is often ignored in studies of counter-terrorism (Duyvesteyn 2012).

While the literature on counter-terrorism has little to say about the effect of cellphone shutdown on terrorist violence, a separate body of literature looks at the relationship between the use of technology and different political outcomes including violence. This body of literature has examined the effect of cellphone use on political behavior such as voting (Vega 2015), mass mobilization (Manacorda & Tesei 2016; Bond et al. 2012; Gladwell 2010), election campaigning and the spread of political information (Smith & Duggan 2012; Smith 2014) and political violence. One important work in this area that specifically looks at the link between cellphone use and political violence is the paper by Pierskalla and Hollenbach (2013). This paper focuses on Africa to argue that the “availability of cellphones as a communication technology allows political groups to overcome collective action problems more easily and improve in-group cooperation, and coordination” (Pierskalla and Hollenbach 2013, 1). Due to the effect of cellphone use on the ability of militants to coordinate and overcome collective action problems, Pierskalla and Hollenbach find that cellphone coverage is correlated significantly with an increased probability of violent conflict in Africa. Shapiro and Weidmann (2015) reach the opposite conclusion – they find that expanding cellphone coverage in Iraq between 2004-2009 has been associated with a decline in the number of successful attacks in the country. This is because noncombatants can use cellphone services to report insurgent activity to the authorities. Similarly, in a working paper, Charles Martin-Shields (2012) focuses on Kenya to argue that cellphones can be effective in conflict prevention since they allow the reporting of incidents of violence.

Despite the dearth of studies on the effect of cellphone use on political violence and the inconclusive results offered by the few studies that do examine this topic, governments have continued to restrict access to telecommunication and internet networks. Countries across the world, including the Democratic Republic of Congo, Egypt, India, Iraq, Ireland, Kazakhstan, Saudi Arabia, Syria, Turkey, and others, have in the past either limited or completely shut down access to telecommunication and internet services (Institute for Human Rights and Business 2015; West 2016). The reasons for such shutdowns have varied from repressing dissent to defending national security, protecting government authority, and tackling terrorism. These telecommunication and internet shutdowns have been costly for governments. Pakistan's leading English language newspaper, Dawn News, reports that the Pakistani government faced a tax revenue loss of Rs. 507 million and Rs. 500 million during the public holidays of Eid and Ashura respectively, in 2012 alone, due to cellphone shutdowns (*Dawn* 2015). It is surprising that even though several governments across the world have relied on telecommunication shutdowns – an immensely costly enterprise for governments – there has not been much academic interest in evaluating the effectiveness of suspending cellphone services on various political outcomes.

My paper seeks to fill this gap in the existing literature by evaluating the impact of disrupting cellphone networks on incidents of terrorist violence in Pakistan between January 2001 and February 2014. Pakistan's policy of suspending cellphone services on certain days presents a unique opportunity to study the impact of cellphone use on terrorist violence through a research design that sidesteps many of the confounders that

would otherwise skew the results. As stated earlier, to date, Pierskalla and Hollenbach (2013) have most directly looked at the effect of cellphone use on political violence, showing that cellphone use helps insurgents to coordinate and launch attacks. In terms of their research methods, they rely on cross-sectional data on cellphone coverage and incidents of violence across Africa to support their argument. This approach leaves their analysis open to confounders – specifically, the factors that help explain the prevalence of violence in a region might also explain the availability or unavailability of cellphone coverage in that area, an issue that Pierskalla and Hollenbach acknowledge. They address this by controlling for confounding variables in their analysis. Despite this, evaluating terrorist attacks in areas where cellphone services are simply not available is not equivalent to studying cellphone shutdowns as a counter-terrorism strategy. Pierskalla and Hollenbach’s (2013) study as well as other existing studies on cellphone use and violence (Shapiro and Weidmann 2015; Martin-Shields 2012) cannot speak to the issue of whether shutting down cellphone services is an effective counter-terrorism strategy. My focus on Pakistan, a country that has suspended cellphone services on different occasions in districts that normally have access to cellphone services, allows me to effectively address this question and avoid such confounders. In addition, looking at within-country variation in incidents of cellphone shutdowns and terrorist violence also allows me to hold constant factors that might vary across countries and affect incidents of terrorism (such as a country’s security infrastructure). For these reasons, my study is better able to evaluate the effect of cellphone use on levels of terrorist violence than existing work on the topic.

### 3.3 Argument

The Pakistani government, along with several other governments across the world, has relied on limiting access to technology such as cellphone services to thwart terrorist violence as well as limit dissent more generally. In the time period that this paper focuses on (2001-2014), the first incident of cellphone shutdown occurred on March 23<sup>rd</sup>, 2012 when cellphone service was suspended in Balochistan on Pakistan Day to prevent any militant violence. This has been followed by 182 other cases where cellphone services have been suspended in different districts on certain days, sometimes across a number of districts on the same day.

Rehman Malik, who served as Pakistan's Interior Minister from 2008-2013, has put forward a three-fold argument for why suspending cellphone services should reduce incidents of terrorist violence: "One, they use them [cellphones] to detonate bombs. Two, the terrorists communicate among themselves with them. And three, they communicate with the masterminds behind the attacks using mobile phones" (Desmukh 2012). These arguments overlap with those made in the literature about the ways in which cellphone use helps militants to overcome collective action problems. Cellphone use allows members of a terrorist organization to spread information within the group, to coordinate and plan attacks, to report back to group leaders on activities, to generate intra-group trust through frequent communication between group members, and finally to actually detonate bombs. It also allows militant leaders to monitor members of the group to ensure that there is no free-riding and that each member is contributing to the group (Pierskalla

and Hollenbach 2013). In addition to being used to trigger a bomb, cellphone batteries have in some cases been removed and replaced with a small bomb (Lufkin 2016).

There are several prominent examples of the use of cellphones in terrorist violence. The most recent case of a large-scale terrorist attack where terrorists used high-tech gadgets and modern communication technology to plan and execute an attack is the Mumbai attack in November 2008, when terrorists laid a 3-day siege at a Jewish center and two hotels. The terrorists relied on satellite phones as well as on normal cellphones to communicate with their superiors who passed orders, gave encouragement and, once the attack was underway, also provided details about the movement of Indian security forces, gleaned from news reports (Kahn 2008; Boulden 2004). Other examples of cellphone use in the execution of terrorist violence include several cases where cellphones were used to detonate bombs: in Madrid in 2004, at Hebrew University in 2002, at the Jakarta Marriott hotel in 2003, in New Jersey and New York City in 2016 and in Thailand in 2016 as well as in post-2001 Iraq in a number of attacks (Teeman, Miller & Siegel 2016; Vega 2015; Smith 2016; Lufkin 2016; Leetaru 2017; Axe 2016). These are just some of the examples of the way in which terrorists have relied on cellphones to plan and execute attacks. For the reasons mentioned in the previous paragraph, compounded with existing anecdotal evidence, it is hypothesized that suspending cellphone services will reduce levels of terrorist violence, as Pakistan's Interior Minister suggests.

In summary, my paper tests the following hypothesis:

*Hypothesis 1: All else being equal, the suspension of cellphone services on any particular day should reduce the number of terrorist attacks on that day compared to days when cellphone services are not suspended.*

However, from 2012 onwards, the newspaper archives of Pakistan's Dawn News suggest that cellphone shutdowns regularly occurred on certain holidays and were usually announced in advance on those holidays. They also occurred on non-holidays, usually as a surprise tactic meant to catch terrorist groups off-guard. I am interested in looking at the effect on terrorist attacks of cellphone shutdowns that occur on holidays and are anticipated or announced in advance as compared to cellphone shutdowns that occur on non-holidays and are unannounced. This has led me to test an additional hypothesis:

*Hypothesis 2: Cellphone shutdowns are likely to be ineffective when they are announced before-hand, such as on holidays, since the announcement allows terrorists the opportunity to use other methods to carry out attacks that do not rely on cellphone use. However, when cellphone shutdowns are not anticipated, as is the case on non-holidays, they are likely to hinder terrorist groups from carrying out at least some attacks that heavily rely on the use of cellphones for their execution.*

Hypothesis 2 also leads me to the expectation that on non-holidays when cellphone shutdowns happen unexpectedly, the terrorist attacks that have been disrupted are carried out at the next available opportunity. This opportunity presents itself on the day after the shutdown, when cellphone services are available. This results in my third hypothesis:

*Hypothesis 3: Terrorist attacks planned on non-holidays and disrupted because of unannounced cellphone shutdowns are likely to be carried out at the next available opportunity, which is the day after the cellphone shutdown. In other words, I anticipate that cellphone shutdowns displace terrorist attacks rather than reducing overall levels of violence.*

### **3.4 Description of the Data**

To test this hypothesis, my paper relies on a panel dataset of daily incidents of violence in Pakistan from January 2001 to February 2014 across 132 districts of Pakistan collected by the Pakistan Institute of Peace Studies (PIPS) in their Digital Database on Conflict and Security. The PIPS dataset subcategorizes each incident of violence in terms of whether it is a terrorist attack, ethnic violence, intertribal clash, sectarian clash, nationalist violence, an attack by government forces, a drone strike or an exchange of fire across Pakistan's borders. It further identifies the date when each incident of violence occurred and the district in which it happened, as well as the number injured and killed in each incident. In this paper, I focus specifically on terrorist violence as defined by the PIPS dataset, that is: "Indiscriminate use of violence by militant outfits such as Tehrik-e-Taliban Pakistan (TTP), Lashkar-e-Islam and others, manifested through suicide attacks, beheadings and destruction of educational institutions, CD/video shops, etc." (PIPS website). In other words, the PIPS dataset defines terrorist violence in the simplest possible terms as violence perpetrated by groups that the Pakistani government considers as terrorist groups. This is the definition of terrorist violence that my paper will base its analysis on. The dependent variable for my analysis of the relationship between



cellphone shutdown and terrorist violence is the number of terrorist attacks on a given day. The variable for the number of terrorist attacks (*Terroristattacks*) varies between 0 and 8, with 8 being the highest number of incidents of terrorist violence on any day in any one district. In my dataset, the highest number of terrorist attacks in a day – 8 attacks – occurred in Swat. Swat district, which was controlled by terrorist groups between 2007-2009, was subject to a military campaign to root out terrorists. During the period, the district witnessed a high number of terrorist attacks by militants and counter-attacks by security forces.

I combined the PIPS dataset on violence with data on incidents of cellphone shutdown during the time period that the violence dataset covers, between January 2001 and February 2014. I collected data on cellphone shutdowns from newspaper archives, specifically the archives of Pakistan's major newspapers: Dawn News, The Express Tribune and The News International. To collect this cellphone shutdown data, I searched through these newspaper archives for any mention of cellphone shutdowns. In all cases, news reports mentioned the cellphone shutdown along with a list of the districts/regions where cellphone services would be suspended. However, in a few cases, newspaper reports mentioned the key districts where cellphone services were suspended and hinted at the fact that cellphone services were suspended in a few smaller districts as well without mentioning the names of those districts. To confirm the dates when cellphone services were suspended, I compared the data I collected from newspaper archives with data collected directly from cellphone companies by the Institute for Human Rights and

Business (2015). By comparing the two datasets, I was able to ensure that no dates had been missed in my data when cellphone shutdowns occurred.

The Institute for Human Rights and Business, however, does not record information on the districts where cellphone shutdowns occurred. My requests for information from cellphone companies in Pakistan did not yield any response. To mitigate this problem, in cases where it was unclear which districts faced cellphone shutdowns, I looked again at newspaper archives, this time focusing on all the major Pakistani newspapers to piece together as much detail as possible on which districts were included in the shutdown. This meant looking through Dawn News, The News, Pakistan Today, The Nation and Express Tribune for details regarding cellphone shutdowns on specific days. Some newspapers included information that was not included in other papers and by relying on these different sources, I created a dataset on cellphone shutdowns including all available information on the days and districts in which shutdowns occurred. There remains a possibility that small districts were not included in newspaper reports on cellphone shutdowns. However, given the thoroughness of the data collection process, I anticipate that only a very small number of districts witnessed cellphone shutdowns and were not included in my dataset. In addition, an overwhelming majority of terrorist violence in Pakistan is concentrated in the major, urban districts of the country, as well as the tribal belt alongside Afghanistan, and cellphone shutdowns in these areas were reported in newspapers.

In general, in the time period that I cover, all incidents of cellphone shutdown in Pakistan occurred between March 23<sup>rd</sup>, 2012 and January 14<sup>th</sup>, 2014. There have been 20 different days when cellphone services were suspended across various districts. Districts are administrative units in Pakistan, which encompass numerous tehsils (also administrative units) with this paper focusing on 132 districts in the country. Out of 132 districts, 67 experienced at least one episode of cellphone shutdown, although several districts like Karachi and Lahore experienced a higher number of cellphone shutdowns. There is some variation in the times of the day when cellphone shutdowns occur: cellphone shutdowns typically occur from 9am or 10am in the morning until anywhere between 6pm to 12am (midnight). Since cellphone services are often suspended across multiple districts on the same day, there have been a total of 183 unique day-district combinations when cellphones were suspended. I have coded the data on cellphone shutdowns as a dummy variable with a 1 representing a cellphone shutdown and a 0 representing cellphone coverage. This variable is my primary independent variable. Table 3-5 in the appendix contains the summary statistics for the key variables in my analysis.

### **3.5 Model and Results**

Using the data described in the previous section, I look at the effect of cellphone shutdowns (*cellphonesuspended*) on the number of terrorist attacks (*terroristattacks*). As a first step, I run an independent two-sample difference of means test to see if there any significant differences in the sample means of two groups of observations: a) the number of incidents of terrorist violence when cellphone services are suspended and b) incidents of terrorist violence without cellphone shutdown. However, since the variances for the

two samples are not equal, with the variance for the sample with cellphone shutdown being almost twice the variance for the sample without cellphone shutdown (.219 as opposed to .149), I rely on the t-test that accounts for unequal variances. Table 3-1 shows the results of the t-test. The t-statistic for this test is -1.456 with 182 degrees of freedom. The two-tailed P value is 0.147 which shows that the difference of means in the number of terrorist attacks between the group of observations with cellphone shutdown and the group without cellphone shutdown is not different from 0. However, to confirm these results, I run a regression model.

*Table 3-1 Results of the t-test*

	Cellphone Shutdown?						95% CI for Mean Difference	t	df
	No ( <i>cellphonesuspended=0</i> )			Yes ( <i>cellphonesuspended=1</i> )					
	M	SD	N	M	SD	N			
Number of Terrorist Attacks	0.0147	.1491	594213	0.0383	.2190	183	-.056,0.008	-1.46	182

Since my dependent variable is a count variable with terrorist attacks being a relatively rare occurrence (no incidents of terrorist violence occur in 98% of the observations in my data), I run a district fixed effects Poisson model on my data (Rodríguez 2007). Table 3-10 in the appendix contains the frequency table for my key dependent variable – the number of terrorist attacks. Rodríguez (2007) argues that when the probability that at least one event will occur in a specified time period is proportional to the length of time, and there is very little probability of two or more events occurring in a small time period and the number of events that occur in different time periods are mutually independent, then we can rely on the Poisson model to analyze our data. In the case of terrorist attacks,

these assumptions are largely met –the probability of a terrorist attack occurring increases over a longer period of time, there is a very low probability that two or more terrorist attacks will occur in a very short amount of time, and to some extent, the terrorist attack that occurred in 2001 in Lahore will not affect the probability of a terrorist attack in Karachi in 2008. However, terrorist attacks over time within a district might not be mutually independent, as districts with a history of terrorist violence have a higher likelihood of seeing violence in the future too. To account for this, I include year fixed effects in my model to control for any trends over time in the number of terrorist attacks. In addition, I run a district fixed effects model, and this eliminates the necessity of including district-level control variables, such as population density, which were included in previous cross-sectional studies on this topic. I include a control variable for whether a particular day is a holiday since holidays are likely to differ in important ways from other days of the year. The Pakistani government often puts into place additional security arrangements on holidays, particularly festive holidays, since it anticipates an increase in terrorist attacks in public areas on days when people have gathered in large numbers to celebrate. It is expected that terrorist attacks are more likely to occur on holidays and by controlling for holiday (*holiday*) in my regression, I can control for the “holiday effect.” In addition, I run my analysis separately for two different time periods: 1) for my entire dataset from 2001 to 2014, even though cellphone shutdowns were first used in 2012; and 2) for the specific period during which cellphone services were suspended, between 2012 and 2014. This is to ensure that my results are robust and hold across both time periods. Finally, as an additional robustness check, I run a fixed effect logit model with a binary

dependent variable (a 1 when an act of terrorism occurs and a 0 otherwise) and the same independent variables as the fixed effect Poisson model.

Table 3-2 below shows the results of this analysis. Models 1 and 2 in the table show that, regardless of which time period of focus, the suspension of cellphone services is not significantly correlated with the number of terrorist attacks. The p-values for my key independent variable of interest, cellphones suspended, are not significant for the first two models in Table 3-2. However, the holiday dummy variable is statistically significant and negatively correlated with the number of terrorist attacks for Model 1, while the holiday dummy has no correlation with terrorist attacks in Model 2. To interpret the coefficient for the holiday dummy for Model 1, I look at the incidence rate ratio for the *holiday* variable which is 0.7999, which means that the number of terrorist attacks decline by 20 percent on holidays compared to other days of the year.

In addition to looking at the effect of cellphone shutdowns on terrorist attacks, I also examine whether cellphone shutdowns have an indirect effect on the number of terrorist attacks on the day after the shutdown. Models 3 and 4 in Table 3-2 show the results of the fixed effects Poisson regression with the lagged independent variable *cellphonesuspended* for the two time-periods, 2001-2014 and 2012-2014. In both models, lagged *cellphonesuspended* is statistically significant and positively correlated with the number of terrorist attacks. In other words, while cellphone shutdowns on specific days are not correlated with the number of terrorist attacks on those days, the number of attacks increase the day after such shutdowns. To interpret these results, I rely on the

incidence rate ratio which is 2.47 (exponentiation of 0.904) for *l.cellphonesuspended* in model 3, showing that the number of terrorist attacks increase by 147 percent on the day after cellphone shutdown. Similarly, in Model 4, focusing solely on the 2012 to 2014 time period, *l.cellphonesuspended* is positively correlated with the number of terrorist attacks with terrorist attacks increasing by 57 percent on the day after cellphones were suspended. Table 3-6 in the appendix shows the results of this analysis when both *cellphonesuspended* and lagged *cellphonesuspended* are included in the same model. Table 3-6 confirms the results from Table 3-2. In addition, Table 3-11 in the appendix shows the results of the reduced Poisson model on the post-2012 data with only the cellphone suspended variable. This also confirms the findings from Table 3-2.

**Table 3-2 Fixed Effects Poisson Model for the Relationship between Cellphone Shutdowns and the Number of Terrorist Attacks**

<b>DV= Number of Terrorist Attacks (Terroristattacks)</b>	<b>(1) Fixed Effects Poisson Model</b>	<b>(2) Fixed Effects Poisson Model Post-2012</b>	<b>(3) Fixed Effects Poisson Model with Lag</b>	<b>(4) Fixed Effects Poisson Model Post- 2012 with Lag</b>
Cellphones Suspended	-0.108 (0.380)	-0.584 (0.382)		
Lagged Cellphones Suspended			0.904*** (0.225)	0.448** (0.227)
Holiday	-0.223*** (0.0612)	-0.175 (0.127)	-0.231*** (0.0611)	-0.222 (0.126)
Year Fixed Effects	☑	☑	☑	☑
District Fixed Effects	☑	☑	☑	☑
Observations	463,809	59,736	463,706	59,736
Number of Districts <sup>3</sup>	103	76	103	76
Time Period for Analysis	2001-2014	2012-2014	2001-2014	2012-2014

Standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \*p<0.1

<sup>3</sup> The number of districts is 103 in Model 1 and 76 in Model 2. This change in the number of districts is because a larger number of districts have seen zero terrorist attacks post-2012 compared to districts over the entire time period from 2001-2014. While there were no terrorist attacks in 56 districts from 2012-2014, there were no terrorist attacks in 29 districts from 2001-2014. Since Stata dropped districts with no violence observations, 56 districts were dropped in the 2012-2014 analysis and 29 districts were dropped in the 2001-2014 analysis.

I further explore the relationship between cellphone shutdowns and incidents of terrorist violence by disaggregating the days on which cellphone shutdowns occur into holidays and non-holidays. I run two models: a) a fixed effects Poisson model for the relationship between cellphone shutdowns on holidays and the number of terrorist attacks; and b) a fixed effects Poisson model for the relationship between cellphone shutdowns on non-holidays and the number of terrorist attacks. Table 3-3 show the results of this analysis. As Models 1 and 2 in Table 3-3 show, there is no correlation between cellphone shutdowns and the number of terrorist attacks when cellphone shutdowns occur on holidays, a finding that holds across the two time periods that I look at (2001-2014 and 2012-2014). In addition, as seen in Model 3 and 4 in Table 3-3, cellphone shutdowns on holidays have no effect on terrorist violence on the day after the shutdown. When cellphone shutdowns occur on non-holidays (Table 3-3), the *cellphonesuspended* variable is statistically significant and negatively correlated with the number of terrorist attacks on the day of the shutdown (for the 2012-2014 period). In addition, there is a statistically significant and positive correlation between cellphone shutdown and the number of attacks on the day after the shutdown (for both time periods). The results show that there is an 87 percent decline in the number of terrorist attacks on the day of the shutdown and a 127 percent increase in terrorist attacks on the day after the shutdown for the 2012-2014 time period. For the 2001-2014 time period, there is no effect of cellphone shutdown on a non-holiday on the number of terrorist attacks on that day, but a significant 263 percent increase in terrorist attacks on the next day.



**Table 3-3 Fixed Effects Poisson Model for the Relationship between Cellphone Shutdowns and the Number of Terrorist Attacks when Shutdowns Occur on Holidays**

<b>DV= Number of Terrorist Attacks (<i>Terroristattacks</i>)</b>	<b>(1) Fixed Effects Poisson Model</b>	<b>(2) Fixed Effects Poisson Model Post-2012</b>	<b>(3) Fixed Effects Poisson Model with Lag</b>	<b>(4) Fixed Effects Poisson Model Post- 2012 with Lag</b>
Cellphones Suspended (Holiday)	0.466 (0.409)	0.0428 (0.410)		
Lagged Cellphone Suspended (Holiday)			-0.229 (0.578)	-0.654 (0.578)
Cellphones Suspended (Non-Holiday)	-1.555 (1.000)	-2.033** (1.001)		
Lagged Cellphones Suspended (Non-Holiday)			1.290*** (0.244)	0.819*** (0.245)
Year Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
District Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Observations	463,809	59,736	463,706	59,736
Number of Districts	103	76	103	76
Time Period for Analysis	2001-2014	2012-2014	2001-2014	2012-2014

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05

For robustness checks, I converted my dependent variable, the number of terrorist attacks (*terroristattacks*), into a binary variable with no terrorist attacks classified as 0 and terrorist attacks greater than 1 classified as 1. With this dependent variable, I ran a fixed effects logit model. I focused on the 2012-2014 period in my logit model, the years during which cellphone services were actually suspended by the Pakistani government at various times. As Tables 3-7 and 3-8 in the appendix show, the results of the fixed effects logit model for the relationship between cellphone shutdowns and the number of terrorist attacks, coincide with the results presented earlier from the fixed effects Poisson model. As was the case in the Poisson model, the fixed effects logit model shows that cellphone shutdowns have no effect on the number of terrorist attacks when cellphones are

suspended on holidays. Additionally, when cellphones are suspended on non-holidays terrorist attacks decline on the day of the shutdown and increase on the day after the shutdown, results that are entirely consistent with the results from the Poisson model.

Finally, I also rerun the fixed effects Poisson model presented in Table 3-2 for the post-2012 time period by including an interaction term between the dummies for cellphone shutdown and holidays. While previously I relied on two separate models to understand the effect of cellphone shutdowns on terrorist violence during holidays and non-holidays, the model below has the advantage of comparing the two different scenarios in the same model, which is empirically and theoretically more meaningful. My previous results had shown that there is no effect on terrorist attacks when cellphone shutdowns occur on holidays and terrorist attacks decline when cellphone services are suspended on non-holidays. The model in Table 3-4 shows that terrorist attacks increase by a factor of 1.297 (29.7 percent) when cellphone services are suspended on holidays compared to non-holidays and decline by 668 percent when cellphone services are suspended on non-holidays. In addition, there is no effect on terrorist attacks on the day after cellphone shutdown when cellphone shutdowns occur on holidays. However, there is a 123 percentage-point increase in terrorist attacks on the day after cellphone shutdown when the shutdown occurs on a non-holiday. This confirms the results from the other models used in this paper and points at the way in which cellphone shutdowns are not effective at reducing terrorist violence when they are anticipated beforehand on holidays, whereas they displace terrorist violence to the next day when cellphone shutdowns occur

unexpectedly on non-holidays. The Fixed Effects Logit model also shows similar results (Table 3-9 in the appendix).

**Table 3-4 Fixed Effects Poisson Model for the Relationship between Cellphone Shutdowns and the Number of Terrorist Attacks with Interaction Term**

<b>DV= Number of Terrorist Attacks (Terroristattacks)</b>	<b>(1) Fixed Effects Poisson Model Post-2012 with Interaction Term</b>	<b>(2) Fixed Effects Poisson Model Post-2012 with Lagged Interaction Terms</b>
Cellphones Suspended	-2.039** (1.001)	
Holiday	-0.230* (0.132)	
Cellphones Suspended interacted with Holiday	2.299** (1.088)	
Lagged Cellphones Suspended		0.803*** (0.245)
Lagged Holiday		-0.597*** (0.158)
Lagged Cellphones Suspended interacted with Lagged Holiday		-0.863 (0.646)
Year Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
District Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Observations	59,736	59,736
Number of Districts	76	76

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

### 3.6 Interpretation

Several key findings have emerged from the analysis in the previous section. The results in this paper confirm that cellphones are important for terrorist attacks in Pakistan, although I show that cellphone shutdown as a counter-terrorism strategy is not effective at reducing overall levels of terrorist violence. However, my analysis shows that in the 2012-2014 time period, the effect of cellphone shutdowns on terrorist violence is different when cellphone services are suspended unexpectedly and when cellphone

shutdowns are preplanned and anticipated by terrorist groups. When cellphone shutdowns are announced beforehand and anticipated by terrorist groups, such as when they occur on holidays, they have no effect on levels of terrorist violence on the day of the shutdown or on the days before or after the shutdown. On the other hand, when cellphone shutdowns occur unexpectedly based on new intelligence that the government receives about possible terrorist attacks, they are correlated with a reduction in the number of attacks on the day of the shutdown (87 percent decline) and an increase (127 percent) in attacks on the day after the shutdown. The fixed effects logit model confirms these findings. In this section, I offer an interpretation of these findings.

There is significant evidence of the use of cellphones in the planning and execution of terrorist attacks in different parts of the world. Cellphones allow terrorists to communicate with each other, to overcome collective action problems, to spread information, and to plan an attack. In addition, cellphones can also be used in the actual execution of an attack by allowing terrorists to coordinate with each other during an attack and get orders from higher-ups. A cellphone can be used to trigger a bomb or be converted into a small bomb. Terrorists have used cellphones to organize and launch an attack in November 2008 in Mumbai, to trigger bombs placed on commuter trains in Madrid in 2004, to set off a bomb at the Hebrew University in 2002, to detonate a bomb at the Jakarta Marriott hotel in 2003, as well as to set off bombs in New Jersey, New York City and Thailand in 2016 (Teeman, Miller & Siegel 2016; Vega 2015; Smith 2016; Lufkin 2016; Leetaru 2017; Axe 2016; Boulden 2004). In fact, in the 2008 Mumbai attacks, the terrorists involved were almost constantly on their phones once the attack

began, getting orders from their handlers, and receiving information on the movement of Indian security forces (Kahn 2008). In the case of Pakistan, the government has alleged that terrorist organizations in the country have used cellphones to coordinate attacks and detonate bombs, with one government official going so far as to say that cellphones are the biggest weapons that terrorist groups have at their disposal (*The Express Tribune* 2012a).

Given the evidence that terrorist groups rely on cellphones to coordinate and carry out attacks, it is surprising that cellphone shutdowns have no effect on incidents of terrorism on holidays. I argue that this can be understood by looking at the way in which terrorist groups are able to adapt when they receive information about cellphone shutdowns that are scheduled to occur. Newspaper archives show that when cellphone shutdowns occur on holidays, the government often announces the shutdown beforehand, a day or several days before the shutdown (*Dawn* 2012; *The Express Tribune* 2012b; *The Express Tribune* 2014; *Dawn* 2017) which means that terrorist groups have prior knowledge of the shutdown and are able to change their tactics accordingly. A look at some of the attacks that have occurred on holidays when cellphones were suspended between 2012-2014 shows that the attacks were planned so as not to require the use of a cellphone in their execution. The attacks that occurred on holidays with cellphone shutdowns involved either the use of hand grenades or suicide bombers. These attacks did not require the use of cellphones to detonate bombs. A few prominent examples stand out in the newspaper archives; in particular, between 2012-2014 the government has suspended cellphone services on Ashura holidays and yet terrorist groups have managed to launch attacks. For

example, on November 25<sup>th</sup>, 2012, a suicide bomber attacked an Ashura procession in DI Khan, killing five and injuring seventy. A Tehrik-i-Taliban spokesman took responsibility for the attack and stated that no matter what counter-terrorism strategies the government adopted, the Taliban would succeed in their attacks (*Dawn* 2012). Similarly, on Ashura holidays in 2013, several policemen were injured in a hand grenade attack (*The Express Tribune* 2016). In other cases, hand grenades or suicide attackers were also employed in carrying out terrorist attacks (*The Express Tribune* 2016). In addition, a member of Pakistan's Counter-terrorism Task Force reinforced this view in an interview, arguing that when terrorist groups have prior knowledge of a shutdown, attacks are planned in ways that do not require cellphone use (Hashmi, Interview with the author, December 13, 2017). For example, she argued that often when terrorist groups have knowledge of a forthcoming cellphone shutdown on a holiday, terrorist groups will instruct a suicide bomber to attack a certain location on the day of the holiday at a specific time without relying on any communication from handlers on the actual day of the attack. In addition, terrorist groups in Pakistan and other parts of the world have sometimes relied on forms of technology other than cellphones to communicate, especially when they perceive cellphone services to be unreliable. For example, terrorist groups have sometimes relied on the internet rather than cellular networks to plan attacks, especially using Voice over Internet Protocol (VoIP) services such as Skype, which are much harder to track than calls made through cellular networks. In addition, in several prominent attacks such as the 2008 Mumbai attacks, terrorists used satellite phones to communicate, making it harder for law enforcement officials to intercept and trace the

calls made through these phones (Kahn 2008; Boulden 2004). In still other cases, terrorist groups have relied on smartphone applications that allow them to communicate without having to use normal cellular networks. A Huffington Post report documents the way in which terrorists in Jammu and Kashmir have used an application for smart phones that allows for off-air communication between them through a special network that does not require access to the internet or normal cellular networks (*Huffington Post* 2016). Thus, terrorist groups change their communication modes and attack tactics when they have prior knowledge of an upcoming holiday during which cellphone services will be suspended. This explains why there is no correlation between cellphone shutdown and the number of terrorist attacks on holidays.

On the other hand, when the government suspends cellphone services unexpectedly on a non-holiday based on intelligence about a possible terrorist attack, terrorist groups are caught off-guard. When cellphone services are suspended unexpectedly, terrorist groups are unable to adapt since changing attack tactics requires preplanning. The clearest example of a cellphone shutdown that was not announced in the days before the shutdown and that was based on intelligence about a possible terrorist attack comes from the following newspaper report: “Cellular services were suspended by Pakistan Telecommunication Authority (PTA) in Karachi on Friday from 11am-6pm in light of terrorism threats, *Express News* reported. According to an intelligence report, a major act of terrorism was suspected in Karachi, which was expected to be carried out through a cell phone” (*The Express Tribune*, 2012). The news report goes on to point out that network operators were informed that cellphone services were to be suspended only

two hours before the actual shutdown. In such cases, terrorist groups are not able to change their attack tactics since they have no prior knowledge of the shutdown; the shutdown is effective in preventing terrorist groups from carrying out attacks, especially those that rely heavily on the use of cellphones. One highly publicized example of the way in which cellphone shutdowns have prevented terrorist attacks is the attack planned on former President General Pervez Musharraf that was foiled by cellphone jammers. On December 25<sup>th</sup>, 2003, Musharraf's motorcade was passing over a bridge which terrorists had planned to blow up, but Musharraf survived due to the use of cellphone jammers (*CBC News* 2003).

However, my analysis shows that while cellphone shutdowns on non-holidays reduce incidents of terrorist violence on that day, they are correlated with an increase in terrorist violence on the next day. I argue that cellphone shutdowns on non-holidays displace terrorist violence from the day of the shutdown to the next day when cellphone services are available. An example of this from the newspaper archives is the cellphone shutdown across twenty-two cities on December 24<sup>th</sup>, 2013, during Chehlum, a commemorative occasion when street processions are held. The cellphone shutdown was announced on the day of the shutdown itself. While there were no terrorist attacks during Chehlum, there were a number of attacks on Shia religious places on the day after the cellphone shutdown. Specifically, a bomb exploded outside an Imambargah in Karachi – and when rescue workers and police arrived, a second bomb placed close by exploded and killed four people and injured thirteen. Another explosion occurred on the same day in Karachi on M. A. Jinnah Road (*Dawn* 2013a). I argue that when unexpected



cellphone shutdowns on non-holidays foil terrorist attacks, terrorist groups then carry out these attacks at the next possible opportunity, the day after cellphone shutdown when cellphone services are available.

It might be argued that the decline in terrorist attacks when cellphone services are suspended on non-holidays can be explained in terms of increased security on those days. However, this flies in the face of extensive archival evidence that points to the fact that the Government of Pakistan increases security around most important holidays such as Eid and Ashura, compared to non-holidays (*The Express Tribune* 2015; *The Nation* 2017, *Dawn* 2013b). In fact, I would anticipate that the increased security around holidays would lead to a decline in terrorist attacks on holidays. The fact that my results show a decline in terrorist attacks on non-holidays rather than holidays goes against theoretical expectations about the effect of increased security on terrorist attacks and strengthens my argument that the decline in terrorist attacks on non-holidays is tied to the effect of cellphone shutdowns.

Thus, based on the results of my regression analysis and my examination of newspaper archives and government reports, my main argument is that when terrorist groups expect cellphone services to be suspended, they are able to adapt their tactics accordingly and cellphone shutdowns have no effect on levels of terrorist violence. However, when cellphone shutdowns occur unexpectedly on non-holidays, terrorist groups are caught off-guard and cellphone shutdowns are associated with a decline in the number of terrorist attacks on the day of the shutdown and an increase in terrorist

attacks on the day after the shutdown. In sum, I argue that cellphone shutdowns are not effective in reducing overall levels of terrorist violence and the suspension of cellphone services is not an effective long-term counter-terrorism strategy, especially given that governments face heavy financial losses by shutting down cellphone services on certain days.

### **3.7 Conclusion**

This paper has examined whether suspending cellphone services has any effect on the level of terrorist violence. It has focused on daily incidents of terrorist violence in Pakistan between 2001-2014 combined with data on cellphone shutdowns and used a fixed effects Poisson model to show that suspending cellphone services has no effect on the level of terrorist violence when cellphone shutdowns occur on holidays. Furthermore, my analysis showed that between 2012-2014 cellphone shutdowns that occur unexpectedly on non-holidays are correlated with a decline in terrorist attacks on the day of the shutdown and an increase in terrorist attacks on the day after the shutdown. A fixed effects logit model corroborated these findings. My paper argued that when terrorist groups have prior knowledge of a forthcoming cellphone shutdown, they adapt by planning attacks that do not rely heavily on the use of cellphones. However, when cellphone shutdowns occur unexpectedly with no advance warning, terrorist groups are caught off-guard and unable to adapt, which is why there is a decline in terrorist attacks on the day of the cellphone shutdown. However, in such cases, terrorist groups then carry out the attacks that have been foiled at the next possible opportunity, the day after cellphone shutdown. I have argued that while unannounced cellphone shutdowns are

effective in reducing terrorist violence on the day of the shutdown, they displace violence to the next day. In sum, I have concluded that suspending cellphone services is an ineffective and costly counter-terrorism strategy for reducing overall levels of terrorist violence.

### Appendix (Essay 3)

*Table 3-5 Summary Statistics for Key Variables*

Variables	Mean	Std. Dev.	Min	Max
Number of Terrorist Attacks ( <i>terroristattacks</i> )	0.015	0.149	0	8
Total Killed ( <i>totalkilled</i> )	0.066	1.162	0	150
Cellphone Shutdown ( <i>cellphonesuspended</i> )	0.0003	0.017	0	1
Holiday ( <i>holiday</i> )	0.395	0.195	0	1

*Table 3-6 Fixed Effects Poisson Model for the Relationship between Terrorist Attacks and Cellphone Shutdowns as well as Lagged Cellphone Shutdowns*

DV= Number of Terrorist Attacks ( <i>Terroristattacks</i> )	(1) Fixed Effects Poisson Model 2001-2014	(2) Fixed Effects Poisson Model Post 2012
Lagged Cellphones Suspended	1.010*** (0.236)	0.584** (0.232)
Cellphones Suspended	-0.492 (0.397)	-0.760* (0.391)
Holiday	-0.228*** (0.0612)	-0.191 (0.127)
Year Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
District Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Observations	463,706	59,736
Number of District1	103	76

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Table 3-7 Fixed Effects Logit Model for the Relationship between Cellphone Shutdowns and the Number of Terrorist Attacks on Holidays*

DV= Number of Terrorist Attacks ( <i>Terroristattacks</i> )	(1) Fixed Effects Logit Model Post-2012	(2) Fixed Effects Logit Model Post-2012 with Lags
Cellphones Suspended (Holiday)	0.322 (0.548)	
Holiday	-0.202 (0.150)	-0.169 (0.144)
Year Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
District Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Lagged Cell Phones and holiday		-0.979 (0.758)
Observations	59,736	59,736
Number of Districts	76	76
Time Period for Analysis	2012-2014	2012-2014

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05

**Table 3-8 Fixed Effects Logit Model for the Relationship between Cellphone Shutdowns and the Number of Terrorist Attacks on Non-holidays**

<b>DV= Number of Terrorist Attacks (Terroristattacks)</b>	<b>(1) Fixed Effects Logit Model Post-2012</b>	<b>(2) Fixed Effects Logit Model Post-2012 with Lags</b>
Cellphones Suspended (Non-holidays)	-2.082** (1.026)	
Holiday	-0.184 (0.144)	-0.199 (0.145)
Year Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
District Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Lagged Cellphones Suspended		1.269*** (0.385)
Observations	59,736	59,736
Number of Districts	76	76
Time Period for Analysis	2012-2014	2012-2014

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05

**Table 3-9 Fixed Effects Logit Model on Number of Terrorist Attacks with Interaction between Cellphones Suspended and Holiday**

<b>DV= Number of Terrorist Attacks (Terroristattacks)</b>	<b>(1) Fixed Effects Logit</b>	<b>(2) Fixed Effects Logit with Lag</b>
Lagged Cellphones Suspended		1.222*** (0.384)
Lagged Holiday		-0.586*** (0.173)
Lagged Cellphones Suspended Interacted with Lagged Holiday		-1.659* (0.864)
Year Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
District Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cellphones Suspended	-2.081** (1.026)	
Holiday	-0.205 (0.150)	
Cellphones Suspended Interacted with Holiday	2.398** (1.163)	
Observations	59,736	59,736
Number of District	76	76

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

*Table 3-10 Frequency Table for Terrorist Attacks*

Number of Events	Terrorist Attacks	
	Frequency	Percent
0	587,299	98.81
1	5,888	0.99
2	943	0.16
3	175	0.03
4	54	0.01
5	20	0.00
6	10	0.00
7	4	0.00
8	3	0.00
	594,396	100.00

*Table 3-11 Reduced Fixed Effect Poisson Model for the Relationship between Cellphone Shutdowns and the Number of Terrorist Attacks*

VARIABLES	(2)	(1)
	Fixed Effects Poisson Model Post-2012	Fixed Effects Poisson Model Post-2012 with Lags
Lagged Cellphones Suspended		0.413* (0.226)
Cellphones Suspended	-0.651* (0.379)	
Year Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
District Fixed Effects	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Observations	59,736	59,736
Number of District	76	76

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

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