

TO PROTECT, SERVE, AND KEEP THE PEACE?  
THE INFLUENCE OF POLICE ON CIVIL WAR

by

SHON A MCCORMICK

B.S., The United States Military Academy, 1994  
M.A., Kansas State University, 2008

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Security Studies  
College of Arts and Sciences

KANSAS STATE UNIVERSITY  
Manhattan, Kansas

2013

## **Abstract**

This dissertation advances the study of civil war by addressing the means through which states' police forces may affect the probability of civil war onset. I improve upon extant work on civil war and state capacity by considering the ability of police to act autonomously from the state and operate as a distinct element of the state's security sector. The project consists of four substantive chapters. One chapter addresses the role of police capacity in preventing civil war and determines that simple measures of police strength do influence the probability of civil war onset. Also, anocracies require a greater number of police to prevent civil war. The next chapter tests whether police repression could lead to civil war by creating grievances among the populace. Tests of this hypothesis determine that while police repression can increase the probability of civil war, it is not as powerful a predictor as state repression overall. The third chapter looks at the effect of the mode of organization of police forces and contains two contrasting hypotheses. The first proposes that police force centralization increases the probability of civil war onset by increasing the likelihood that the state and police view the utility of employing repression more favorably. The other proposes that centralization reduces the probability of civil war onset by making the police more effective. Nevertheless, neither hypothesis yields significant outcomes when tested. The final chapter employs two case studies about the experience of police serving as military during a civil war. I find that in both cases, police service in what are typically military functions did tend to make the police more repressive after the war, which contributed to reoccurrence by giving dissidents a cause around which to rally and by reducing the dissidents' perceptions of the utility of non-violent means of protest. I conclude the study with a summary of the major findings, suggestions for further study, and recommendations for policy makers.

TO PROTECT, SERVE, AND KEEP THE PEACE?  
THE INFLUENCE OF POLICE ON CIVIL WAR

by

SHON A MCCORMICK

B.S., The United States Military Academy, 1994  
M.A., Kansas State University, 2008

A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Security Studies  
College of Arts and Sciences

KANSAS STATE UNIVERSITY  
Manhattan, Kansas

2013

Approved by:

Major Professor  
Andrew G Long

## **Abstract**

This dissertation advances the study of civil war by addressing the means through which states' police forces may affect the probability of civil war onset. I improve upon extant work on civil war and state capacity by considering the ability of police to act autonomously from the state and operate as a distinct element of the state's security sector. The project consists of four substantive chapters. One chapter addresses the role of police capacity in preventing civil war and determines that simple measures of police strength do influence the probability of civil war onset. Also, anocracies require a greater number of police to prevent civil war. The next chapter tests whether police repression could lead to civil war by creating grievances among the populace. Tests of this hypothesis determine that while police repression can increase the probability of civil war, it is not as powerful a predictor as state repression overall. The third chapter looks at the effect of the mode of organization of police forces and contains two contrasting hypotheses. The first proposes that police force centralization increases the probability of civil war onset by increasing the likelihood that the state and police view the utility of employing repression more favorably. The other proposes that centralization reduces the probability of civil war onset by making the police more effective. Nevertheless, neither hypothesis yields significant outcomes when tested. The final chapter employs two case studies about the experience of police serving as military during a civil war. I find that in both cases, police service in what are typically military functions did tend to make the police more repressive after the war, which contributed to reoccurrence by giving dissidents a cause around which to rally and by reducing the dissidents' perceptions of the utility of non-violent means of protest. I conclude the study with a summary of the major findings, suggestions for further study, and recommendations for policy makers.

# Table of Contents

List of Figures .....	x
List of Tables .....	xii
Dedication .....	xv
Chapter 1 - Introduction.....	1
What is Civil War and Why Does it Occur?.....	3
Definition of Civil War .....	3
Civil War Onset .....	4
Stages of Civil War.....	4
Spectrum of Internal Instability .....	5
What are Police and What do They Do?.....	7
The Approach of this Study .....	12
Chapter 2 - Police Capacity and Civil War.....	14
State Capacity, Police, and Civil War.....	15
Mobilization of Sanctions .....	18
Threat and Surveillance .....	19
Research Design .....	24
Dependent Variables .....	24
Independent Variables.....	25
Actual Capacity.....	25
Bias Effects .....	30
Threat Capacity.....	31
Bias Effects .....	32
Controls.....	32
Models.....	35
Results.....	36
Results for H1a: Increasing police actual capacity reduces the probability of civil war onset .....	37

Results for H1b: Increasing police visible capacity reduces the probability of civil war onset, but is conditional on regime type. Increases in police capacity in anocracies should exhibit a smaller effect. ....	40
Results for H1c: Increasing police visible capacity reduces the probability of civil war onset, but is conditional on previous levels of internal violence. Police are less effective in preventing civil war when past levels of violence are higher. ....	44
Conclusion .....	49
Chapter 3 - Repression and Civil War .....	51
Repression in Theory .....	51
Police as a Repressive Instrument.....	53
Police Repression Compared to Repression by Other Government Agents.....	56
Repression Research Design.....	59
Dependent Variables .....	59
Independent Variables.....	60
Police Repression.....	60
Police Repression as a Proportion of Overall Repression .....	63
Controls.....	65
Models.....	67
Results.....	68
Results for H2a: Increasing repression increases the probability of civil war onset .....	68
Effect when using ITT and IDEA police scores .....	69
Alternate Tests .....	70
Results for H2b: An increasing proportion of government acts of repression conducted by the police increases the probability of civil war onset.....	71
Results when using ITT and IDEA Ratios.....	73
Effect of Total Repression by All Other Actors .....	74
Marginal Effect of Repression Ratio. ....	75
Conclusion .....	76
Chapter 4 - Police Organization and Civil War .....	77
Police Organization in Theory .....	77
Bayley's Description of Police Organization.....	78

Grievance and Police Organization .....	79
Greed and Police Organization .....	86
Research Design .....	89
Dependent Variable.....	89
Primary Independent Variable: Centralization of Police .....	89
Research Design for Grievance based Hypothesis .....	91
Intervening Variables.....	92
Controls.....	92
Controls for the Effect of Police Organization on Repression (Repression as DV).....	93
Controls for Effect of Repression on Civil War .....	93
Models.....	93
Research Design for Greed based Hypotheses .....	96
Independent Variables .....	96
Interactive Variables for Greed based Hypothesis.....	96
Control Variables .....	97
Models.....	97
Results.....	98
Results for Grievance Hypotheses (H3a Models).....	98
Results from Tests of Model 3a.1 (Step 1) .....	98
Results from Tests of Model 3a.2. Simultaneous model (steps 1 and 2).....	99
Results for Greed Hypothesis (Model 3b) .....	101
Discrete Change of Centralization .....	102
Marginal Effects of Police Capacity .....	104
Conclusion .....	105
Chapter 5 - Police in War.....	106
Reoccurrence in Theory.....	106
Distinctions between the Police and the Military .....	107
Why Police Fighting as Military Should Matter.....	108
Research Design .....	109
Case Selection.....	111
Case Study #1. Guatemala.....	114

Case Study Characteristics.....	114
Background of Guatemalan Police .....	115
1 <sup>st</sup> Guatemalan War.....	116
End of 1st Guatemalan War .....	117
Conduct During 1 <sup>st</sup> Guatemalan War.....	118
The Reoccurrence of the Guatemalan Civil War .....	120
Analysis of Validity of Hypothesis 4.....	122
Overall Assessment of the Guatemala Case Study .....	124
Case Study #2 The Greek Civil Wars .....	126
Background of the Greek Police .....	126
Greek Police and a History of Repression .....	127
1 <sup>st</sup> Greek Civil War .....	128
The Second Greek Civil War (December 1944).....	129
Varkiza Agreement .....	130
Roots of Second Conflict (Third Phase of Civil War) .....	131
Police Conduct During the Third Greek Civil War .....	132
End of the War .....	133
Analysis of Validity of Hypothesis.....	133
The Dekemvriana and Reoccurrence .....	134
The Third and Final Phase .....	135
Overall Assessment of the Greece Case Study .....	138
Parting thoughts on the Case Studies.....	140
Chapter 6 - Conclusion .....	143
Summary of Major Arguments and Findings .....	144
Contributions to the Study of Police and Civil War .....	147
Suggestions for Further Study .....	148
Recommendations for Policy Makers.....	150
References.....	153
Appendix A - Description of Dependent Variables.....	168
COW .....	168
Sambanis.....	169



Fearon and Laitin (FL).....	169
Toft.....	169
PRIO .....	170
Appendix B - Supporting Information for Chapter 2.....	171
Statistical Comparisons of Sampling Bias.....	171
Bias Effects of Including Police Capacity Data.....	171
Bias effects of including the MAR variable.....	173
Effect on Sample of Including Police Capacity.....	175
Description of Variables Contained in the Capacity Models .....	177
Correlation matrices.....	179
Comparison of annual and quinquennial time domains.....	181
Regression Outcomes for Police Capacity.....	183
Outcome Graphs for Police Capacity Models .....	189
Appendix C - Supporting Information for Chapter 3.....	203
Description of CIRI and PTS Datasets .....	203
CIRI.....	203
PTS.....	203
Effect of Inclusion of Repression Variables on Sample Sizes of Onset Databases.....	204
Correlation Matrix for Candidates for Control Variables.....	206
Description of Variable contained in repression models.....	208
Regression Outcomes for Repression Models .....	210
Outcome Graphs for Repression Models.....	219
Appendix D - Supporting Information for Chapter 4 .....	228
Description of variables contained in organization models.....	228
Tests of Bias Effect from ITT and IDEA .....	231
Regression Outcomes for tests of Police Organization .....	232
Outcomes for Grievance Hypothesis (simultaneous models).....	232
Outcomes for Greed Hypotheses .....	243
Outcomes Graphs for Organization Models .....	246
Graphs for Grievance Models.....	246
Graphs for Greed Models.....	250

## List of Figures

Figure 2-1 Effects of Measures on Police Capacity on the Probability of Civil War Onset .....	38
Figure 2-2 Comparisons of predicted probabilities using quinquennial and annual data.....	39
Figure 2-3 Predicted probabilities of civil war onset as police capacity measures increase, conditional on regime type.....	42
Figure 2-4 Marginal effect of police capacity as states become anocratic .....	43
Figure 2-5 Discrete change of anocratization as police capacity increases .....	44
Figure 2-6 Predicted Probabilities of police capacity, conditional on regime type .....	46
Figure 2-7 Marginal effects of police capacity, conditional on previous violence.....	47
Figure 2-8 Marginal effect of previous violence, conditional on police capacity .....	48
Figure 3-1 The Effect of Police Repression on the Probability of Civil War Onset using Sambanis onset data .....	70
Figure 3-2 Effect of increasing total repression scores on the probability of civil war onset using Sambanis .....	71
Figure 3-3 Effect of increasing the repression ratio on the probability of civil war onset .....	74
Figure 4-1 Three Step Model of Organization, Repression, and Civil War .....	95
Figure 4-2 Effect of Increasing Centralization on the Probability of Civil War Onset, with Repression as an Intermediate Process .....	100
Figure 4-3 Discrete Change of Centralization as Police per Capita Varies .....	103
Figure 4-4 Discrete change of centralization as police per area varies.....	103
Figure B-1 Graphs of comparison of the use of annual and quinquennial time domains.....	181
Figure B-2 Effect of Simple Measures of Police Capacity on Civil War Onset.....	189
Figure B-3 Predicted probabilities of police capacity, interacted with the square of Polity .....	191
Figure B-4 Discrete change of anocracy as police capacity changes .....	193
Figure B-5 Marginal effects of police capacity, as anocracy varies .....	195
Figure B-6 Predicted probabilities of police capacity, interacted with the lagged MAR score..	197
Figure B-7 Marginal effects of the lagged MAR score, as police capacity varies .....	199
Figure B-8 Marginal effects of police capacity as the lagged MAR score varies .....	201
Figure C-1 Effects of police repression on civil war onset.....	220

Figure C-2 Effects of total government repression on civil war onset, using ITT and IDEA data .....	222
Figure C-3 Effects of total government repression on civil war onset, using CIRI and PTS data .....	224
Figure C-4 Effects of repression ratios on civil war onset.....	226
Figure D-1 Effect of centralization using police repression .....	246
Figure D-2 Effect of centralization using overall government repression, measured by CIRI and PTS.....	248
Figure D-3 Discrete change of centralization as police capacity varies .....	250
Figure D-4 Marginal effects of police per capita in the presence of centralization.....	252

## List of Tables

Table 1-1 Levels of state internal insecurity.....	6
Table 2-1 Outcomes of Testing Hypothesis 1a.....	38
Table 2-2 Effects of Visible Capacity on the Probability of Civil War Onset .....	41
Table 2-3 Effect of Increasing Visible Capacity on the Probability of Civil War Onset, conditional on previous internal violence .....	45
Table 3-1 IDEA Repression Events .....	62
Table 3-2 IDEA Repressive Actors .....	64
Table 3-3 Outcomes for H2a.....	69
Table 3-4 Results of Regression Using Police Repression.....	72
Table 4-1 World Classification of Police Types.....	78
Table 4-2 Probability of Repression when taking into account State and Police Interests.....	82
Table 4-3 Types of Police Organization .....	90
Table 4-4 Outcomes of OLS Regression of Police Organization on Repression (model 3a.1)....	99
Table 4-5 Outcomes of tests of hypothesis 3b .....	102
Table B-1 Polity5 Statistics for Unconstrained Sample .....	171
Table B-2 Polity Statistics when including Police per capita .....	171
Table B-3 Polity Statistics when including Police per Area.....	171
Table B-4 Encap Statistics for Unconstrained Sample .....	172
Table B-5 Encap Statistics when Including Police per capita .....	172
Table B-6 Encap Statistics when Including Police per area .....	173
Table B-7 Polity Statistics when Including MAR variable and Police per capita measure on..	173
Table B-8 Polity Statistics when Including MAR variable and Police per area Measure .....	173
Table B-9 Encap Statistics when Including MAR and Police per capita .....	174
Table B-10 Encap Statistics when Including MAR and Police per area Measure.....	174
Table B-11 Onset databases with corresponding Police Data .....	175
Table B-12 Onset Sample size with Additional Police Capacity Data.....	176
Table B-13 Variables for Capacity Hypotheses.....	178
Table B-14 Correlations among potential control variables .....	179

Table B-15 Correlations among independent variables in models .....	180
Table B-16 Regression outcome using police per capita measure of police capacity.....	183
Table B-17 Regression outcome using a police per area measure of police capacity .....	184
Table B-18 Regression outcomes using police per area, conditional on regime type .....	185
Table B-19 Regression results using police per area, conditional on regime type .....	186
Table B-20 Regression outcomes using police per capitaconditional on levels of previous internal violence .....	187
Table B-21 Regression outcomes using police per area, conditional on levels of previous internal violence .....	188
Table C-1 Effect on Sample Sizes of Onset Databases .....	204
Table C-2 Correlations among candidates for control variables for the effect of repression on civil war onset .....	206
Table C-3 Repression model variable descriptions .....	209
Table C-4 Regression with CIRI.....	211
Table C-5 Regression with PTS.....	212
Table C-6 Regression with ITT total .....	213
Table C-7 Regression with IDEA total.....	214
Table C-8 Regression with ITT police.....	215
Table C-9 Regression with IDEA police .....	216
Table C-10 Regression with ITT ratio and constituent terms.....	217
Table C-11 Regression with IDEA ratio and constituent terms .....	218
Table D-1 Description of Variables Contained in the 3a Models.....	229
Table D-2 Description of Variables Contained in 3b Models .....	229
Table D-3 Effects on Civil War Onset Sample Size when matched with Police Organization Data .....	230
Table D-4 Comparison of Mean Scores of Repression .....	231
Table D-5 Simultaneous regression using COW onset data and IDEA repression data .....	233
Table D-6 Simultaneous regression using COW onset data and ITT repression data.....	234
Table D-7 Simultaneous regression using Fearon and Latin onset data and IDEA repression data .....	235

Table D-8 Simultaneous regression using Fearon and Laitin onset data and ITT repression data .....	236
Table D-9 Simultaneous regression using PRIO onset data and IDEA repression data.....	237
Table D-10 Simultaneous regression using PRIO onset data and ITT repression data.....	238
Table D-11 Simultaneous regression using Sambanis onset data and IDEA repression data ....	239
Table D-12 Simultaneous regression using Sambanis onset data and ITT repression data.....	240
Table D-13 Simultaneous regression using Toft onset data and IDEA repression data.....	241
Table D-14 Simultaneous regression using Toft onset data and ITT repression data .....	242
Table D-15 Regression outcome for centralization, conditional on police per capita and area .	244

## **Dedication**

I dedicate this dissertation to my wife and daughters. I could not have completed this journey without their love, patience, and understanding. I must not forget how fortunate I was to have such support throughout. Knowing that I had a family to return to at the end of a long day of study not only made me much more focused and productive, it allowed me to keep the inevitable frustrations and setbacks I experienced along the way in the proper perspective compared to the really important things in life.

## Chapter 1 - Introduction

The topic of the causes of civil war is highly contested,<sup>1</sup> but an increasingly common explanation relates to state capacity (Hendrix 2010). Even though the indisputably multi-faceted nature of state capacity makes its role in civil war onset contested in its own right (Soifer and Hau 2008), one aspect of state capacity that at least merits scrutiny in many studies relates to a state's fundamental ability to manage violence throughout its territory (Evans, Rueschemeyer, and Skocpol 1985; Hendrix 2010).

This ability is often conceptualized as coercive capacity, and is measured by size of the military (Hegre et al 2001; Sambanis 2004; Hendrix 2010). It is probably un-contentious to posit that the military constitutes an important element of a state's coercive capacity, but focusing solely on the military overlooks another equally important organization. In the modern era, police have come to share space with the military as a coercive instrument in states' security sectors. By police, I mean the "custodians of the state's monopoly on force" who have "primary formal responsibility for legitimate force to safeguard security" (Brewer et al 1996:xx; Reiner 2000:7). A fundamental, though not exclusive, distinction between the police and the military is that police have responsibility for maintenance of internal order, whereas the military is externally focused (Bittner 1972; Bayley 1985).

Given the important role that police play in maintaining order (accepting that a civil war onset represents a breakdown of order), it is surprising that studies on the role of police capacity have not achieved an equivalent status to studies of the effects of military capacity. This paper, for the first time, gives the role of police in civil war onset its proper due. Civil war scholarship has not overlooked the role of police entirely, but existing scholarship contains flaws. One shortcoming is a failure to treat police as an agent that can possess some degree of autonomy from the ruler. Previous studies often characterize police as an instrument or reflection of the state and do not allow for consideration of the effects of police autonomy.<sup>2</sup> Other studies conflate the effect of police and military forces on civil war – combining them into a broader

---

<sup>1</sup> See Sambanis (2004), Hegre and Sambanis (2006), and Dixon (2008) for examples of the various competing explanations for civil war that find support in the quantitative literature.

<sup>2</sup> With the exceptions of Gurr (1968) and Hibbs (1973), no large N studies related to civil war treat police as an autonomous agent.



category of “security forces” or “coercive forces” (Doyle and Sambanis 2000; Toft 2010). I argue that doing so is short-sighted because it overlooks the very distinct roles and missions of police forces and how they affect civil war. Studies that do allow for the unique effect of police coercive capacity often rely on dubious proxy variables for police capacity like Gross Domestic Product (GDP) (Fearon and Laitin 2003; Doyle and Sambanis 2000) or military capabilities (Collier and Hoeffler 2004; Davenport 1995). The few studies that employ valid indicators of police capacity (Gurr 1968; Hibbs 1973) were relegated to the very limited datasets available at the time. It should not be surprising that these few studies yield insignificant and conflicting outcomes. Finally, a seemingly universal shortcoming of extant studies is that they do not consider attributes of police forces other than size, such as type of organization. This shortcoming has the effect of treating every state’s police forces as similar in form and function.

In contrast to the aforementioned studies, I argue that while police capacity may be related to other attributes of state capacity, it is not simply a proxy for state strength and merits attention for its own effect on civil war onset. The obvious counterargument is that police capacity is just another indicator of state strength, and the empirical difficulties surrounding policing capacity suggest that scholars would be better off continuing to use widely available indicators of state strength like military or economic capacity. This counterargument has a weak theoretical basis. Police are worthy of study as a distinct institution for a number of reasons. First, the police, not the military, are typically the state agency with primary responsibility for maintaining order within society. If a civil war represents a breakdown in order, then by logical extension the police must have played a role, if only by their failure to prevent it. Second, the police are generally the most prevalent government agency within society and are therefore the face of the government to most of its inhabitants. “The Police are to the government as the edge is to the knife” (Bayley 1985: 189). Finally, the role of police in maintaining order and their unique presence in society combine to make a state’s police force uniquely situated to repress, a characteristic I present later as an important causal mechanism for civil war onset.

In addition to improving upon the theoretical work relating police forces and civil war onset, I intend to advance the empirical treatment of police attributes. In Chapter 2, I explore how police capacity can inhibit the onset of civil war, and I introduce a dataset I have created containing a superior measure of police capacity. I also broaden the operationalization of police capacity beyond simple measures of size by considering other characteristics such as

organizational type. In Chapter 3, I look at how police may misapply their inherent coercive capacity by engaging in repression, which may contribute to civil war onset by creating grievances. In Chapter 4, I address how modes of police organization can allow the police differing levels of autonomy in satisfying the state's demands to either engage in or refrain from repression. Additionally, I address how modes of organization can influence the effectiveness of the police in deterring rebellion. In doing so, I develop a database capturing levels of organizational centralization. Though police forces and militaries occupy separate roles within the greater security sector, police often fight alongside the military once civil wars are underway. Chapter 5 looks at how a police force's experience in performing what are typically military functions during a civil war may contribute to an increased police pre-disposition toward employing repression after the war, thereby increasing the probability of a reoccurrence of civil war.

While each of the aforementioned chapters has a distinct focus, there are a number of topics and concepts that permeate this study. In the following sections, I address these more comprehensive topics. The first of these is the concept of civil war itself.

## **What is Civil War and Why Does it Occur?**

### *Definition of Civil War*

There is no universally accepted definition for civil war. For instance, the quantitative literature exhibits multiple and often conflicting definitions of civil war (Sambanis 2004). Casualty thresholds are particularly contentious. Scholars employ them to distinguish civil wars from lesser forms of internal political violence, but the imposition of any threshold inherently invokes the risk of excluding conflicts that just miss the cutline. Even the few areas of agreement among the studies are problematic. For instance, most definitions stipulate participation of the government as a combatant and the internality of the war within the territory of a sovereign state. Nevertheless, even these simple requirements are problematic because civil wars can involve international participants aiding either side (Sambanis 2004). In light of these definitional challenges and in an effort to not become tied to considerations of quantitative operationalization, I employ a conceptual definition of civil war as “armed combat within the

boundaries of a recognized sovereign entity between two parties subject to a common authority at the outset of hostilities” (Kalyvas 2006).<sup>3</sup>

## *Civil War Onset*

### *Stages of Civil War*

One way to analyze civil wars is through their stages of progression. A common and useful framework for doing so is to divide civil wars into *onset*, *duration*, and *termination* (Kalyvas 2006). I also add *reoccurrence* as a phase. I treat reoccurrence as a form of onset, except that reoccurrence only happens in some cases of civil war termination. In other words, all civil wars have an onset, but not all experience reoccurrence. Because the focus of this study is police characteristics as a cause of civil wars, I limit myself to only consideration of civil war onsets and reoccurrences.<sup>4</sup> In the next sub-section, I describe some common theories of civil war *onset* and how police capacity should apply to them. I offer a more focused discussion of the unique considerations for civil war *reoccurrence* in Chapter 5.

A common distinction in the literature is to characterize the causes of civil war as either related to “greed” or “grievances” (Collier and Hoeffler 2004). The former puts primacy on economic opportunism as the catalyst for civil war, whereas the latter places the onus on political explanations. Another way to characterize the greed/grievance distinction is *inherency* and *contingency* (Eckstein 1980). Inherency based explanations answer the question of “why not civil war?” Potential for civil war always exists, and nonoccurrence is temporary and only due to some impediment. Contingency based explanations answer the question of “why” and assume that the occurrence of a civil war is due to some aberrant condition.

---

<sup>3</sup> See also Appendix A - Description of Dependent Variables for ways different scholars employ to distinguish civil war from other forms of conflict.

<sup>4</sup> I must point out that I have elected to not address the effect of police on civil war duration/termination, mainly because police do not appear to have as substantial an effect on this phase as they do on onset and reoccurrence. That the police may have a lessened effect during these phases may stem from the military’s relatively higher importance in defeating rebellions. By the time that internal conflicts have escalated to the level of civil war, states may have little choice except to employ the military as its primary fighting force.

Two families of studies that draw upon the greed/grievance explanations focus on *state capacity* and *government repression*, and I contend that a state's police force can affect the probability of civil war onset through both mechanisms. In short, government repression can serve as a source of grievance and state capacity can serve both as a disincentive towards aspiring rebels' desire to challenge the state as well as source of grievance when the state fails to deliver adequate public goods. The next two chapters of this study consider each mechanism individually. Before doing so, however, discussion of a number of topics that pervade the remainder of the ensuing chapters is in order.

### ***Spectrum of Internal Instability***

I characterize civil war onset as the final step on a progression through increasing levels of insecurity, a process that applies to both greed and grievance based explanations for civil war. The table below depicts the steps.<sup>5</sup> The lowest level of instability is "Normal Crime," which is always present to some degree. Though it exists as a challenge to order, in some sense "normal crime," by definition is impossible to eliminate completely and states can only hope to contain it before it advances to a higher level of disorder. Disorder may also exist in the form of strikes and large demonstrations in generally stable states. The level of "disorder" represents the threshold between an acceptable level of insecurity and those higher levels that represent true threats to the state.

---

<sup>5</sup> This table is adapted from one developed by Bayley and Perito (2012).

**Table 1-1 Levels of state internal insecurity**

Level of Insecurity (highest to lowest)
Civil War
Insurgency
Subversion
Disorder
Normal crime

Dissidents can elect to escalate to higher levels of insecurity, either because they determine it can benefit their interests (greed based) or in response to government repression (grievance based). The state can either accede to the dissidents' demands, or respond with its own escalating levels of violence. A grievance based explanation would suggest that state acquiescence should end the escalation because the source of the grievance would disappear. On the other hand, a greed based explanation would suggest that state acquiescence may indicate a weak bargaining position and encourage greater demands from the dissidents. Escalating reactions and counteractions by the state would have the opposite effect. From a greed perspective, they should serve to convince aspiring rebels of the high costs associated with challenging the state. From a grievance perspective, state escalation could exacerbate grievances, especially if state behavior becomes overly repressive.<sup>6</sup>

---

<sup>6</sup> Thoms and Ron (2007) draw upon a similar typology in their description of the typical civil war as series of escalating challenges to the state by dissidents groups that invoke escalating repressive responses from the state, resulting in a "vicious cycle" that terminates in civil war (695-696). Though he focuses the role of repression, Lichbach treats civil war as a series of escalating self-interested based actions and reactions between dissidents and the state. Boix (2008) explains the greater prevalence of guerilla wars (insurgencies) in comparison to civil wars as a function in part of the cost considerations that dissidents take into account before expanding the conflict to civil war.

## What are Police and What Do They Do?

In addition to civil war, the other primary concept of interest in this study is “police.” A useful starting point to understand the distinct effect that police forces can impart on the probability of civil war onset is an examination the meaning of the terms “police” and “policing.” Though seemingly interchangeable, the two terms are conceptually distinct in that police are just one type of policing (Reiner 2000:1). Some form of *policing*, defined as “activities intended to create conditions of conformity,” has been universal in all societies in which there has been potential for conflict and disorder (Reiner 2000: 7). Virtually no society has existed without some form of policing (Bayley 1985: 10) since the maintenance of public order is the primary requirement for all states (Brewer et al 1996: 1).

On the other hand, the term *police* refers to a narrow subcategory of policing that has become a feature of all modern societies (Silver 2005: 10). Police are “custodians of the state’s monopoly on force” (Brewer et al 1996: xx) and the “specialized body given primary formal responsibility for legitimate force to safeguard security” (Reiner 2000: 7). Another way to define police is “people authorized by a group to regulate interpersonal relations within the group through the application of physical force.” Key terms in this definition that distinguish police from other groups are *physical force*, *internal usage*, and *collective authorization* (Bayley 1985: 7).

Common to all definitions is the denotation of police as an agent of the state. In contrast, policing can be carried out by a diverse number of actors, both private and public (Reiner 2000:3). These distinctions between police and policing exist because policing refers to a set of practices that vary across time and place. Thus, **police** as we know them today represent the form of policing that reflects the contemporary relationships between **state** and **society** (Merlingen and Ostrauskaite 2005:217-8). In describing the relationship of the police to the state and society, I draw upon Levi’s (1997) definition of the state as “a complex apparatus of centralized and institutionalized power that concentrates violence, establishes property rights, and regulates society within a given territory while being formally recognized as a state by

international forums.”<sup>7</sup> I define society as the people and social relations present in the territory governed by the state (Goodwin 2006:14).

One way to view the relationships of the police, state, and society is to frame them as idealized types according to the opposing Weberian and Marxist perspectives of the state. The Weberian perspective characterizes the state as “the human community that successfully claims a monopoly of legitimate force within a given territory” (Weber [1918] 2010: 23). In general, the state structures society and thus, the police serve as an evenhanded bureaucratic instrument of the state that allows society to function in an orderly way (Evans, Ruescemeyer, and Skocpol 1985). According to Marxism, society structures the state since the state solely exists as an instrument of the dominant economic class. Along with the army, the police are the chief tools of the dominant class to maintain order (Chilcote 1994: 157).

While the Weberian and Marxist idealized types may be useful to aid in conceptualization of the relationships between state and society, their portrayal of the relationships as unidirectional are over-simplistic. A more sophisticated perspective treats the relationship as more dialectic and complex. Society structures the state, and the state structures society (Evans, Ruescemeyer, and Skocpol 1985; Skocpol 1985). The dialectic relationship that exists between state and society is also evident in the relationship of police to each. Police do not have to exist as either “even handed protectors of order” (Weberian) or tools of the dominant class (Marxist). Rather, the police can be both or neither depending on their relationship with the state and society. Thus, police exist as an intermediary between the state and society - both influenced by and influencing each (Marenin 1985).

The “principal-agent model” (Ross 1973; Petersen 1993; LaFont and Martimort 2001) offers a useful way to portray the intermediary role of the police. Though the model has its roots in economics, it has expanded into political applications (Waterman and Meier 1998; Miller

---

<sup>7</sup> This definition is useful for distinguishing between the state and society, but it conflicts somewhat with the Principal-Agent Model. The problem arises because when employing this model, I termed the “state” as the principal, whereas Levi’s definition would consider the state to include both the principal and its agent. A more accurate description that better aligns with the tenets of the Principal Agent Model would use a different term than “state” for the principal. Nevertheless, following Goodwin (2001), I will continue to refer the central authority as the “state” for the purpose of simplicity.

2005). Put simply, the model stipulates that a principal contracts with an agent to perform some task (Peterson 1993), but agents enjoy an asymmetry of information on how well they perform the principal's bidding. Problems can arise when the agent shirks from performing the principal's desired tasks due to an asymmetry of interests between the two, compounded by the principal's inability to overcome the information asymmetry.

I expand the basic principal-agent model to its multiple-principal corollary with the state and society serving as the two distinct and occasionally competing principals (Spiller 1990).<sup>8</sup> My use of the multiple principal-agent model is based on the premise that police, the state, and society represent conceptually distinct organizations. My decision to distinguish between the state (and police) and society is consistent with the "statist" school of thought (Krasner 1984) and conflicts with both the Marxist characterization of the state as an instrument of the ruling and dominant class and the pluralist characterization of the state as a marketplace filtering the demands and interests of competing groups and individuals (Chilcote 1994). According to either of these opposing characterizations of state/society relationships, the state (and by extension, its agents) cannot possess interests separate from one or more elements of society. While I admit that the boundary between the state and society is not as stark as my theoretical constructs suggest, I maintain that the "conceptual distinctions between them are worth preserving" (Goodwin 2006: 55), especially with regard to the impact of state capacity on internal conflict.

Though the police sociological literature does not explicitly employ the economic based language of the principal-agent model, the two fields display a remarkable level of conceptual overlap. For instance, a common theme in the sociological literature is that the police are mediators between the state and society, while at the same time possessing interests of their own (Brogden 1982, Bayley 1985; Marenin 1996). One can easily see similarities between this characterization of the relationships between the police, state, and society and the model that

---

<sup>8</sup> Spiller (1990), drawing on Bernheim and Whinston (1986), addresses the role of government industrial regulatory agencies as an agent situated between the competing principals of Congress and private industry interests groups. According to this model, the regulatory agencies seek to achieve the highest payoff from industry and Congress, at the lowest level of effort by balancing the demands of both Congress and private industry. In Spiller's model, Congress provides payouts in the form of budget allocations and industry provides payouts in the form of post-government employment.



Spiller employs if one simply replaces Spiller's "regulatory agencies" with "police manager."<sup>9</sup>

In all but the most dysfunctional countries, the state serves as the principal to the police's agent. The role of the police as agent is rooted in the state's overriding interest in preserving its own existence, which requires a sufficient degree of public order (Brewer et al 1996; Levi 2002; Bueno de Mesquita et al 2003). Because the maintenance of order exceeds the ability of the ruler, it must constitute an agent to perform the policing function, who in modern times is most often a police force (Silver 2005). The success of the police in fulfilling this function entails satisfying the demands of both the state and society without neglecting the police force's own interest. Viewed from a purely economic perspective, the police choose the mixture of strategies of consent and coercion that best balance the requirements of the state and society. Police should seek to provide the state the minimally acceptable level of order while obtaining maximum material rewards – including rents – at the minimum possible level of efforts. Autonomy from both the state and society becomes a means to an end insofar as it would allow the police more flexibility in pursuit of their interests.

States as principals typically have two means to achieve control over agents: alteration of the structure of incentive programs and monitoring (Peterson 1993). Incentive programs involve the provision of state resources to the police. For instance, the state appropriates the financial resources to allow the police to operate (Marenin 1985). The state can also exert political control over the police through selection of senior police officials and direction to engage in certain activities (Bayley 1985).

Monitoring involves two elements. One is the capacity to monitor, which requires that a state have a means to determine whether the police are performing in accordance with the state's wishes. The most common state-based monitoring agents of police are courts and legislatures (Bayley 1985). The courts can throw out those cases that it deems to have been prosecuted in an illegal manner. Additionally, courts can even determine police conduct to be illegal, leading to prosecution of the police themselves (Bittner 1972). Legislatures monitor police conduct by developing the laws that serve as the legal basis of police activity (Marenin 1985). The second

---

<sup>9</sup> This individual is the most senior police official who is responsible for mediating between the requirements and demands of external audiences and internally feasible solutions (Brogden 1982). See also note 8 for a description of the Multiple-Principal Agent model.

element of monitoring is a willingness to supervise police conduct, though this element may be more a function of regime types than state capacity. A state may have the means to monitor, but may not strictly monitor police conduct as long as the police deliver order. This behavior should be more evident in states with autocratic governments, which we should expect to be less responsive to complaints from society.

While the state is an intuitive candidate to serve as a principal, at first glance “society” is not. Nevertheless, society constitutes a valid principal because its members can make demands on the police. One way to view the relationship between the state and society is in the form of an exchange (Levi 1988). In all but the most despotic states, elements of society demand that the state provide them a sufficient mix of public and private goods in return for allowing the ruler or regime to remain in power (Bueno de Mesquita et al 2005). One fundamental public and private good is public order. Because the police are the primary agent responsible for providing public order, they cannot escape becoming either directly or indirectly caught up in society’s demands for order (Bayley 1985). Society makes demands on police indirectly by channeling their demands through the state. In fact, as police have taken on an increasingly professional persona in the United States and Great Britain, these forces have become more autonomous from the direct demands of their societies, thereby requiring citizens to make demands increasingly through political representatives (Bittner 1972, Brogden 1982, Kelling and Moore 1988).

Nevertheless, society can still maintain direct accountability over police in a number of ways, both formal and informal. In some states, societies form civil review boards with the express purpose of reviewing police activities. Additionally, mass media wields a significant influence on police behavior in states with high press freedom (Bayley 1985). Finally, society retains some degree of control over the police via society’s willingness to allow the police to maintain order through consent rather than coercion. A necessary condition for the police to maintain order by consent is that society views the police and the government as legitimate, and these views are linked to the prevailing attitudes towards what is legitimate and legal to do to maintain order (Brogden 1982; Marenin 1985; Vagg 1996).

## **The Approach of this Study**

As a final note before proceeding to the substantive chapters, I offer a discussion of the guiding principles underlying my approach to this study. My central guiding principle is to engage in “explicit theorizing, grounded in axiomatic logic, from which empirical referents may be extracted...followed by rigorous empirical analysis in which operational assumptions and procedures for evaluating evidence are explicitly stated” (Bueno de Mesquita 1985: 134). In keeping with this principle, this study predominantly employs quantitative methodologies. The primary rationales for this decision are past practice and the nature of my analysis. Since the major contribution of this paper is to incorporate new theories with new data, rather than improve upon existing methodologies, I accept the suitability of the methodology of numerous extant quantitative studies and draw upon them as exemplars.<sup>10</sup> The second reason for my choice of a quantitative methodology stems from the nature of my analysis. I am more concerned with the overall effects of my independent variables than their effects on individual cases. Case studies offer too little inferential constraint to permit trustworthy theory testing (Achen and Snidal 1989). Additionally, I am more concerned with the probabilistic rather than deterministic effect of my independent variables, and quantitative methods are more appropriate for this approach (Mahoney and Goertz 2006).

One area where qualitative case studies may have been useful is for exploring interactive effects, but the nature of my inquiry makes a quantitative methodology more suitable. Qualitative case studies can be superior for determining the necessary and sufficient impacts of independent variables, but this study is more concerned with the individual effects of interactive variables (Freidrich 1982: 827). I deviate from my use of quantitative methodologies when testing one hypothesis and employ a qualitative, case study oriented methodology. The reason stems from the difficulty in creating valid quantitative operationalizations of the key independent variables.

One of the ramifications of my decision to mostly employ quantitative methodology is that I limit myself to concepts that are suitable for quantitative operationalization. My decision

---

<sup>10</sup> Numerous examples exist of studies of civil war onset and reoccurrence that employ a quantitative methodology. For onset, see Hibbs (1973), Hegre et al (2001), Fearon and Laitin (2003), Collier and Hoeffler (2004), Hegre and Sambanis (2006), Fjelde and DeSoysa (2009), Kalyvas and Balcells (2010). For reoccurrence see Doyle and Sambanis (2000), Walter (2004), Fortna (2004), Toft (2010)

to rely primarily on existing datasets only exacerbates this limitation because it restricts the time domain of the sample. Existing databases only contain observations of civil war onsets from the 1940 to 1990 timeframe,<sup>11</sup> which has the effect of treating civil war as solely a late 20<sup>th</sup> century phenomenon.<sup>12</sup> I discuss in the potential impact of this time censoring in the Conclusion chapter. On the other hand, restricting the time domain to the late 20<sup>th</sup> century does have the benefit of better aligning civil wars with my primary concept of inquiry. As I noted earlier in this chapter, police as I define them are a relatively recent phenomenon, so the concept of policing may not even be valid for civil wars that occurred before World War II.

The other ramification of the cross-national time series research design I employ in most of my chapters is that it forces me to rely on general theories that I expect to be pertinent across the entire country-year sample. As a result, many context-specific factors are lost. Hence, any conclusions I develop will be probabilistic, rather than deterministic, especially for an event as susceptible to multiple causes as civil war. Similarly, the principal-agent model that undergirds many of my hypotheses treats entities as rational actors— an approach that comes with a host of criticisms and caveats.<sup>13</sup> The ramifications of my methodological choices reinforce the need for the use of detailed case studies by researchers who are more concerned with determining why a predicted outcome did or did not actually play out. The conclusions I develop from the case studies in Chapter 5 only underscore this point.

With these caveats in mind, I proceed to the substantive chapters. The first of these addresses how police capacity may reduce the probability of civil war onset. This is not an especially original proposition, but one that I believe has not received proper theoretical or empirical treatment in the past.

---

<sup>11</sup> The one exception is the COW database, which contains observations of onset going back to 1816, but all of the other variables begin no early than 1940. See Appendix A for a more complete description of the COW dataset.

<sup>12</sup> For example, Kalyvas and Balcells (2010) determine that irregular war was more prevalent during the Cold War due to the support of the USSR for the rebels.

<sup>13</sup> Walt (1999) offers a cogent criticism of the shortcomings in the rational-choice method. One example of a characteristic of the police that does not fit neatly into the rational choice framework is the need of individual policemen to feel they are contributing to society in a meaningful way (Marenin 1985).

## Chapter 2 - Police Capacity and Civil War

As noted in Chapter 1, the proposition that the capacity of a state's police force influences the probability of civil war onset is not novel. Several prominent studies posit a theoretical relationship between police capacity and civil war onset; however, these studies exhibit a number of conceptual and empirical shortcomings. The major conceptual shortcoming is conflating the police and military as two sides of the same coercive coin, with police pointed inward and the military pointed outward (Weiss 2011). Such a conceptualization fails to take into account the very different relationship that police maintain with the state and society in comparison to the military. Another consistent problem relates to operationalization of police capacity. Some studies fold police capacity into state capacity more broadly, employing poor indicators such as GDP (Fearon and Laitin 2003; Doyle and Sambanis 2000), or military capabilities (Collier and Hoeffler 2004; Toft 2010). The latter is doubly troubling because it reinforces the conceptual problems I mention above. While these indicators could be valid, the authors never put the assumed relationship between their chosen indicators and the concept of police capacity to the test. Other studies that do employ more valid indicators of police capacity rely on limited datasets with very small time domains that yield insignificant results (Gurr 1968; Hibbs 1973).

I intend to improve upon the current state of scholarship relating police capacity and civil war by explicitly distinguishing police capacity theoretically and empirically from other attributes of state strength. I distinguish police theoretically by treating them as an agent of the state, rather than an attribute or instrument. Police occupy a distinct role in a state's security sector due to a combination of their fundamental requirement to use force to maintain order and their unique relationship to and presence among society. This approach requires that I consider police to enjoy some degree of agency and autonomy from the larger state apparatus.<sup>14</sup> In other words, police capacity is not a direct reflection of state capacity, though both could be simultaneously weak or strong for different reasons. As such, police capacity cannot be represented by proxy variables that measure other attributes of state strength such as GDP.

---

<sup>14</sup> I rely upon Marenin (1985) for the observation that police autonomy varies among states. I address the role of police autonomy from the state more fully in the discussion surrounding my second set of hypotheses

Rather than rely upon similar dubious proxy variables, I distinguish police empirically by compiling a dataset that actually measures the size of states' police forces.

### **State Capacity, Police, and Civil War**

I build a theory relating police capacity to civil war by expanding upon extent theories relating civil war and state capacity more broadly. Notwithstanding the empirical problems in the studies the preceding sections of this chapter described, the studies do provide a useful theoretical starting point for how state coercive capacity can affect the probability of civil war onset. The literature on state capacity and civil war generally finds that greater capacity inhibits the outbreak of civil war in two ways. One is through coercive capacity to deter or defeat violent threats to the state, and the other is by more efficiently monitoring the behavior of its citizenry (Hendrix 2010). In a meta-study of the role of state capacity on civil war onset, Hendrix (2010) identifies three primary, but competing definitions and operationalizations of state capacity. These are military capability, bureaucratic/administrative capacity, and quality and coherence of institutions. Military capacity reflects the ability of the state to deter or repel challenges. Bureaucratic/administrative capacity refers to the ability of the state to monitor its population, and institutional measures are a proxy for regime characteristics.

In the following paragraphs, I argue that police capacity can affect the probability of civil war onset in the form of each of the three conceptualizations of state capacity Hendrix identifies. I begin by offering a definition of police capacity as it pertains to civil war. Viewed in its role as an agent of the state, police capacity in general refers to the ability of the police to maintain order. This is the one demand that all modern states (principals) impose on their police (agents) (Bittner 1972; Marenin 1985; Reiner 2000). This demand represents the primary rationale for the designation of police forces as a state agency and serves to distinguish the police from other government agencies. Only the police have the designation as the special repository for the state's monopolization of force in its territory (Egon 1972; Brewer et al 1996; Reiner 2000). The state as principal rewards or sanctions the police on their ability to establish and

maintain order.<sup>15</sup> Accepting that a civil war constitutes a breakdown in order and thus a failure of the police to satisfy the demands of the state (and society), police capacity in relation to civil war becomes the ability of the police to prevent society from progressing to a level of instability indicative of a civil war.

I draw first on Hendrix's concept of *military capacity*, which I redefine as "coercive capacity."<sup>16</sup> Coercive capacity relates to a state's ability to project its power and impose order across its territory (Fjelde and DeSoysa 2009). The capacity of a state's police to effectively suppress violent resistance to the state relies mostly upon the *Inherency* school, which contends that groups will strive to violently resist the state in the absence of some viable opposition to doing so. Weak state capacity to deter is not in and of itself a primary cause of civil war. It is entirely plausible that a state's inhabitants may remain peaceful despite an absence of state coercive capacity. Nevertheless, an absence of state coercion can enable those who desire to challenge the state, regardless of their root motivation (Collier and Hoeffler 2004). Moreover, weak state coercive capacity can allow a nascent rebel movement to develop unimpeded because state agents are unable to gather the intelligence necessary to discover the nascent rebel activity or defeat the rebels once discovered (Fearon and Laitin 2003). In other words, states can more easily progress through the stages of instability described in Chapter 1.

For police coercive capacity to impart a unique effect on the probability of civil war means it must affect civil war onset in a way that is distinct from other elements of the state, such

---

<sup>15</sup> The primary objective of maintaining order may seem to contradict the prominent role that police forces fulfill in law enforcement. This is likely because modern police organizations, especially in the United States and Great Britain, have come to view their role primarily as law enforcement, rather than order enforcement, despite the conflict that arises between this self conception and the amount of time and effort police actually allocate to law enforcement. Egon (1972) and Bayley (1985) both find that police in the United States and Great Britain spent less than half their time on law enforcement related duties. Egon attributes his finding in part to his conclusion that it is impossible for police to rely solely upon enforcement of the law to maintain order since no set of laws and regulations can be comprehensive and exhaustive enough to dictate police behavior in all circumstances. As a result, police must rely on their special authorization to employ coercive force as an agent of the state in an effort to maintain order, bounded only by some general guidelines.

<sup>16</sup> I redefine military capacity as "coercive capacity" because the military is not the only member of a state's security sector.

as the military. This is not to say that the military does not play a role in coercive capacity. Should the level of instability within a state reach the level of civil war, the military will no doubt become the primary state agent responsible for defeating the rebellion because the military is uniquely trained and equipped for such a mission (Bayley and Perito 2012). Nevertheless, the focus of this study is on what elements of state coercive capacity can influence the onset (and conversely the prevention) of civil wars. In other words, what elements of state coercive capacity influence the probability that a state will transition from a lower level of instability to a civil war? I contend that police coercive capacity should influence the probability of civil war onset in a way that is distinct from other attributes of state capacity for two primary reasons. First, police by definition are a states' primary agency with authorization to employ force to maintain internal order. The criticality of the police to maintain order is amplified by the second reason, which is the tendency of the police to be the most prominent and pervasive agent of the state among the population (Silver 2005: 14). It is for these reasons that the police, not the military, should be the focus of the study of state coercive capacity on civil war onset. Hendrix offers support for this contention by noting that military capacity may not be the most appropriate measure of coercive potential and suggesting that police capacity may be more important (2010: 277).

In the following paragraphs I describe several ways in which police capacity, in the form of "actual capabilities" and "visible capabilities" can reduce the probability of civil war onset. To do so, I draw from Reiner (2000), who determines that police maintain order more generally through *mobilization of sanctions, threat, and surveillance*. Before doing so, I must emphasize that coercion is not synonymous with repression. Rather, coercion means compelling someone to do something against their will with threat of violence should the individual resist (Bittner 1972). For instance, arrest is a form of coercion in that police are physically restraining someone from continuing some illegal activity. Should the individual resist, we would expect the police officer to employ an appropriate measure of coercion to subdue the individual. Such behavior does not constitute an act of repression unless the police officer's response was grossly disproportionate or arbitrary.<sup>17</sup>

---

<sup>17</sup> I use Goldstein's (1978) definition of repression when making this determination.



### *Mobilization of Sanctions*

I conceptualize mobilization of sanctions as *actual capabilities*, meaning the ability of the police force to maintain order. This element differs from threat in that coercive threat is perceptual; whereas mobilization capacity refers to the actual capabilities the police possess and can include hidden factors unknown to the rebels. In the context of civil wars, actual capability refers to the ability of police to prevent internal instability from reaching the level of civil war. At the lowest level of instability, police can prevent a slide to civil war by arresting lawbreakers. The level of organizational development necessary for dissidents to conduct a civil war occurs most effectively in a lawless, permissive environment (Fearon and Laitin 2003). Moreover, the police can also prevent simple lower levels of instability from escalating by containing events such as strikes and riots and preventing them from contributing to a general level of disorder (Bayley and Perito 2010).

At the higher level of the spectrum of instability, police can contribute to maintaining order by defeating rebel attacks. While police are not appropriately equipped to fight larger organized challenges to the state such as those that constitute an insurgency, police often do—whether by their choice or by virtue of being prominent targets for the insurgents (Bayley and Perito 2010). In such environments police capacity to maintain order refers to their ability to effectively contain an insurgency to prevent the rebel groups from reaching a level of organization capable of engaging in a civil war.

An example of the role mobilization of sanctions can have on civil war onset concerns the absence of a police force in the Federally Administered Tribal Areas (FATA) in Pakistan. This absence is one of the primary reasons that insurgents and terrorists have adopted the area as a base of operations (GAO 2008; Jones and Fair 2009). Unlike other provinces in Pakistan, the FATA has never enjoyed a civilian police force. Legislation dating from the British colonial era governing the administration of justice in the FATA prevents the imposition of police forces typically found in the rest of the country (Jones and Fair 2009). Also, there is no national police force in Pakistan; policing is a provincial/regional function (Das 2006). Policing functions in the FATA have fallen to the tribal police and the Frontier Corps, a government sanctioned tribal

paramilitary organization (ICG 2009; Innocent 2008). These rudimentary police organizations have failed to impart any sense of order in the FATA.

The absence of any national Pakistani government coercive force in the FATA has allowed it to become one of the foremost examples of “un-policed spaces” in the world and a sanctuary for terrorists and insurgents who migrated there after being forced to leave their previous operating areas in Afghanistan and other parts of Pakistan (Chalk 2007). The Pakistani military has repeatedly attempted to establish state control over the area, but their heavy handed efforts have been unsuccessful (ICG 2009). Similarly, U.S. assisted efforts to improve the Frontier Corps have been unsuccessful, leading to recommendations that Pakistan must cede policing authority for the FATA to the police of the neighboring North West Frontier Province, which maintains a more professional and capable police force (Oxford Analytica 2007; Jones and Fair 2009).

In keeping with these arguments, I offer the following hypothesis relating police capacity to civil war:

**H1a:** Increasing police actual capacity reduces the probability of civil war onset

### ***Threat and Surveillance***

The second means the police employ to maintain order is *threat*. In keeping with the inherency argument for civil war onset, police forces must possess a sufficient level of coercive capacity to create the impression within aspiring rebel groups that violent resistance to the state is not cost-effective. I conceptualize threat capacity as *visible capability*, which refers to the prospective rebels’ perceptions of the capability of the police to maintain order when faced with a violent challenge. Visible capability differs from actual capacity insofar as visible capacity refers to the ability of the police to deter, whereas actual capability refers to the ability of the police to prevail. Visible capability consists of the factors that aspiring rebels would take into account when determining the utility of violent resistance to the state. It is difficult to specify which attributes that the aspiring rebels regard as important, but scholars tend to measure police capacity in part as a function of size (Bayley 1985), so I assume that dissidents would apply

similar criteria. Dissidents should be able to measure the size of the police force rather easily, if not overall, then at least in terms of police presence observable in their local areas.

It is difficult to include a case study on the deterrent quality of visible capacity since it occurs in the minds of the aspiring rebels, however, research on the effectiveness of police efforts to deter crime offers a plausible substitute. While crime is clearly not directly analogous to civil war, both phenomena represent steps on the spectrum on internal instability, and involve a decision to challenge the authority of the state to some degree. Using crime and police data from the state of Florida, Benson, Rasmussen, and Kim (1998) find strong evidence of a deterrent effect by testing the relationship between police resources (especially increases in the number of police patrols) and crime. Those criminal activities receiving the most resources decreased, while those type of crimes that lost attention and resources tended to rise, suggesting that the criminal recognized that the risk of getting arrested had lowered.

While I contend that police visible capacity affects the probability of civil war onsets cross-nationally, its effects are not uniform. Visible capabilities should be conditional on regime type. Hendrix's other two conceptualizations of state capacity offer useful ways understand this conditional relationship. Drawing on the *institutional* concept, the effect of government capacity on civil war is bound up both empirically and theoretically with regime type. Empirically, civil wars are not as common in either strong autocracies or strong democracies, with democracies experiencing fewer civil wars than autocracies (Hegre et al 2001). Collective violence occurs most often in low democracy/low capacity states. Regimes in these states lack the ability to regulate abuses by both their own agents and non-state actors. Additionally, due to a lack of democratic institutions, groups have limited non-violent venues for presenting claims. In contrast, high capacity/low democracy regimes (such as autocracies) experience only moderate levels of violence because these states have the capacity to effectively suppress dissent and control coercive agents. High capacity/ high democracy regimes experience the lowest levels of violence because these states can both effectively manage violence, and they have institutions to which dissenters can present their claims in a non-violent way (Tilly 2003). Similarly, states that exhibit higher government spending and trustworthy economic institutions are strongly associated with civil peace (Fjelde and DeSoysa 2009).

Autocracies may need a less obtrusive police force because the aspiring rebels know that the state will observe no boundaries in responding to the violent threat. On the other hand, a less

obtrusive police force may also be sufficient to maintain order in democracies for the converse reason that democracies tend to rule more based on consent than coercion, and therefore require fewer coercive forces to maintain order. Anocracies enjoy neither advantage.<sup>18</sup> Consequently, anocracies should need to maintain a police force with a relatively higher level of coercive capacity since anocratic states often can neither sufficiently dissuade nor peacefully co-opt the opposition (Tilly 2003).

Regime effects may also manifest themselves through Hendrix's concept of *bureaucratic/administrative capacity* to monitor society. Anocracies may face the greatest challenges in indentifying threats to the state, a responsibility which typically falls to the police. The police's ability to perform surveillance is one of the most significant distinctions between a state's military and police force. The requirement for the police to perform their task of maintaining order by constantly interacting among the state's population in a dispersed manner gives them a unique opportunity to gather intelligence. In contrast, the military tends to operate in large groups in a more heavy-handed manner (Bayley and Perito 2012).

Surveillance alone will not prevent civil war; rather, it enables other state functions. The police cannot effectively exercise their coercive functions, either through deterrence or actual coercion, without at least knowing who the perpetrators are. A failure of the police to identify the aspiring rebels allows the dissident organization to develop unimpeded (Fearon and Laitin 2003; Bayley and Perito 2012). The converse can also be deleterious. Overzealous arrests and persecution resulting from poor intelligence can aggravate grievances and reduce the legitimacy of the government— a topic I explore more fully in the next chapter.

Inherent in effective police surveillance is a requirement that the police possess some monitoring capacity, whether it is physical presence or some more technical means. For instance, common “beat-cops” may be able to detect obvious rebel activities. Effective surveillance of this type requires that the police employ a sufficient density of coverage to detect such signs of incipient violent resistance.

Simple coverage may not be enough, however. One has to assume that all but the most incompetent rebels would avoid such obvious activities, thereby requiring police to employ more elaborate and invasive surveillance methods such as penetration of the rebel organizations and

---

<sup>18</sup> See Chapter 3 - Repression in Theory for a discussion of the role of regime type on repression.

cooption of members. Studies of counterterrorism offer some insight on the efficacy of these more sophisticated methods of surveillance. Lacquer (1987) concludes that co-option of terrorist members through clandestine penetration is the most effective means to destroy a terrorist organization, but cautions that this method may not be suitable for all regime types.

Democracies face a particular problem with such methods due to the tendency of democratic governments to possess laws that restrict them from employing them.

Lacquer's findings suggest that we should expect democracies to experience more civil wars due to the decreased ability of their police forces to monitor incipient rebel movements. Paradoxically, this does not seem to be the case. Democracies almost never experience civil wars, so some other factors must be at play.<sup>19</sup> Strategies of control may be one such factor. Police in democracies tend to maintain order more by consent than coercion (Bittner 1972). The reliance on consent can increase the legitimacy of the police in the eyes of society, which in turn may increase the probability that inhabitants will report rebel activities. For instance, Kalyvas (2006) finds that intelligence from locals inhabitants is critical to successful government termination of civil wars. Kalyvas's conclusions are similar to the premises underlying the push for "community oriented policing" in the United States. This style of policing is intended to remedy the divide that emerged between police and society in the mid 20<sup>th</sup> century as police forces became more professionalized and centralized in an effort to root out corruption and politicization (Kelling and Moore 1988). An unintended consequence of that effort was that the police lost members of society as sources of intelligence. Police had come to respond only to emergency calls from a centralized dispatcher rather than to direct demands from society.

Another reason inhabitants of democracies may be more forthcoming in reporting incipient rebel activities is that the average inhabitant faces a greater economic cost if the rebellion succeeds. In democracies, the government distributes resources more in the form of public rather than private goods. Should a rebellion succeed, the average citizen of a democracy stands a high chance that the new government (which presumably represents the disenfranchised) will reward its supporters with private goods at the exclusion of the average citizen (Bueno de Mesquita et al 2005). In sum, the loss of surveillance capacity that democracies suffer due to their laws that restrict intrusive police surveillance may be more than offset by the willingness of

---

<sup>19</sup> See the discussion earlier in this section for a description of the effect of regime type on civil war onset.

the average citizen to provide intelligence on incipient rebel activities. Thus, highly autocratic regimes should have a greater surveillance capacity due to an absence of restrictions on police stridency in penetrating potential rebel groups. On the other hand, democracies should enjoy an advantage in access to intelligence from their citizens due to the high costs that society would suffer if the civil wars succeeded. Thus we should expect that surveillance capacity is weakest in the middle range of regimes. Anocracies are restricted in their ability to penetrate society, but do not enjoy enough legitimacy in the eyes of their inhabitants to impel the inhabitants to fear the effects of a successful civil war.

Bearing in mind the greater challenges anocracies face in monitoring and controlling their populace, I offer the following hypothesis depicting the conditional effect of regime type on the relationship between police threat capacity and civil war.

**H1b.** Increasing police threat capacity reduces the probability of civil war onset, but is conditional on regime type. Increases in police threat capacity in anocracies should exhibit a smaller effect.

We should also expect that aspiring rebels would prefer to not limit their calculations of police capacity to solely considerations of measures of police coverage. Determination of the police force's competency in executing its police tasks would be even more beneficial.<sup>20</sup> *Ceteris Paribus*, less competent police should have a lesser deterrent effect. For example, Toft (2010) finds that the experience of undergoing security sector reform is a significant factor in reducing civil war reoccurrence because reform increases the perceived costs of violent resistance in the minds of would-be rebels. A turn to bargaining models of interstate war can also shed light on how rebels may consider police competency.<sup>21</sup> A general line of reasoning suggested by this field is that aspiring rebels are never sure of the states' true coercive potential until they actually engage in violent resistance to the state. Until that time, the would-be rebels are relegated to discerning the coercive potential from other activities. One way may be to observe government

---

<sup>20</sup> Competency could include factor beyond simple personnel strength such as training, equipment, etc.

<sup>21</sup> For instance, Fearon (1995) attributes the outbreak of war in large part to the existence of private information. Bueno de Mesquita, Morrow, and Zorick (1997) explain how crises leading to war can serve as means for potential adversaries to ascertain their opponent's true capabilities.

responses to other forms of violent resistance of lower magnitude than civil war. Would-be rebels who observe police forces unable to deter or overcome instances of violent resistance by other groups should be more likely to view police forces as incapable, and therefore more likely to violently challenge the state. Thus, I expect that increasing levels of political violence in a state reduce the threat capacity of that state's police force.

**H1c:** Increasing visible capability reduces the probability of civil war onset, but is conditional on previous levels of internal violence. The effects of increasing visible capacity should diminish as levels of internal political violence increase.

## **Research Design**

Having discussed the ways in which state and police repression should increase the probability of civil war, the next step is to test those relationships. To do so, I employ a series of cross-national time series quantitative models.<sup>22</sup> In the following paragraphs I describe my choices for my dependent and independent variables and conclude with a presentation of the models capturing the relationships among the various variables.

### ***Dependent Variables***

The dependent variable for this chapter is civil war onset. Because multiple definitions for civil war exist within the quantitative literature, I test my hypotheses by drawing from five extant and commonly used databases for observations of civil war onset. They are the Correlates of War Intra-State War Dataset (v4.0) (Sarkees, Reid and Wayman 2010), abbreviated as *COW*; the Sambanis (2004) dataset; the Fearon and Laitin (2003) dataset; the Uppsala Conflict Data Program (UCDP)/ Peace Research Institute Oslo (PRIO) Armed Conflict Dataset v.4-2010

---

<sup>22</sup> See Chapter 1 - The Approach for discussion of why I choose to use a quantitative methodology.

(Harbom, Lotta, and Wallensteen 2010; Gleditsch et al 2002), abbreviated as *PRIO*<sup>23</sup>, and the “Civil War Dataset”(Toft 2010), abbreviated as *Toft*. A fuller description of these databases and how they compare is available in Appendix A.

### ***Independent Variables***

Operationalization of police capacity involves creation of indicators of threat and actual capability. In the following sections, I consider each element separately, beginning with actual capability.

#### ***Actual Capacity***

The two most generally used comparative measures of police capacity are number of police and government expenditures on police (Bayley 1985: 75). Based on my own research, data on government expenditures specifically pertaining to police forces is not available in a sufficient quantity to support cross-national research.<sup>24</sup> That leaves number of police as the only viable candidate, though it is not without its own challenges related to establishing equivalence on the meaning of police cross-nationally, a point to which I will return later.<sup>25</sup> Sizes of police forces exhibit some consistent trends worth noting. Absolute size of police is highly correlated with states’ populations (Harrendorf and Smit 2010: 114). On the other hand, the sizes of police forces have been increasing at a greater rate than their respective states’ populations – a phenomenon for which there has been no suitable explanation (Maguire and Shulte-Murray 2001).

Consistent with past practice, I measure police strength by both police per capita and police density per geographic area (Hibbs 1973, Bayley 1985). Data on individual states’

---

<sup>23</sup> The PRIO dataset includes “Minor Armed Conflicts” entailing 25 or more battle deaths and “War” entailing greater than 1000 battle deaths. I employ conflicts according to the lower threshold in an effort to impart greater variety into the observations of onsets.

<sup>24</sup> Farrell et al (2001) offer a method for how to do so for a single year, but it is too ponderous to employ over many years.

<sup>25</sup> Hibbs (1973); Bayley (1985); McGuire and Schulte-Murray (2001); and Harrendorf, Heiskanen, and Malby (2010) all discuss the utility of police strength as an indicator of police capacity.



population is readily available from the Correlates of War (COW) National Military Capabilities (NMC) (v4.0) dataset (Singer 1987). I derive area data from two sources. I rely upon the World Bank *World Development Indicators* for data for 1961-2010. I rely upon the *World Handbook of Political Science Indicators* (Taylor and Hudson 1973) for area data for 1950-1960. The optimal measure of police capacity would capture variation within states, but such data on the distribution of police capacity within states is not available to an extent to support large N, cross-national analysis.

There is no comparable, comprehensive source of data like the World Bank publications or the COW NMC that provides data on police strength, which leads me to compile a composite dataset. The largest source of data on police strength currently available is the *United Nations Surveys on Crime Trends and the Operations of Criminal Justice Systems* (CTS). Conducted by the UN Office of Drug Control, these surveys collect self-reported data from UN member states on police strength and a number of other criminal justice related topics. The UN has administered ten waves of surveys, beginning in 1970, and has just issued the questionnaire for the eleventh and most recent survey.<sup>26</sup> Meaningful data on police strength is available for the years 1970, 1975, 1976, 1979, 1980, 1984, 1986, 1990, 1994, 1995, 1997, 1998, 1999, 2000, 2001, and 2002. The number of states responding to the surveys varies from 30 to 50. Early surveys simply measured total number of police personnel, defined as personnel in:

“public agencies whose principal functions are the prevention, detection and investigation of crime and the apprehension of alleged offenders. Police may or may not form part of the national security force of the particular country.”<sup>27</sup>

Later surveys revised the definition of police and provided the following guidance to respondents:

“Police are personnel in public agencies whose principal functions are the prevention, detection and investigation of crime and the apprehension of alleged offenders. If the police are part of the national security force in your country, please try to focus your replies as much as possible on the civil police rather than on the national guard or local militia. If there are many local forces, please provide data on those forces if possible. If police or law enforcement personnel fulfill prosecutorial functions, that fact should be

---

<sup>26</sup> All of this data is available at the UNODC website at <http://www.unodc.org/unodc/en/data-and-analysis/United-Nations-Surveys-on-Crime-Trends-and-the-Operations-of-Criminal-Justice-Systems.html>

<sup>27</sup> The variable description of “police” comes from the Codebook for the Dataset of the 1st and 2nd United Nations World Crime Surveys.

noted.... Data concerning support staff (secretaries, clerks etc.) should be excluded from your replies.”

Surveys conducted after 1990 separate police into “sworn officers” and total police, but I continued to employ total police as the indicator of police capacity since it is the only measure that is consistent across all surveys (Harrendorf and Smit 2010). Merging the responses from all of the surveys results in 1022 country-years of data on police strength on 137 different countries. The number of responses per country ranges from one to 16.

While the CTS does offer the largest source of police strength data, it is not without problems. The data is uneven, and many states responded only sporadically, thereby making meaningful longitudinal analysis difficult. For example, the United States’ series of submissions contained values for police strength that oscillated as much as 50% between subsequent surveys - leading McGuire and Schulte-Murray (2001) to recommend dropping observations of the United States when using the CTS data.

Prior to the publication of the CTS, the most prominent dataset on police strength came from the *World Handbook of Political and Social Indicators*, 2nd ed. (Taylor and Hudson 1973).<sup>28</sup> Taylor and Hudson define internal security forces as encompassing “police forces at all levels of government and such paramilitary internal security forces as gendarmeries, active militias and active national guards.” This work provides data on the strength of internal security forces for 121 states for the years 1950, 1955, 1960, and 1965, though not all states provided data for all four years, resulting in 268 country-years of internal security forces strength.

Creating a composite datasets derived from the CTS and the World Handbook greatly benefits my study. It allows me to increase the sample size beyond the CTS by more than 25%, as well as increase the time domain from 32 years to 52 years. My ability to consider such a combination theoretically and empirically valid rests on the degree of equivalence between the definition of “internal security forces” from the World Handbook and “police” from the CTS.<sup>29</sup> The major difference hinges on the inclusion or exclusion of militias and national guards.

Despite the imperfect fit between the two datasets’ definitions for police, I consider it

---

<sup>28</sup> Both Bayley (1985) and Hibbs (1973) specifically mention this handbook as the most suitable source for data on police strength available at the time.

<sup>29</sup> The fact that the World Handbook includes gendarme forces should not be a problem since gendarmes are police forces and should have been included in the CTS survey responses.

acceptable and treat them as equivalent. The drawback, of course, is that the World Handbook's inclusion of militias and national guards runs the risk of biasing the size of the police forces upward. The optimal solution to the problem would be to subtract the size of the militias and national guards from the total internal security force, but accurately replicating the work of Taylor and Hudson would be difficult. As a mitigating step, I drop the United States from my sample because the United States is unique in the size of its national guard (Bayley 1985: 44).<sup>30</sup>

While the CTS and World Handbook provide the majority of the data on the sizes of police forces, two other sources can fill in remaining gaps in data. *The World Police Encyclopedia* (Das 2006) provides a description of the police forces for 193 states. Common to many of these descriptions is an enumeration of the total size of the states' police forces. Das does not provide an explicit definition for police. Instead, the authors of each individual state's entry provide their own meaning for police. This work also does not provide time series data. Rather, the police force size descriptions depict a point in time, typically in the late 1990s.

The second supplemental source is the *World Factbook of Criminal Justice Systems* (Newman, Bouloukos, and Cohen 1993). This work contains descriptions of the criminal justice systems of 45 different states, including descriptions of the sizes of police forces. The work follows the UN definition of police as "public agencies whose principal functions are the prevention, detection and investigation of crime and the apprehension of alleged offenders." Similar to the *World Police Encyclopedia*, this work only provides point data on police strength, typically for the early 1990s. I add police strength data from these sources when either makes specific reference to the size of a police force at a specific time.

Having discussed the attributes of police strength as an independent variable, the next step is to marry this variable with my dependent variables – civil war onset. I prefer to employ country-year data, but many of the country-years with a civil war onset simply have no corresponding police data. Missing police capacity data causes all of the five datasets to experience greater than a 90% reduction in the sample size of civil war onset-years. See Table B-12 for a depiction of the reduction in sample sizes. Additionally, many states that do have

---

<sup>30</sup> McGuire and Schulte-Murray (2001) recommend dropping the United States anyway due to the erratic nature of its police strength data in the CTS.

police strength data have only one data point of police strength in the time period proximate to the onset. The result is that there not enough data to capture variation in police capacity in the years leading up to war.

As a mitigating step, I employ five year intervals (quinquennials) instead of one year (annual) intervals. I compute a quinquennial value of police strength as the average of the available yearly values of police strength. Using quinquennial time periods reduces my overall sample size by 80%, but the gain in the number of onsets with corresponding police strength data greatly offsets the loss in aggregate sample size. See Appendix B - Effect on Sample of Including Police Capacity for the updated sample sizes.

This coding choice leaves the issue of how to best code ongoing wars unresolved. Scholars who employ CNTS models have split on the most effective way to code ongoing civil war years (Sambanis 2004). One school of thought treats ongoing war years as “0.”<sup>31</sup> The risk of this modeling choice is that years of war are coded the same as years of peace, which can have the effect of diminishing the impact of the causal factors. For instance, if some phenomenon leads to civil war onset, one would expect the phenomenon to still be in effect during the duration of the civil war. By coding these ongoing years as zero, the effect of the phenomenon becomes statistically associated with a peace year. The other school of thought instead codes ongoing civil war years missing data.<sup>32</sup> Country years only receive a score of “0” after the war terminates. Any new civil war onset that occurs before the previous war concludes receives a score of “1,” and subsequent years are treated as missing until the final civil war concludes. The advantage of this method is that it does not diminish the effect of the causal phenomenon like the first method does. The drawback of the method is that it reduces the sample size, though any reduction appears to be negligible since civil wars are rare events and do not generally last long.

The only clear instance wherein a quinquennial should be coded as missing data is when the war spans all five years that constitute the quinquennial, which is very rare. More frequent is the case wherein some years of the quinquennials are ongoing and some years as peace-years. Whether to code such quinquennials as “ongoing” or “peaceful” is so arbitrary that any derived benefits from treating ongoing years as missing become dubious. Consequently, I code a

---

<sup>31</sup> Examples of this school include Fearon and Laitin (2003), Hegre and Sambanis (2006), and Fjelde and DeSoysa (2009).

<sup>32</sup> Examples of this competing method are Collier and Hoeffler (2004) and Hegre et al (2001).

quinquennial as a “1” if a civil war onset occurred during the time period and as a “0” if no civil war occurred during the quinquennial. My coding choice does not allow for additional onsets during the time period, but any bias effects from this choice are minimal since quinquennials that experience additional onsets are relatively uncommon for most datasets.<sup>33</sup>

### *Bias Effects*

Since my choices for indicators of police capacity substantially reduce my sample, it is necessary to determine if any bias resulted, and no substantive systemic bias appears to be present. To make this determination, I rely upon two phenomena that are strongly related to civil war onset: democracy and development.<sup>34</sup> I analyze how the values of means and standard deviations of these variables change from those derived from the original dataset compared to the values of the means and standard deviations derived from the restricted dataset. I limit analysis to data from the years 1945-1999 since this interval is present in all onset databases. See Appendix B - Bias Effects of Including Police Capacity Data for statistical results.

In comparison with the original sample, the restricted sample is slightly biased toward countries with higher Polity scores (-0.6 to 2.2), but still within the range considered to represent an anocratic regime type. Additionally, both samples exhibit nearly identical variance for Polity scores. The means of the development scores of both samples are virtually the same. The only substantial difference with regard to development is that the constrained sample has slightly higher within country variation (5 versus 4), indicating a bias toward developing countries – a phenomena empirically associated with a lower risk of civil war (Fearon and Laitin 2004; Hegre and Sambanis 2006).

---

<sup>33</sup> If I do not allow for additional onsets within a quinquennial, the COW reduces from 105-98, Doyle and Sambanis from 135-125, Fearon and Laitin from 100-97, and Toft from 108-93. The greatest decrease occurs in the PRIO dataset, which reduces from 314 to 249 onsets.

<sup>34</sup> See Chapter 1 for a discussion of the effect of democracy on civil war onsets. Hegre and Sambanis (2006) find that one common measure of development (the log of energy consumption per capita) has a significant negative effect on the risk of civil war onset.

### *Threat Capacity*

Threat capacity refers to the ability of the police to cause aspiring rebels to view the threat of police coercion as credible. This perception results from a combination of visible capabilities and the record of success of previous government efforts in prevailing over violent dissidence. Potential rebels should view previous government failures to curtail internal violence as an indicator of weak government coercive capacity.

I operationalize visible capabilities as police presence, which is a function of police per area and per population (Bayley 1985). The problem with this choice is that it makes the indicators of visible capacity identical to the indicators of actual capacity, meaning that one set of indicators reflects two different concepts. I mitigate this problem by qualifying the impact of visible capacity. Visible capacity should be conditional on regime type. Both autocracies and democracies should require police forces with less visible capacity to prevent the onset of civil war.<sup>35</sup> I model the conditional effect of regime type as a dummy variable indicating a state has an anocratic regime type, interacted with the police capacity score. I consider a state to be an anocracy when it has a Polity IV score (Marshall, Gurr, and Harff 2010) between -5 and 5. The Polity scores are available for nearly all country-years in my sample, so its inclusion induces no bias. I create a quinquennial score by coding the dummy as the modal score for the quinquennial. I also include the dummy variable as a constituent term.<sup>36</sup>

I also consider threat capacity to be a function of the level of success the state has attained in prevailing over violent dissidence in the past. Aspiring rebels should learn from previous groups' efforts how effectively the state might respond to future acts. I operationalize previous government efforts by the level protest from the Minorities at Risk (MAR) project (2009) "Anti-Regime Rebellion" scores. This variable is an ordinal measure of violent anti-regime behavior by minority groups ranging from 1 for "low level political banditry" to 5 for "protracted civil war." A limiting factor of this measure is that it only represents activity by minority ethnic groups. As a result, states without significant minority groups are excluded. Nevertheless, this exclusivity is also an advantage in that it reduces the risk of endogeneity with

---

<sup>35</sup> See the Threat and Surveillance section of this chapter for a description of the role of regime type on civil war onset.

<sup>36</sup> I include constituent terms based on the recommendations of Kronmal (1993), Brambor, Clark and Golder (2005), and Clark, Gilligan, and Golder (2006).

civil war onsets.<sup>37</sup> The MAR already depicts quinquennial scores, so there is no need to convert it. The temporal domain is 1940 to 2000, so it encompasses the other variables. The number of countries that have MAR data per quinquennial varies from 43 to 120, with a mean of 88. I employ the lagged value of the rebellion score to minimize issue of endogeneity and to allow for a period of time for learning to occur (Collier and Hoeffler 2004).

### *Bias Effects*

A drawback of the inclusion of the MAR variable is that it reduces the sample even more substantially because not all states in the onset samples have corresponding MAR data. I test for the effect of sampling bias that may result from including the MAR variables using the same methodology I employed for police capacity, and no meaningful bias appears to be present. Including MAR scores increases the mean Polity score from -0.5 to 1.5, which indicates a slight but most likely insubstantial bias towards democratized countries. There is no bias effect in the variance of Polity scores, nor is there systemic bias on development scores. See Appendix B - Supporting Information for Chapter 2-Bias effects of including the MAR variable for statistical results.

### *Controls*

Candidates for control variables for this chapter must be theoretically and empirically related to police capacity to deter rebellion as well as civil war onset.<sup>38</sup> I consider the following

---

<sup>37</sup> There is a risk that instances of increasing political violence tends to lead to civil war, and that civil war leads to increased political violence. I tested the correlation the MAR rebellion score and the incidences of civil war onset in the five databases and found only low levels of correlation (less than 0.5).

<sup>38</sup> Selection of control variables involves two steps: selecting control variables to ensure the independent variable of interest is not spurious and inclusion of control variables to improve the fitness of my models (Aneshensel 2002). With respect to the first consideration, control variables to identity spuriousness must be correlated with both the independent variable of interest and the dependent variable (King, Keohane, and Verba 1994; Aneshensel 2002; Ray 2003). Moreover, there should be a theoretical basis for this relationship, rather than just an empirical regularity (Ray 2003). The second step in determining controls is to select those that improve the fit of the overall model. Appropriate types of these variables must add to the explanatory power of the model while not substantially reducing the explanatory power of the key independent variable. Typically, these variables depict an alternative explanation for the dependent variable, not related to the hypothesis under scrutiny.

variables candidates for controls to identify a spurious relationship between police capacity and civil war onset. In keeping with my choice to employ quinquennial data, I compute quinquennial values for the control variables using techniques I explain individually for each control variable.

Extractive Capacity. Though I propose that police capacity has an independent effect on civil war onset by deterring rebels, it may also serve as an indicator of a state's extractive capacity, which studies have concluded is of the most significant aspects of state capacity for preventing the outbreak of civil war (Fjelde and De Soysa 2009; Hendrix 2010) as well as producing an effective police force (DeRoun and Sobek 2004). States must compel their citizens to contribute tax revenue, and police forces are typically an important element in enforcing compliance (Tilly 1985; Levi 2001). Additionally, police cannot operate without adequate levels of government resourcing (Bayley 1985). I operationalize extractive capacity with the Relative Political Capacity (RPC) measure.<sup>39</sup> I compute the quinquennial value as the average RPC values per quinquennial.

Bureaucratic quality. Police capacity may also be in some part a function of a state's bureaucratic quality and organization. Police forces that do not receive regular pay or other state resources are less effective (Englehart 2009). Bureaucratic quality also affects a range of other goods the state provides its inhabitants that can forestall challenges to the state (Fjelde and De Soysa 2009). I employ a measure of regime instability as an indicator of bureaucratic quality under the premise that political change can cause instability. The instability reduces the coherence of a state's institutions, which can lead to a loss of legitimacy by the regime and induce dissatisfied groups to struggle against it (Hegre et al 2001).

Drawing on Hegre and Sambanis (2006), I model the effect of regime change as  $2^{(durable/0.5)}$ , where *durable* is a variable from the Polity IV dataset that measures the number of years that have transpired since an institutional change that leads to a minimum of three points change on the Polity score.<sup>40</sup> I employ the minimum yearly value of the quinquennial for my measures of

---

<sup>39</sup> Hendrix determines that the ratio of taxes to GDP (tax ratio) is a better measure, but the data on RPC is more readily available.

<sup>40</sup> Hegre and Sambanis draw on the work of Hegre et al (2001), who model the effects of regime change as a decay function of time, measured by  $e^{(-year\ since\ regime\ change/0.5)}$ . Their source of data is Polity IIIId. Their findings are



*durable*, rather than the mean. The reason is that in some cases wherein a regime change occurs, preceding values were as high as 100, which would mask the effect of the regime change or peace onset if I computed the mean score.

Military capacity. If, as I propose, police capacity enters into aspiring rebels' strategic calculus of the utility of challenging the state, then a state's military capacity should also be a major determinant as well. In fact, rebels may give more consideration to the capacity of the military because of the greater lethality militaries typically possess in comparison with police forces. Military capacity could also act indirectly through police capacity by enhancing the ability of the police to deter challenges. Rebels may be aware that the military would reinforce the police in responding to challenges to the state if necessary. To model the effect of military capacity, I include measures of military capacity in the form of the number of military personnel per capita and per area.<sup>41</sup> I compute the quinquennial values for military capacity as the mean value for the quinquennial.

Omitted Candidates. Two other possible candidates for control variables are measures of development and regime type, which other studies indicate are powerful explanations for civil war (Hegre and Sambanis 2006). Nevertheless, I exclude measures of development as a control variable because the theoretical relationships between them and civil war onset are unclear. GDP can encompass many theoretical causal relationships, thereby introducing the risk of conceptual over-determination (Hendrix 2010). I do not employ measures of regime type as control variables because I include a regime variable as an interaction term in the model of Hypothesis 3b. Additionally, many of the causal mechanism that link democracy to more effective police are captured by the bureaucratic quality measures (Hendrix 2010).

Because valid control measures should be correlated to some degree with key explanatory variables, I conduct tests of correlation among them all (Aneshensel 2002). Military per area and police per area are highly correlated (.8), but their per capita counterparts are not. To validate

---

supported by Fearon and Laitin (2003). Hegre and Sambanis (2006) determine a similarly negative effect on onset using their model. Since all authors utilized essentially the same model on the same data, I employ the function developed by Hegre and Sambanis because they use the most recent data.

<sup>41</sup> I include military per capita measures in models that include police per capita measures, and military per area measures in models that include police per area measures.

my decision to exclude measures of development, I also included them in the correlation test as a rudimentary means to identify spuriousness in my key independent variables (King, Keohane, and Verba 1994; Aneshensel 2002), and no meaningful correlation is present. See Appendix B - Supporting Information for Chapter 2-Correlation matrices for full results.

### *Models*<sup>42</sup>

Since I treat the dependent variable of civil war onset as a binary outcome, I run a cross-national time series (CNTS) style binary dependent variable regression (Sambanis 2004; Wimmer, Cederman, and Min 2009). I vary from common practice in the literature in that I employ a Generalized Estimating Equation (GEE) using a probit link with a decaying time function and robust standard errors rather than a more typical CNTS logit/probit. I do so for two reasons. First, the GEE better incorporates unit effects than simple logit/probit.<sup>43</sup> Second, the GEE is superior at accounting for time and spatial correlation (Zorn 2001).<sup>44</sup> I choose probit over logit solely for simplicity of computation of predicted probabilities.

The models below depict hypothesis 1a. All variables are measured in quinquennials (t=5).

---

<sup>42</sup> See Appendix B - Description of Variables Contained in the Capacity Models for a description of the variables contained in the models.

<sup>43</sup> Civil war is a complicated phenomenon, and the risk that I have omitted some variable that captures unit effects is high. I could also employ a probit with unit effects, but since I am more concerned with the overall effect of my explanatory variables rather than the effect of a single unit, GEE is more appropriate than random effects (Zorn 2001: 475).

<sup>44</sup> I expect time dependence since others (Hegre et al 2001; Fearson and Laitin 2003; Collier and Hoeffler 2004) have demonstrated that temporal proximity to a previous civil war is an indicator of a subsequent civil war. My use of a decaying time function as a statistical control has the added benefit of controlling for the effects of temporal autocorrelation. That the risk of a civil war onset is higher in the years following a previous civil war is a fairly well accepted phenomena (Hegre et al 2001; Collier and Hoeffler 2004; Hegre and Sambanis 2006). Nevertheless, this time effect violates the assumption of independence of observations (Beck, Katz, and Tucker 1998) that is integral to the probit technique I employ.<sup>44</sup> The findings on special correlation are less conclusive (Hegre et al 2001; Hegre and Sambanis 2006), but the use of the GEE accounts for it regardless.

**Model 1.a.1:**  $\text{onset}_{it} = \beta_0 + \beta_1 (\text{police per capita})_{it} + \beta_2 (\text{extractive capacity})_{it}$   
 $+ \beta_3 (\text{bureaucratic quality})_{it} + \beta_4 (\text{military per capita})_{it}$

**Model 1.a.2:**  $\text{onset}_{it} = \beta_0 + \beta_1 (\text{police per area})_{it} + \beta_2 (\text{extractive capacity})_{it}$   
 $+ \beta_3 (\text{bureaucratic quality})_{it} + \beta_4 (\text{military per area})_{it}$

These models depict hypothesis 1b.

**Model 1.b.1:**  $\text{onset}_{it} = \beta_0 + \beta_1 (\text{police per capita})_{it} + \beta_2 (\text{anocracy})_{it}$   
 $+ \beta_3 (\text{anocracy} * \text{police per capita})_{it} + \beta_4 (\text{extractive capacity})_{it}$   
 $+ \beta_5 (\text{bureaucratic quality})_{it} + \beta_6 (\text{military per capita})_{it}$

**Model 1.b.2:**  $\text{onset}_{it} = \beta_0 + \beta_1 (\text{police per area})_{it} + \beta_2 (\text{anocracy})_{it}$   
 $+ \beta_3 (\text{anocracy} * \text{police per area})_{it} + \beta_4 (\text{extractive capacity})_{it}$   
 $+ \beta_5 (\text{bureaucratic quality})_{it} + \beta_6 (\text{military per area})_{it}$

The models below depict hypothesis 1c:

**Model 1.c.1:**  $\text{onset}_{it} = \beta_0 + \beta_1 (\text{police per capita})_{it} + \beta_2 (\text{past civil strife})_{it}$   
 $+ \beta_3 (\text{police per capita} * \text{past civil strife})_{it} + \beta_4 (\text{extractive capacity})_{it}$   
 $+ \beta_5 (\text{bureaucratic quality})_{it} + \beta_6 (\text{military per capita})_{it}$

**Model 1.c.2:**  $\text{onset}_{it} = \beta_0 + \beta_1 (\text{police per area})_{it} + \beta_2 (\text{past civil strife})_{it}$   
 $+ \beta_3 (\text{police per area} * \text{past civil strife})_{it} + \beta_4 (\text{extractive capacity})_{it}$   
 $+ \beta_5 (\text{bureaucratic quality})_{it} + \beta_6 (\text{military per area})_{it}$

## Results

The following sections contain the results of tests of the hypotheses relating police capacity and civil war onset in the form of both predicted probabilities and marginal effects. The choice of which form to present stems from which best depicts the hypothesis under analysis (Green 2010). I determine predicted probabilities by varying the key independent variables

while holding all other independent variables at their means.<sup>45</sup> Because the models employ quinquennial data, the outcomes actually reflect the probability that a civil war onset will occur during a five year period. Since the derived standard errors of the coefficients in the probit models do not directly correspond to probabilities of prediction, I generate 95% confidence intervals for my computed probabilities (Gujarati 2009 and Porter). I consider the results to be statistically significant when the lower confidence interval is not close to zero. The exact threshold varies with the model, as I explain in the subsequent paragraphs. The marginal effects graphs employ 95% confidence intervals as indicators of statistical significance (Brambor, Clark, and Golder 2006). I consider the results of the marginal effects tests to be statistically significant when the confidence intervals do not include zero. As a result of the high number of indicators I employ for repression and civil war onset, I cannot include all the graphs of outcomes in the body of this chapter. Instead, I only include a small number of graphs that are illustrative of trends. I offer the remainder in Appendix B - Outcome Graphs for Police Capacity Models.

***Results for H1a: Increasing police actual capacity reduces the probability of civil war onset***

The table below depicts the outcomes from testing this hypothesis with the two indicators of police capacity. The columns contain the two indicators of police capacity, and the first row depicts their hypothesized effect on the probability of civil war onset. As the second row shows, the outcomes of tests of the effects of simple measures of police capacity on the probability of civil war onset exhibit consistent and statistically significant negative effects on the probability of civil war onset. The third row indicates which portion of the range of the independent variable exhibits the most statistically significant results, as indicated by the lower confidence bound of the interval not being close to zero and relative narrowness of the confidence interval. The following sections provide more detail on the information depicted in the table.

---

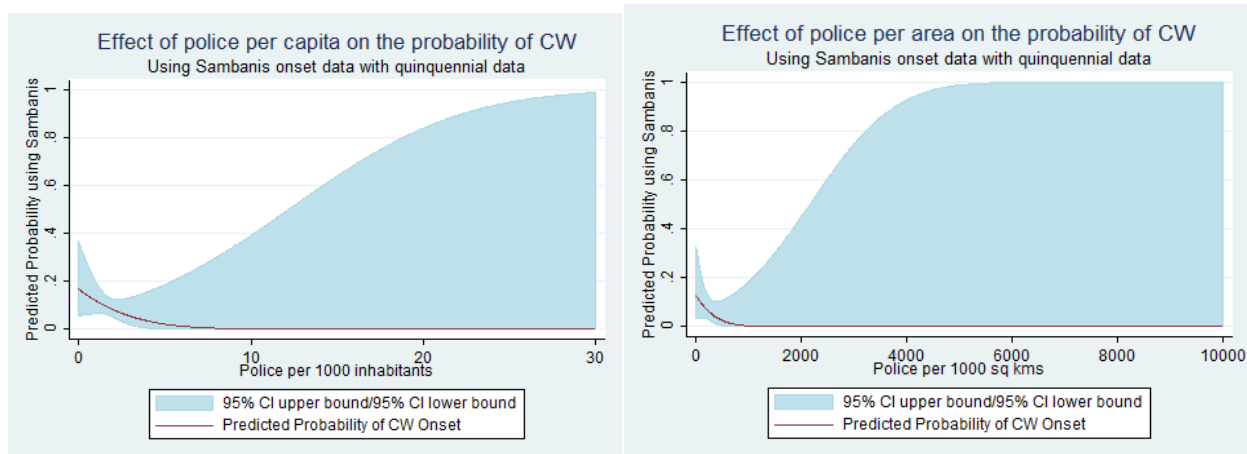
<sup>45</sup> Though common in the past, this technique of employing the means of non-focus independent variables, “the average case” been criticized by Hamner and Kalkan, who advocate for the use of an “observed value” approach. The crux of their criticism is that the average case is not necessarily representative of any actual observations in the sample, an occurrence that can lead to overstated outcomes. .

**Table 2-1 Outcomes of Testing Hypothesis 1a**

	Indicators of police capacity	
	Police per capita	Police per area
Predicted effect on probability of civil war onset	Decrease	Decrease
CW datasets with concurring results	All	All but Toft
Range of values of independent variables with highest statistical significance	Lower	Lower

Using police per capita as the indicator, all databases exhibit the decreasing effect that I predicted. Using the police per area measure, all databases except for Toft exhibit a decreasing effect on the probability of civil war onset. Use of the Toft database yields predicted probabilities uniformly close to zero, with no region exhibiting statistical significance. Low values of both police per capita and police per area exhibit the most statistical significance. The graphs below depict outcomes for both indicators using Sambanis onset data and are indicative of the general trends.<sup>46</sup>

**Figure 2-1 Effects of Measures on Police Capacity on the Probability of Civil War Onset**

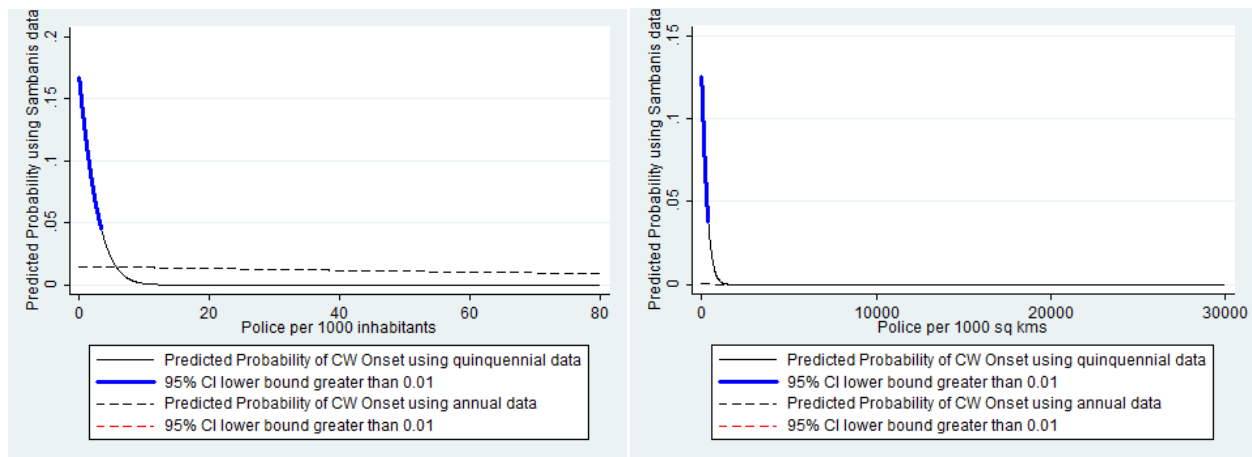


<sup>46</sup> In an effort to more effectively depict the region with significant outcomes, the graphs only reflect the range of the respective indicators from their lowest to their 99<sup>th</sup> percentile value. Both indicators contain outliers in the highest percentile, the inclusion of which would greatly compress the scale of x axis.

In light of these generally statistically significant findings, I can conclude with confidence that increases in police capacity in the form of police per capita and police per area decrease the probability of civil war onset, though this finding is only valid for the lower 75<sup>th</sup> percentile of values of each. High values of police per capita and police per area both result in predicted probabilities that are close to zero, but a lack of statistical significance renders this latter finding unreliable.

As a check of my decision to employ quinquennial data, I run the same models using annual data for all variables instead. The figure below depicts a comparison of the differing outcomes, using Sambanis onset data.

**Figure 2-2 Comparisons of predicted probabilities using quinquennial and annual data**



The left-most graph depicts predicted probabilities using police per capita, and the right most graph depicts predicted probabilities using police per area. For both graphs, solid lines indicate quinquennial data and dashed lines annual data. It is evident that the use of quinquennial data (indicated by the curves with solid lines) leads to higher, more statistically significant predicted probabilities, though only at low values of each indicator of police capacity. What is more, the use of three of the five databases with police per capita leads to increasing probabilities of civil war for annual data, and decreasing probabilities using quinquennial data, though the annual data is not statistically significant. I attribute the differences to missing data problems emanating

from the mismatches within the annual data I addressed earlier. See Appendix B - Comparison of annual and quinquennial time domains for a full list of comparison graphs.

***Results for H1b: Increasing police visible capacity reduces the probability of civil war onset, but is conditional on regime type. Increases in police capacity in anocracies should exhibit a smaller effect.***

The following table contains my analysis of this hypothesis for both indicators of police capacity, interacted with a dummy variable indicating a state maintains an anocratic regime type. The columns are the two measures of police capacity. To summarize the results, the first row indicates that I predict increases in police capacity should decrease the probability of civil war onset. The second row shows that tests of my predictions found support with all onset databases when states were non-anocratic. Row three reflects that the use of only two databases support my prediction when states are anocracies. Row four is the prediction of the marginal effect of increases in police capacity implied by this hypothesis, conditional on whether a state is an anocracy. Row five indicates the police per capita measures provide some support for this prediction, but police per area measures do not. In the following paragraphs I describe these findings at greater length.

**Table 2-2 Effects of Visible Capacity on the Probability of Civil War Onset**

	Indicators of visible capacity	
	Police per capita	Police per area
Predicted effect on probability of civil war onset from increasing values	Decrease	Decrease
CW datasets with concurring results for non-anocracies	All	all but Toft <sup>47</sup>
CW datasets with concurring results for anocracies	Sambanis, PRIO	All but Toft <sup>48</sup>
Predicted change in marginal effect of police capacity when states are anocratic	Reduce	Reduce
CW datasets with concurring results	All <sup>49</sup>	None

The following graphs depict these outcomes. Solid lines indicate anocracies and dashed lines all others. The thin lines represent predicted probabilities, and the heavier colored lines represent regions of values of the independent variables yielding relatively high levels of statistical significance. As the graphs portray, increases in police per capita values reduce the predicted probability of civil war for non-anocracies, but the effect of increases in police per capita in anocracies is not consistent. With the use of some databases, increasing police per capita actually *increases* the probability of civil war onset. On the other hand, increases in police per area appear to reduce civil war regardless of regime type. For both indicators the more statistically significant results occurred in the lower 75<sup>th</sup> percentile of observations. The figure below depicts these outcomes.

---

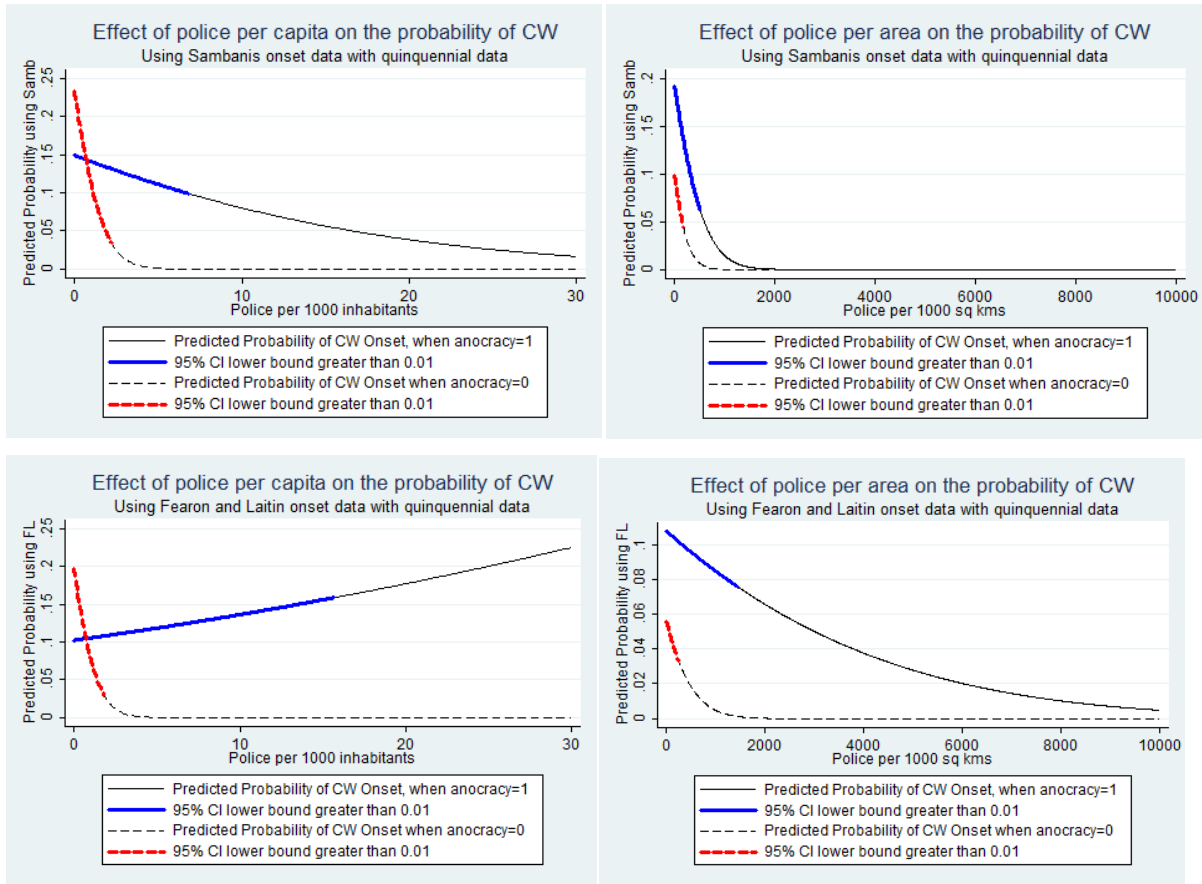
<sup>47</sup> Predicted probabilities are all close to zero with the use of the Toft database.

<sup>48</sup> Use of the Toft database yields an increase in predicted probabilities, but the results demonstrate low statistical significance.

<sup>49</sup> The conclusion comes with caveat the results when the anocracy=1 do not yield statistically significant results.



**Figure 2-3 Predicted probabilities of civil war onset as police capacity measures increase, conditional on regime type**

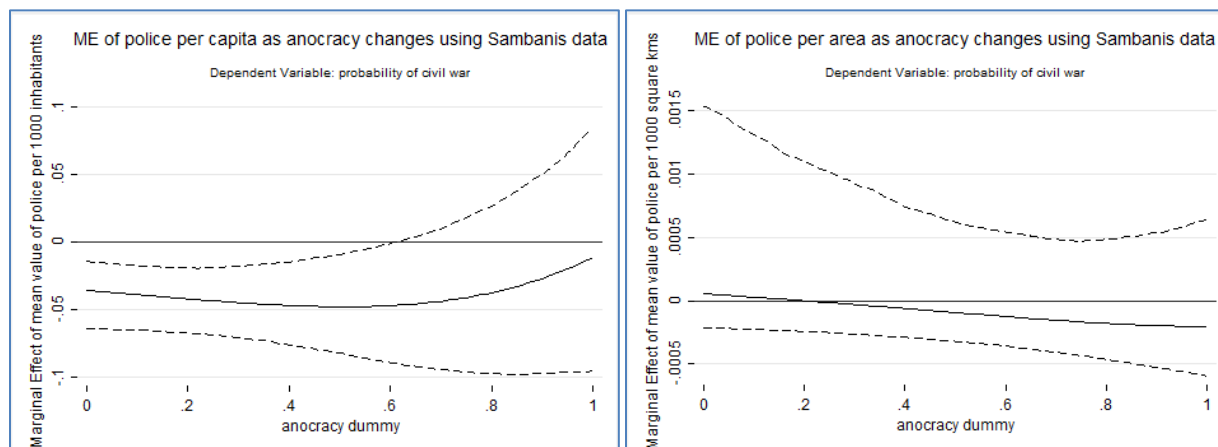


The same hypothesis can also be re-constructed in terms of marginal effects. Written as such, I expect that increases in police capacity should lead a more substantial reduction in the probability of civil war onsets in non-anocracies. Thus, H1b implies that:

The marginal effect of police capacity is negative for all values of anocracy, but this effect is strongest in non-anocracies (anocracy=0).

I compute the marginal effect as one unit increases from the mean values of the two indicators of police capacity at different values of anocracy, setting all other independent variables at their means. Since anocracy is a dummy variable, its only pertinent values are “0” and “1.” The graphs below employ Sambanis onset data and are illustrative of results from using other databases.

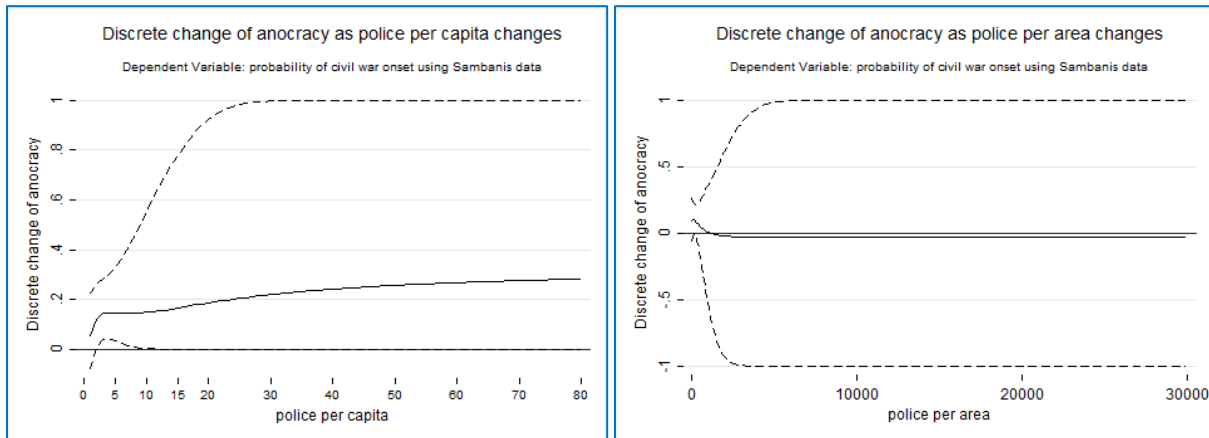
**Figure 2-4 Marginal effect of police capacity as states become anocratic**



The graphs reveal that the police per capita measure of police capacity yields a substantively and statistically significant marginal effect when anocracy=0 (non-anocracies). Moreover, the marginal effect reduces substantively at anocracy=1 as predicted, but is not statistically significant. The use of measures of police per area does not yield statistically significant results at any value of anocracy.

Berry, Golder, and Milton (2012) suggest that the converse effect of conditional variables may also be relevant. Transposing the interactive variables from the previous test involves computation of the discrete change of anocracy as police capacity varies, however, hypothesis 1b does not specify how the discrete change of anocracy may vary at different values of police capacity. Consequently, I simply predict that the discrete change of anocracy should always be positive for all values of police capacity.

**Figure 2-5 Discrete change of anocracy as police capacity increases**



As the graphs above depict the effect varies depending upon the police capacity indicator. Using police per capita, the discrete change of anocracy is positive as predicted, though statistically significant results only occur in the lower 75<sup>th</sup> percentile of police per capita values. The discrete effects when using police per area measures are substantively and statistically insignificant.

On the whole, I find moderate support for hypothesis 1b, though results were strongly contingent on the specific indicator of police capacity. Measures of police per capita yielded mixed results for predicted probabilities, but produced some statistically significant outcomes for marginal effects and discrete changes. Measures of police per area yielded more consistently statistically and substantively significant predicted probabilities, but did not result in statistically significant marginal effects.

***Results for H1c: Increasing police visible capacity reduces the probability of civil war onset, but is conditional on previous levels of internal violence. Police are less effective in preventing civil war when past levels of violence are higher.***

The following table reflects the results of my analysis of the effect of increases in visible capacity, as captured by both indicators of police capacity, interacted with the MAR score of internal violence. In short, I predict that increases in police capacity should decrease the probability of civil war (marginal effects are negative), but the marginal effects should diminish

as the levels of internal violence increase. As rows two and three indicate, increases in police capacity according to either measure generally reduce the probability of civil war onset. Predictions of the marginal effect of police capacity do not find support. As row five indicates, increases in levels of violence do not appear to affect the marginal effect of police capacity on the probability of civil war onset. On the other hand, there is some support for the conditional effect of increases in police capacity on the marginal effect of internal violence when police per area serves as the indicator of police capacity. I describe these findings in greater detail in the following paragraphs.

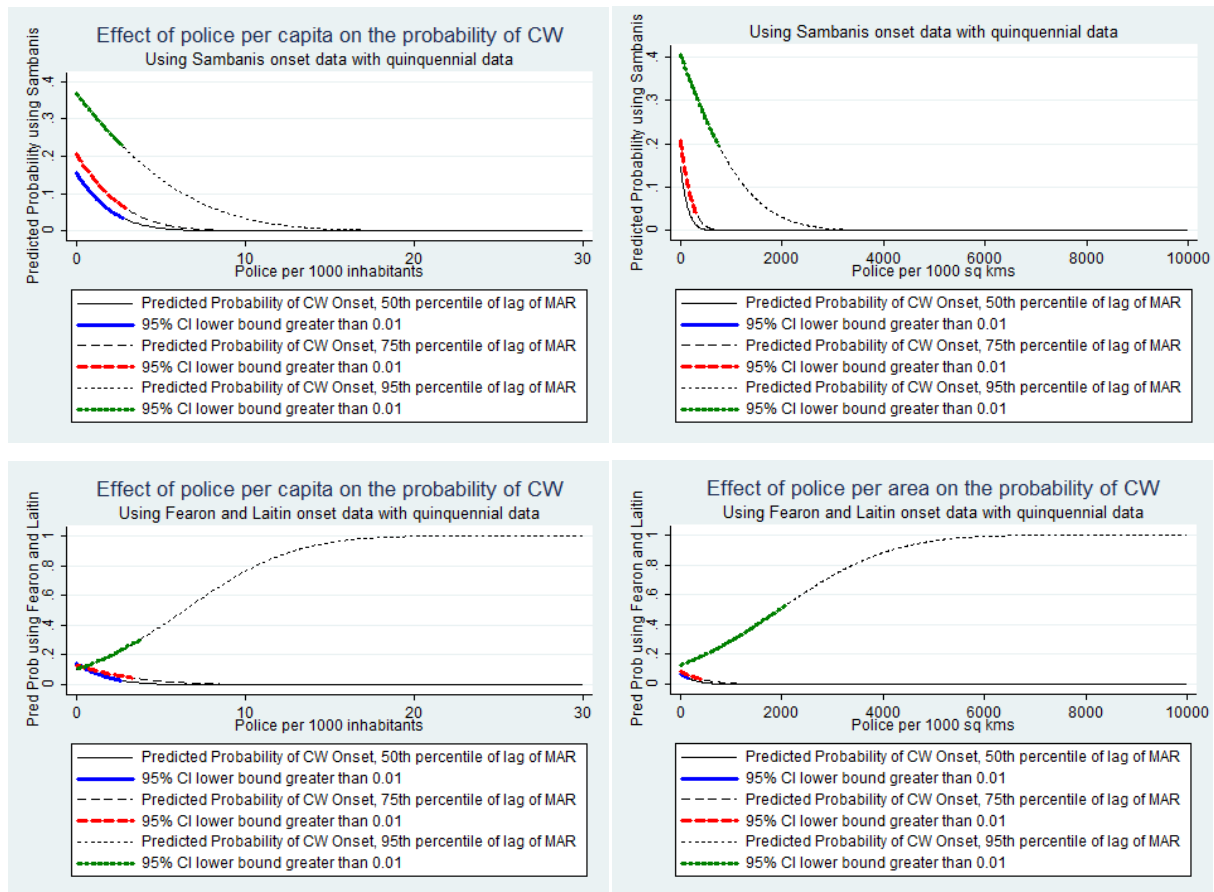
**Table 2-3 Effect of Increasing Visible Capacity on the Probability of Civil War Onset, conditional on previous internal violence**

	Indicators of visible capacity	
	Police per capita	Police per area
Predicted effect on probability of civil war onset	Decrease	Decrease
CW datasets with concurring results for low levels of violence	All	all but Toft
CW datasets with concurring results for high levels of violence	COW, Sambanis, PRIO	COW, Sambanis, PRIO
Predicted change in marginal effect of police capacity as levels of previous violence increase	Reduce	Reduce
CW datasets with concurring results	None	None
Predicted change in marginal effect of levels of previous violence as police capacity increases	Reduce	Reduce
CW datasets with concurring results	COW, PRIO	COW, PRIO

The graphs below are illustrative of the major finding relating police capacity to civil war onset, conditional on levels of internal violence. The upper graphs indicate two predominant trends. First, increases in police capacity decrease the probability of civil war. Second, civil war is more likely as previous levels of internal violence increase. This latter finding is not

surprising and is consistent with previous studies. The lower left graph depicts the outliers wherein increases in police per capita, in the presence of high levels of internal violence, actually increases the probability of civil war onset, in direct contrast to my predictions. For both indicators of police capacity, the predicted probabilities with the highest statistical significance occur at the lower end of the independent variables.

**Figure 2-6 Predicted Probabilities of police capacity, conditional on regime type**



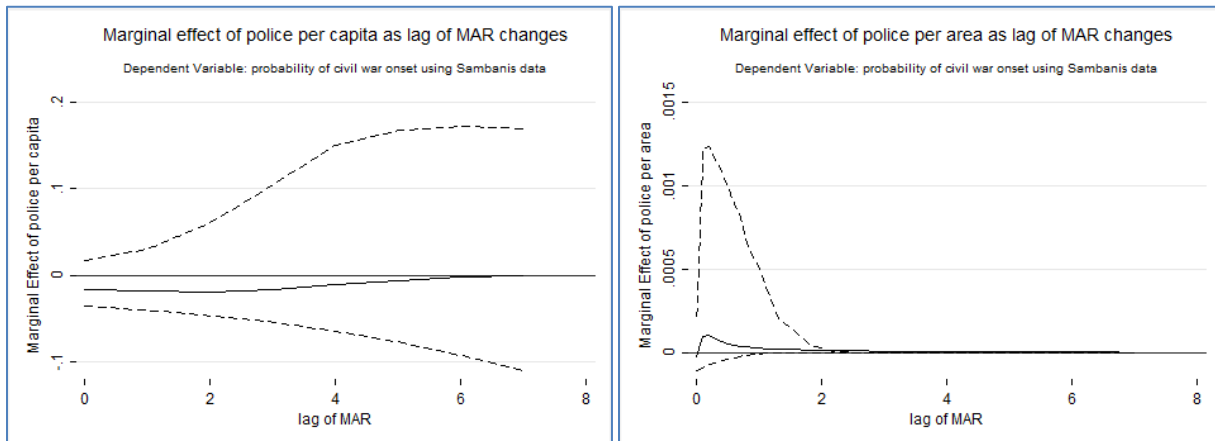
Hypothesis 1c can also be viewed in terms of marginal effects. Rewritten as such, H1c becomes the following two hypotheses:

The marginal effect of police capacity is negative for all values of past violence, but its effect is strongest at low values of past violence.

The marginal effect of political violence is positive for all values of police capacity, but its effect is strongest when police capacity is low

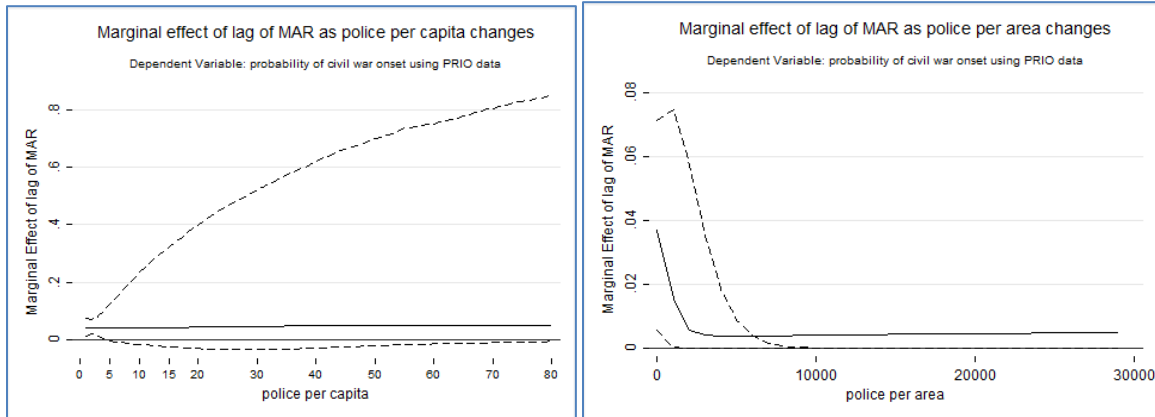
Tests of the first marginal effects hypotheses yield no statistically significant results. The graphs below depict the marginal effect of a one unit increase from the means of the two police capacity measures as the lagged MAR score increases, using Sambanis onset data.

**Figure 2-7 Marginal effects of police capacity, conditional on previous violence**



Conversely, transposing the interactive terms does yield statistically significant results for some databases for the marginal effect of one unit increases in the values of the police capacity indicators as the lagged MAR score increases, as depicted in the following graphs. Use of the police per capita measure with the COW and PRIO onset databases yields positive marginal effects that are statistically significant at low values, but the marginal effects do not diminish as predicted. The left-most graph in the figure below depicts this outcome for the PRIO onset data. On the other hand, the use of police per area measures with COW and PRIO onset data does yield predicted results. Marginal effects are positive and reduce to zero as police per area measures increase for low values of police per area.

**Figure 2-8 Marginal effect of previous violence, conditional on police capacity**



These outcomes lead me to conclude that hypothesis 1c is unsubstantiated, mostly due to a lack of statistically significant outcomes. While the marginal effects of lagged MAR scores yielded outcomes with the predicted sign, few of the onset databases generated statistically significant results. The marginal effect of measures of police capacity yielded conflicting outcomes dependent upon the specific measure of police capacity, though a few outcomes were statistically significant.

## Conclusion

This chapter addressed the relationship between police capacity and civil war onset. I argued that police can, independently of other government agents, reduce the probability of civil war onset through both mobilization of sanctions and threat. I operationalized mobilization of sanctions as actual capacity and threat as visible capacity. The difference between the two is that the latter lies in the minds of the aspiring rebel. I distinguish visible capacity operationally by offering the qualification that the effect of threat should be conditional on regime type and levels of previous internal violence. The marginal effects of increasing police capacity should be smaller in both anocracies and in states that experience higher levels of past internal violence.

**Actual capacity.** I found strong support for my hypothesis that increasing actual police capacity reduces the probability of civil war onset. Increases in per capita and per unit area measures of police strength both exhibit a statistically significant decreasing effect on the probability of civil war onset, though the statistically significant region is limited to the lower 75<sup>th</sup> percentile of values of the indicators of police capacity.

**Visible capacity.** I find little support for the hypothesis regarding the conditional effect of regime type on police capacity, based primarily on a lack of statistically significant results for the marginal effects of police capacity. Moreover, results were strongly contingent on the specific indicator of police capacity. Use of police per capita measures demonstrated contrasting effects on the probability of civil war onset, depending on the onset database utilized. While the discrete change of anocratization was uniformly positive and statistically significant for the lower 75<sup>th</sup> percentile of police per capita values, tests of the marginal effects of increasing police per capita did not yield statistically significant results. Measures of police per area did yield consistent statistically and substantively significant predicted probabilities. Predicted probabilities decreased with increasing police per area regardless of regime type, and predicted probabilities were higher in anocracies for any given value of police per area. On the other hand, use of police per area with tests of the discrete change of anocratization generally produced statistically insignificant results, though the one onset database that did yield significant results was in the predicted direction.

I find little support for the conditional effect of previous levels of internal violence on police capacity to reduce the probability of civil war onset. Increasing lagged MAR scores did, for any given value of police capacity, increase the probability of civil war onset, but that finding



is consistent with past scholarship and does not reveal much about police capacity. The marginal effects of increasing lagged MAR scores were mostly statistically insignificant, though the use of two databases did yield significant results for both measures of police capacity. Use of both the COW and PRIO onset databases result in positive marginal effect for low values of police capacity, which is consistent the predictions of hypothesis 1c, but is not novel as explained above. My hypothesis suggested that the marginal effects of police capacity should decrease as lagged MAR scores increase, but none of the tests of the onset databases yielded statistically significant results.

## Chapter 3 - Repression and Civil War

The previous chapter addressed how police capacity can affect the probability of civil war onset. Critical to the ability of the police to prevent civil war onset is a capacity to employ sufficient coercive capacity to dissuade would-be rebels from challenging the state. Nevertheless, police capacity can be a double-edged sword. The police can utilize their inherent ability and responsibility to employ coercive force to such an extent that it constitutes repression. This chapter addresses the effects of such police behavior on the probability of civil war onset. I propose that police use of repression should increase the probability of civil war onset by inducing grievances among the population. The following section offers a theoretical explanation of why this phenomenon should occur.

### Repression in Theory

A discussion of the relationship between repression and civil war should begin with a definition of repression. A common conceptual definition for repression among extant studies on the role of repression on civil war is:<sup>50</sup>

“state actions manifested through official regulatory measures designed to discriminate grossly against persons or organizations viewed as presenting a fundamental challenge to existing power relationships or key governmental policies because of their perceived political beliefs”(Goldstein 1978: xvi).

The extant literature indicates that on the whole, acts of repression increase the risk of civil war (Thoms and Ron 2007; Dixon 2009). The theoretical foundation for a relationship between repression and civil war rests primarily within the grievance based, collective action family of explanations for civil war onset. This family generally contends that government use of violence can intensify the opposition by activating latent grievances until they surpass a threshold that induces the opposition to employ collective violence against the state (Gurr 1980; Goodwin 2001; Thoms and Ron 2007). Civil war is the end point of a predictable pattern of dissent that

---

<sup>50</sup> Englehart (2009) makes this observation.

progresses from protest to civil violence to civil war. At each stage, the state responds with repression, which increases opposition until civil war results (Regan and Norton 2005).<sup>51</sup>

Much like it appears to do for civil war onset, repression may also play a role in civil war reoccurrence. The very experience of undergoing a civil war may induce states to employ repression more frequently in the aftermath in an effort to forestall another civil war. Moreover, combatants may have become accustomed to using repression during the conduct of the war, and past use of repression is one of the strongest indicators of future use (Davenport 2005). Similarly, regime use of repression during a civil war can increase the salience of group boundaries, which is an important pre-condition for the creation of violent opposition groups (Gurr 1980).

While a strong case for the relationship between repression and civil war exists, the relationship appears to be multifaceted, which may explain Davenport's (2007) finding that acts of government repression appear not to exhibit a consistent pattern with respect to dissident violence – a phenomenon he coins the “Punishment Puzzle.” For instance, the effect may be time dependent. Increased repression may lead to increased internal violence in the short term, but decreased violence in the long term (Hibbs 1973). The effect of repression may vary depending upon the dissident behavior. Regan and Norton (2005) find that acts of repression are one of the strongest predictors of civil war onset, but repression serves to decrease non-violent protest.<sup>52</sup> The level of repression may influence civil war in a curvilinear fashion. Moderate levels of repressiveness tend to lead to greater political violence than low or high levels (Muller 1985). As a result, dissident groups operating in a regime that employs moderate levels of repressiveness should exhibit the highest levels of violent behavior. Dissidents in such environments should view violence as a feasible alternative since the state neither offers non-violent venues for dissenters to pursue their interests nor sufficiently dissuades dissent.

---

<sup>51</sup> Appendix C - Description of CIRI and PTS Datasets contains tests of two common repression indicators on the probability of civil war onset. These tests find strong support for causal relationship between increasing levels of state repression and the probability of civil war onset.

<sup>52</sup> Regan and Norton find that repression is a stronger predictor than political discrimination, GDP per capita, the existence of extractable resources, population, regime type, and ethnic fractionalization.

I must note that a prominent study disputes the aforementioned body of research relating repression and civil war. Collier and Hoeffler (2004) determine that acts of government repression appear to have low power in comparison with other causes of civil war. A deeper analysis of these authors' findings, however, indicates that the contrast between their findings and the other aforementioned authors may be not as stark as it appears. The reason is that Collier and Hoeffler do not actually test for the effects of government repression according to Goldstein's definition. Instead, Collier and Hoeffler test the effect of political repression, as indicated by Polity III scores.<sup>53</sup> This measure indicates the degree of political inclusiveness of a regime, not how much it "grossly discriminates" against its citizens. Regime exclusiveness is not a suitable proxy for repression since states with both high and low polity scores both exhibit low levels of repression. Neither democracies nor autocracies tend to need to employ repression to maintain order (Gupta, Singh, and Sprague 1993).

### ***Police as a Repressive Instrument***

While many authors have addressed the association between state repression in the aggregate and civil war, studies relating police repression and civil war are much less common. This is somewhat surprising due to the inherent capacity of police forces to employ repression stemming from their function as a coercive instrument of the state (Reiner 1999). The state's requirement that its police possess a capacity to employ force to maintain social order and foster economic development has the paradoxical effect of also providing the police the capacity to engage in repression. This paradox is not relegated solely to despotic regimes. Even in democracies, policing is embedded in a social order characterized by conflict between those that control the social order and those who oppose it (Merlingen and Ostrauskaite 2005: 218).

Discerning the role of police repression on civil war requires distinguishing repression from coercion. The threshold between coercion and repression may represent the difference

---

<sup>53</sup> The Polity III (Jagers and Gurr 1996) dataset consist of indicators of political authority and regime type for 177 members of the international system. Variables include two indicators of regime type (autocracy and democracy) and eight indicators of political authority (regulation of executive recruitment, competitiveness of executive recruitment, openness of executive recruitment, monocratism, constraints on the chief executive, regulation of political participation, competitiveness of political participation, and centralization of state authority).

between police behaviors that simply maintain order and police behaviors that instigate violence. We should not expect that acts of coercion society views as legitimate would lead to the level of collective action necessary to engender violent dissent. On the other hand, repression can represent an aberration from preferred norms of behavior and could engender sufficient collective action to transform latent grievances into active violent dissent.

All police forces draw their authority from some mixture of coercion and cooperation, even in democracies (Brewer et al 1996). Yet, civil war is rare, suggesting there may exist some socially acceptable level of police coercion that would not serve as the impetus for violent resistance to the state. In fact, both the state and society expect the police to employ coercion in pursuit of the maintenance of order. As such, coercive capacity should constitute an important element of “actual capacity,” which the previous chapter indicated exhibits a statistically and substantively meaningful effect on the probability of civil war onset. If police use of coercion alone induces the state’s inhabitants to rebel, then increasing police actual capacity should increase the probability of civil war, rather than decrease it as the previous chapter indicated.

This is not to say that repression is the distinct province of the police. They are just one of several government agencies capable of employing repression.<sup>54</sup> The most obvious alternative is the military – the agency that frequently constitutes the police force’s partner in a state’s security sector (Toft 2010). In fact, a weakness in previous studies has been to conflate a state’s police and military forces when addressing their effect on repression (Hibbs 1973; Davenport 1995). What is more, the military may represent a highly effective instrument to carry out state policies of repression due to the military’s typically greater lethality and deployability in comparison to the police (Bittner 1972).

I propose that while other agencies can undoubtedly employ repression, police repression should impart an independent effect on increasing the probability of civil war onset. I base this argument on two considerations. The first is the central role that the use of coercion plays in the rationale for the existence of police forces. Police by definition possess the capacity to repress, regardless of whether they choose to do so. Their ability to employ force to maintain order on

---

<sup>54</sup> Other government agencies with a record of employing repression include prison officials, intelligence officers, and paramilitaries (Conrad and Moore 2011).

behalf of the state is the defining characteristic of a police force.<sup>55</sup> The second reason stems from the relative pervasiveness of the police as the face of the state within society (Silver 2005). In other words, if a state's inhabitants are to experience a level of repression sufficient to lead to civil war, then police should have a high likelihood of constituting the agency responsible for conducting the repression. Consequently, I offer the following hypothesis:

**H2a:** Increasing acts of police repression increase the probability of civil war onset.

Robben (2005) provides a telling example of how police repression in Argentina helped mobilize violent resistance to the state. Police repressive actions during a month long period in 1969 proved to be the major instigator for Argentinean student and labor movements to align their movements as well as accept violence as the most appropriate response to the police behavior. In 1969, Argentina was under the rule of the second military dictator since the overthrow of Peron in 1955. Peron won the presidential election 1946 espousing a populist message and drawing much of his strength from labor unions and other economic non-elites. Following his ouster, his supporters (*Peronistas*) continued to agitate for Peron's successor dictators to reenact Peronist style policies.

At the same time, younger college students were becoming politically active due to dissatisfaction with the paternalism of the military dictatorship. The student activists were not overtly Peronist. They came from a generation that had missed the violence associated with the coup against Peron. Nevertheless, a series of repressive in the mid 1960s acts drove them and the *Peronista* labor movement together in violent common cause. Sensing the growing political unrest of the university students, President Onganía took control of all Argentinean universities and forbid students from engaging in political activities. On July 29, 1966, to protest Onganía's actions, a group of students and faculty barricaded themselves inside a building at an architectural university in Buenos Aires. Federal police responded and demanded that the students leave. When the students refused, the police stormed the building and ousted the students. In an event that became known as the "Night of the Long Sticks," or "*la Noche de los*

---

<sup>55</sup> See Chapter 1 - What are Police and What do They Do? for an explanation of the role of police with regard to coercive force.

*Bastones Largos*,” the police forced the protestors to walk a gauntlet while the police beat them with rubber batons.

News of the police actions swept through Argentina and provided a common cause around which students and the Peronista labor movement could rally. It also served to radicalize the students and foreshadowed two later significant insurrectionary events. The first was the *Rosariazo* on May 21, during which students and labor movement members protesting unpopular government policies in the town of Rosario clashed with police on horseback. The police attempted to disperse the rally with tear gas, causing the protestors to respond with violence. The police eventually gained control at a cost of two of the protestors’ lives and many wounded. The Rosario event was just a stepping stone to the more significant pitched battles between protestors and police during protests that occurred from May 29-30 in the town of Córdoba. In a crowd that numbered near 50,000, student protestors joined striking laborers to mark the deaths of a number of protestors over the last month. By this time, the protestors had come to expect a violent response from police and had stationed snipers on the rooftops overlooking their members. Over 4000 police and 5000 members of the military attempted to break up the crowd. The conflict waged for two days before the government was able to re-establish order, resulting in the deaths of at least 16 protestors and hundreds of wounded. The magnitude of the violent protests caused President Onganía to invoke a state of martial law that remained in effect until 1973. The government response erased any hope the protestors may have held regarding the utility of non-violent means to address their grievances, thereby setting the stage for a pattern of dissident terrorism and government repressive reactions over the next decade.

### ***Police Repression Compared to Repression by Other Government Agents***

The previous section discussed the ways in which police repression should impart an independent effect on the probability of civil war onset. In doing so, it acknowledged that police are not the only government agency capable of indulging in repression. In fact, the databases this study employs later in this chapter recognize a number of other government agents with a record of repression, such as intelligence agents and paramilitaries (Conrad and Moore 2011). The military in particular is especially well equipped to conduct repression. Accepting the proposition that repression by any of these government agents can create grievances that can lead

to civil war onset, the question remains whether acts of repression by any one agent have a greater probability of creating the grievances that contribute to civil war onset. I argue that all acts of state repression are not equal, and that police repression should matter most. The remainder of this section describes how police acts of repression should lead to a greater probability of civil war than acts by other government agents because increases in police repression are most likely to create grievances.

Though I made the point earlier that police are uniquely suited to repress due to their distinct mission and relatively high pervasiveness within society, this characteristic does not explain why police acts of repression should matter more. If greater police repression only increases the probability of civil war onset because police have more opportunities to repress in compared to other government agents, then specific characteristics of police do not matter. Who represses becomes less important than how often.

Instead, police repression should matter more because police repression represents a more profound deviation from social norms than does repression by other agents. Previous studies have described how repression and culture are related. States tend to act most repressively when dissidents violate norms of behavior, perhaps because society is more tolerant when faced with this kind of threat (Davenport 1995). A reasonable assumption is that the reverse may also be present. Norms may also influence how the recipients of repression respond. State repression that represents the most egregious violation of social norms may be most likely to instigate the sufficient levels of collective action necessary for violent challenges to the state.

Police conduct should represent a more profound violation of cultural norms principally because society should have developed the strongest and deepest norms for police repressive behavior in comparison to norms of behavior for other government agents. Thus, police pervasiveness not only gives the police more opportunities to repress, it also gives society the most opportunity to develop expectations for police conduct. A corollary to this line of reasoning is that high, but consistent levels of police repression should not be as important because society should have become accustomed to the police repressive conduct. Latent, accumulating grievances become less important than changes in the degree or quality of the



grievances.<sup>56</sup> Thus, the effects of within-country increases in police repression are more important than increases among countries because norms do not translate well across states (Landman 2006; Morgan 2009).

A comparison between society's expectations for the police and military can illustrate how society should view them differently. As mentioned, both the police and military are co-participants in states' security sector (Toft 2010), and the use of force is fundamental to both organizations' responsibilities. Nevertheless, society's expectations for their police and military forces' employment of force should differ. States expect their militaries to employ overwhelming force to protect their sovereignty. Militaries tend to apply overwhelming force with relatively low regard for collateral damage, so society should be under no illusion that their military would exercise restraint if the military should respond to an internal threat to the state (Bittner 1972; Crelinsten and Schmid 1992).

Society's uncertainty over norms for interaction with the military, combined with societies knowledge of the military's lethality and traditional mission of defeating external threats should reduce the probability that any military repressive acts would constitute a violation of societal norms. At the same time, the relative scarcity of military members operating within society should inhibit society from developing robust expectations for military repressive conduct. Because the military focuses on external threats (Lutterbeck 2004), the duties of the military should not require that they routinely interact with their state's inhabitants. As a result, society is unable establish norms from repeated interactions with the military.

Society's uncertainty about norms of interaction with the military does not apply to the police. For one, the police are more pervasive among society. Additionally, the relationship between the police with society is different than between the military and society. Whereas society expects that the military is trained and equipped to employ maximum force, society generally expects police to operate with some degree of restraint in performing their requirement to maintain order (Crelinsten and Schmid 1992). Acts of police repression are especially egregious according to this model because the repression transforms society from a principal to a target. This relationship does not apply in the same way to the military. While the military is

---

<sup>56</sup> This line of reasoning draws on the findings of Gurr (1968), who proposes that increases in grievances are more important than the than its absolute levels.

undoubtedly an agent of the state, the military's actions in performing its requirements are not as obvious to the state's inhabitants. If the police fail to perform their requirements, then society should be able to recognize an increase in disorder. On the other hand, a failure of the military to protect state sovereignty would be much less immediately evident to society. It is also much less likely. Whereas lower levels of internal disorder that fall within the typical province of the police are common, war and violent conflict are relatively rare events (Bayley and Perito 2012).

Though the discussion above centered on differentiating the police from the military, the latter is just one of several government agents capable of employing repression. Nevertheless, I extend the same argument concerning to all other government agents as well. One would not expect that any non-police agencies would exercise either the responsibility for maintenance of order or the presence among society sufficient to establish norms of behavior anywhere near approaching that which the police can.

With these considerations in mind, I offer the following hypothesis:

**H2b:** An increasing proportion of government acts of repression conducted by the police increases the probability of civil war onset.

## **Repression Research Design**

This chapter employs a research design very similar to the design I employed in Chapter 2. It differs only in that a greater availability of data allows me to employ annual data, rather than quinquennial data as I did in chapter 2.

### ***Dependent Variables***

I retain the same datasets for civil war onset for use as dependent variables that I discussed in the previous chapter. See Appendix A - Description of Dependent Variables for a description of the dependent variables.

## *Independent Variables*

My conceptual definition for police repression is an extension of Goldstein's (1978) definition of repression, with the stipulation that police repression consists only of those acts of repression conducted by the police. My two hypotheses relating police repression to civil war onset consider the effects of police repression alone and police repression as a proportion of overall government repression.

### *Police Repression*

I develop my own datasets for police repression because no extent datasets measure it explicitly. For instance, the two most prominent datasets within the repression literature, the *Cingrinelli-Richards (CIRI) Human Rights Dataset ver 12.10.11 Physical Integrity Index* (Cingrinelli and Richards 2011) and the *Political Terror Scale (PTS)* (Wood and Gibney 2010) only measure aggregate repression by all government agents, thereby making it difficult to discern the specific impact that police repression might create. See Appendix B - Description of CIRI and PTS Datasets for more about these datasets.

I developed measures of police repression by drawing from two event-related datasets. The first source is the Ill-Treatment & Torture (ITT) Specific Allegation (SA) data, a subset of the ITT Data Collection Project (Conrad and Moore 2011). The ITT consists of specific allegations of torture and ill-treatment, listed by the state and the dates during which the allegation occurred. Data is available for more than 16,000 allegations of torture that occurred from 1995-2005. The major advantage of the ITT SA dataset over the CIRI and PTS is that it also provides information on the "Agency of Control" responsible for conducting the specific allegation – one of which is the police.<sup>57</sup> I consider the ITT's definition of torture consistent with the definition of repression I employ for this paper.<sup>58</sup> As such, I treat police torture as a suitable indicator of police repression. The obvious counterargument is that torture does not

---

<sup>57</sup> Other AOCs include prisons, the military, intelligence agents, immigration and detention officials, paramilitaries, and "unstate" when coders could not determine a specific agency.

<sup>58</sup> The ITT utilizes the UN Convention against Torture, which in part is "any act by which severe pain and suffering...is intentionally inflicted." I consider instances of torture according to this definition to be uncontentious examples of repression.

represent the entire universe of acts of repression. In other words, all torture is repression, but not all repression is torture. I intend to mitigate the possible deleterious effects of excluding other forms of repression by creating a second dataset, which I describe more thoroughly in a subsequent section.

The event-style organization of the ITT data requires revision to incorporate into the time-series, cross-sectional format I employ. Consequently, I operationalize police torture as the aggregate number of acts of police torture that occur in a given country-year. To do so, I reformat the ITT data so that each event receives a score of “1” for each year it encompasses. For events that spanned multiple years, I scored the event as having occurred in the start year, the end year, and any years between. For example, an allegation of police torture in the United States that lasted from 1995-1997 will yield a score of “1” for the years 1995, 1996, and 1997. Since many states had years in which numerous allegations of torture occurred, I create a sum of all incidences of torture that occurred during each particular country-year by police, as well as a second score of torture committed by all government agencies. Returning to my previous example, during 1995 the United States endured 52 incidences of police torture and 53 incidences of torture by all other agents. Country-year scores for police torture range from 0 to 179 and for torture by all agents from 0 to 321. Because the scores exhibit sufficient variation, I can treat them as continuous variables. Employing this methodology yields 1696 country-years of observations (many of which are “0”). The number of states with observations vary from 153-155 per year.

The second measure of police repression derives from the “10 Million Dyadic Events,” (King and Lowe 2003a; King and Lowe 2003b), which draws upon the Integrated Data for Events Analysis (IDEA) project (Bond et al 2003). The IDEA is a compilation of event data culled from the Reuters Business Briefing by an automated software system known as the VRA® Knowledge Manager, which generates social, economic, environmental, and political events data. The VRA codes events according to the source and target actors as well as the type of event that transpired. Important to this study is that “police” are one of the actors in the IDEA dataset. Information is available for events that occurred from 1990-2004 for over 260 states and

related territories, yielding the 10 millions events that King and Lowe employ as the title to their project.<sup>59</sup>

I convert the event data to country-year totals. This methodology involves aggregating the total number of events that constitute the concept of interest by country-year. Since I am interested in police repression, I treat acts of police repression as those events wherein police are the source of the activity. The IDEA dataset includes 257 different types of events, ranging from the benign such as “apologize”, to the severe such as “military occupation,” however; “repression” specifically is not one of them. Using Goldstein’s definition of repression as screening criteria, I consider the following IDEA events to constitute acts of repression.<sup>60</sup>

**Table 3-1 IDEA Repression Events**

IDEA Event
Assassination
Beatings
Bodily punishment
Criminal arrests and detentions
Hostage taking and kidnapping
Torture
Political arrests and detention

Because the 10 Million Dyadic events does not include data for all countries, I run into the dilemma of whether I should code missing data as a zero or leave it as missing.<sup>61</sup> As a

---

<sup>59</sup> One difference between the IDEA and the ITT is that the IDEA only records events as point data - by month or day depending on level of accuracy available. As such, IDEA events cannot span multiple years like events from the ITT can.

<sup>60</sup> Each of these events has observations in which police are the source actor.

<sup>61</sup> For instance, if Canada has a year in which no repression was recorded, that year should most accurately be coded a zero since it is plausible that no repression occurred in Canada that year. On the other hand, an absence of

solution, I code police repression as a zero for a given country year if any recorded event is present in the database for that same country-year, under the assumption that if media can record any event, it should be able to record instances of police repression.<sup>62</sup> Conversely, I code a country-year as missing data if that same country-year has no other recorded IDEA event. Following this methodology yields 2723 country years of observations, including zeros.

### ***Police Repression as a Proportion of Overall Repression***

I operationalize the proportion of repression conducted by the police as a ratio of police repression to acts of government repression conducted by other government agents.<sup>63</sup> For the ITT database, this variable would consist of a ratio of acts of torture conducted by police to acts of torture conducted by all other government agents.<sup>64</sup> For example, in the United States in 1995, the coding scheme I employ generated 52 acts of police repression and 53 acts of by all other agents, yielding a ratio of 0.981.

Employing a ratio variable also helps control for scale effects. It is a reasonable assumption that, all other things being equal, more populous countries should experience a higher number of acts of repression simply because there are people to serve as propagators and victims of repression. This consideration is the major reason I choose not to simply include total acts of repression as a statistical control variable. Doing so would indeed capture the conditional

---

recorded events of torture in authoritarian regimes that restrict the media should not be coded as zero and should instead remain missing data because the absence of a score is more likely due to an absence of an observer.

<sup>62</sup> Bhasin, Murdie, and Davis follow a similar methodology.

<sup>63</sup> An alternative method to capture the interactive effects of police repression and total repression would be to simply include each term additively since the probit model I employ is inherently interactive (Berry, DeMeritt, and Esarey 2010). Nevertheless, I include constituent terms based on the guidance of Freidrich (1982) and Brambor, Clark, and Golder (2005).

<sup>64</sup> A drawback of including a ratio term is that country-years with values of zero become missing data because a ratio cannot have a denominator of zero. This exclusion can have the effect of biasing my sample towards countries that have at least a score of one or higher for number of acts of repression for any given year. The effect is minimal on observations derived from ITT data, but more substantial on data derived from IDEA data. For instance, 30 of 122 onsets from the PRIO data change to missing when ratios are included.

effect of varying values of total repression on the relationship between police repression and the probability of civil war onset, but would not account for scale.

I also create a ratio value using IDEA data. In the case of the IDEA, this ratio consists of a measure of acts of police repression compared to a measure of acts of repression by all those government agents depicted in the table above. Much like I did for the ITT data, I create a measure of country-year sums for repression by all other government agents using IDEA data. I do so by following the same methodology I did for compiling IDEA recorded instances of police repression. I consider the following IDEA sources to be government actors:

**Table 3-2 IDEA Repressive Actors**

Actor
Government Agent
Judiciary
Health Care Agents
Military
National Executives
Legislators
Officials
Peace-keeping forces
Police
Sub-national officials
True Agents

Because the repression measures have such short time domains, the sample size reduces significantly. See Appendix C - Effect of Inclusion of Repression Variables on Sample Sizes of Onset Databases.

As a check of multicollinearity among the repression measures I developed (are they all just measuring the same phenomenon?), I calculated the correlation among the ITT and IDEA measures of police repression, the respective measures of police repression and repression by all other government agents, and repression by all agents. I find no strong correlations between police repression and repression by other government agents for either the ITT or IDEA

database.<sup>65</sup> See Appendix C - Correlation Matrix for Candidates for Control Variables for correlation results.

### *Controls*

Candidates for control variables for hypotheses in this chapter need to be empirically and theoretically related to both repression and civil war onset. I consider the same set of candidates for use with both hypotheses in this chapter because each contains civil war onset as a dependent variable, and the independent variables only differ in regard to which government agents conduct the repression. Both police repression and government repression more broadly rely upon the same causal mechanism of creating a level of grievance sufficient to induce collective action against the state; I just propose that police repression is particularly suited for it. With these considerations in mind, I test the following variables for use as controls for spuriousness.

Time since the last civil war (peace years). Previous studies have indicated that the experience of having undergone a previous civil war is a strong predictor of both repression and civil war. States tend to repress more in post civil war environments (Davenport 2005). Similarly, states face a higher probability of civil war outbreak in the time period follow a previous civil war (Hegre et al 2001;; Hegre and Sambanis 2006) because the grievances that led to the previous civil war are lingering (Collier and Hoeffler 2004). To model the effect of previous civil wars, I employ a decay function of  $e^{-\left(\frac{\text{years since last civilwar}}{8}\right)}$  that Hegre et al (2001) found to generate statistically significant results on the probability of civil war onset. I compute individual measures of this variable for each onset database. This variable also helps corrects the violation of the assumption of independence of observations (Beck, Katz, and Tucker 1998) that is integral to the probit technique I employ.<sup>66</sup>

---

<sup>65</sup> Another choice for the denominator of the ratio term is total repression by all government agents (total repression), including police, which would yield a police repression ratio ranging from zero to one. While conceptually acceptable, measures of total repression were highly correlated with police repression (0.8 for IDEA and 0.83 for IIT), leading me to reject this variable.

<sup>66</sup> Another method to correct for temporal dependence is to use of cubic polynomials, which is superior to the use of time dummies and easier to use than cubic splines (Carter and Signorino 2010). Though I agree in principle with these authors in their use of a hyperbolic function to capture the effects of time, the decay function I have chosen



Regime effects. Regime characteristics affect both repression and civil war onset. Anocracies tend to repress more (Davenport 1995; Regan and Henderson 2002; Davenport 2004) and experience a higher number of civil wars. In order to capture the effect of anocratic regime type, I employ a variable that measures the square of the Polity IV score. I also employ a measure of the Polity IV score itself because the effect of regime type is not perfectly curvilinear. Democracies still repress less than autocracies (Davenport 2004).

Threats to regime. Threat, repression, and regime type may be inextricably mixed. States repress in response to threat, which in turn causes the opposition to challenge the state even more (Thoms and Ron 2007). To control for the effect of threat on repression and civil war onset, I employ the Political Instability Task Force (PITF) Revolutionary War Magnitude Scale.

Excluded candidates. One of the most common and consistently statistically significant explanatory variables for both repression and civil war onset are measures of development, most notably GDP per capita (Hegre et al 2001; Davenport 2007). Nevertheless, I exclude this measure as a control variable because the theoretical relationships between it and both repression and civil war onset are much less certain. Scholars have yet to develop a good understanding of why more affluent states repress less (Davenport 2007).

In an effort to check for spuriousness of my chosen key repression independent variables (including excluded variables), I compute correlations among them and all the aforementioned candidates for control variables.<sup>67</sup> The only high (>0.7) correlations exist among different

---

captures essentially the same behavior with only one term, rather than three as in cubic polynomials. A drawback of this approach, and any measure of peace duration, is left censoring. Four of the five datasets I employ begin in the 1940s, which has the effect of omitting the influence of any civil wars that occurred before the 1940s. Hegre et al (2001) acknowledge this problem, but admit there is not much that scholars can do about it – though they employ the much larger COW dataset. The solution of Hegre et al is to start all states with a score of “0” until the state experiences a civil war, though they conclude that this choice runs the risk of underestimating the effect of time. I will follow Hegre et al in the spirit of falsifiability and parsimony because the alternative to their method is to treat the first years that a state enters a dataset as the first peace year, which runs the more egregious risk of overestimating the effect of time. States that never experience a civil war received a value of “0” for this variable.

<sup>67</sup> Because of the bivariate nature of my dependent variables, I cannot rely on analysis of changes to regression coefficients from including control variables to determine spuriousness (Karlsen, Holm, and Breen 2011). Rather, I

dependent variables and among the different time decay functions, none of which are ever in the same regression. Of note, neither GDP nor the log of GDP are highly correlated with any other variables, which is further support for my decision to exclude them as control variables. See Appendix C - Correlation Matrix for Candidates for Control Variables for full results.

### *Models.*

I again apply a GEE model with a probit link for the same reasons I explain in chapter 2. See Appendix B - Description of Variables Contained in the Capacity Models for a full description of the variables contained in the models.

The first models test the effect of police acts of repression on the probability of civil war onset.

$$\begin{aligned} \text{Model 2a.} \quad \text{Onset}_{it} = & \beta_0 + \beta_1 (\text{police repression})_{it} + \beta_2 (\text{peace\_years})_{it} \\ & + \beta_3 (\text{lag of threat})_{it} + \beta_4 (\text{square of Polity IV})_{it} \\ & + \beta_4 (\text{Polity IV})_{it} \end{aligned}$$

The next set of models also includes measures of police repression from the ITT and IDEA databases, but this time using a ratio of police acts of repression to overall government acts of repression. Because the variable representing the proportion of repressive acts conducted by the police is a ratio, it constitutes an interaction. Consequently, I also include its constituent terms of the ratio, as evident in the models below.<sup>68</sup> I use the inverses of the ITT and IDEA measures of total repression as constituent terms since they form the denominator term in the ratios (Kronmal 1993). I test both models against all five datasets for civil war onset.

---

employ theory and correlations since spurious variables must be correlated with the more valid additional variable (Anneshensel 2002).

<sup>68</sup> I include constitutive terms based on the recommendations of Kronmal (1993), Brambor, Clark, and Golder (2005) and Clark, Gilligan, and Golder (2006).

**Model 2b.** 
$$\begin{aligned} \text{Onset}_{it} = & \beta_0 + \beta_1 (\text{proportion of police acts of repression})_{it} \\ & + \beta_2 (\text{police repression})_{it} + \beta_3 \left( \frac{1}{(\text{repression by others})_{it}} \right) \\ & + \beta_3 \text{peace\_years}_{it} + \beta_4 (\text{lag of threat})_{it} + \beta_5 (\text{square of Polity IV})_{it} \\ & + \beta_6 (\text{Polity IV})_{it} \end{aligned}$$

Sufficient data exists for these models to allow me to code ongoing war years as both “zero” and “missing, however, I treat ongoing war years as missing to prevent endogeneity. The experience of enduring a civil war is one of the strongest predictors of state use of repression (Davenport 2007), which raises the possibility of reverse causation during ongoing war years – civil war would increase repression. Treating ongoing years as “missing” reduces the risk of endogeneity by removing those potentially endogenous country-years from the sample.

### ***Results***

This section presents the results from testing the aforementioned models. I analyze the results using predicted probabilities and marginal effects. I determine predicted probabilities by varying the key independent variables while holding all other independent variables at their means. Since the derived standard errors of the coefficients in the probit models do not directly correspond to probabilities of prediction, I generate 95% confidence intervals for my computed probabilities (Gujarati 2009 and Porter). I consider the results to be statistically significant when the lower confidence interval is not close to zero. The exact threshold varies with the model, as I explain in the subsequent paragraphs. The inclusion of a ratio term prevents me from using the Brambor, Clark and Golder (2006) technique for computing marginal effects. Instead, I have to rely on visual inspection of the slopes of the predicted probabilities curves. As a result of the high number of indicators I employ for repression and civil war onset, I cannot include all the graphs of outcomes in the body of this chapter. Instead, I only include a small number of graphs that are illustrative of trends. I offer the remainder in Appendix C - Outcome Graphs for Repression Models.

#### ***Results for H2a: Increasing repression increases the probability of civil war onset***

The table below depicts the results of testing this hypothesis using the indicators of police repression. As a point of comparison, the table also includes columns depicting the results of

testing measures of total acts of repression per country-year according to the ITT and IDEA databases. I predict that increasing values of all indicators of repression should increase the probability of civil war. The second row depicts the trends of the predicted probabilities, which strongly correspond to the hypothetical predictions. Nevertheless, as the final row indicates, these predicted probabilities come with low degrees of statistical significance. The following sections provide a more detailed discussion of these findings.

**Table 3-3 Outcomes for H2a**

	Indicators			
	ITT police repression	IDEA police repression	ITT total repression	IDEA total repression
Predicted effect on probability of civil war onset	Increase	Increase	Increase	Increase
CW datasets with concurring results	All	All	Nearly all <sup>69</sup>	All
CW datasets yielding statistically significant results	COW PRIO	PRIO	COW PRIO	COW PRIO

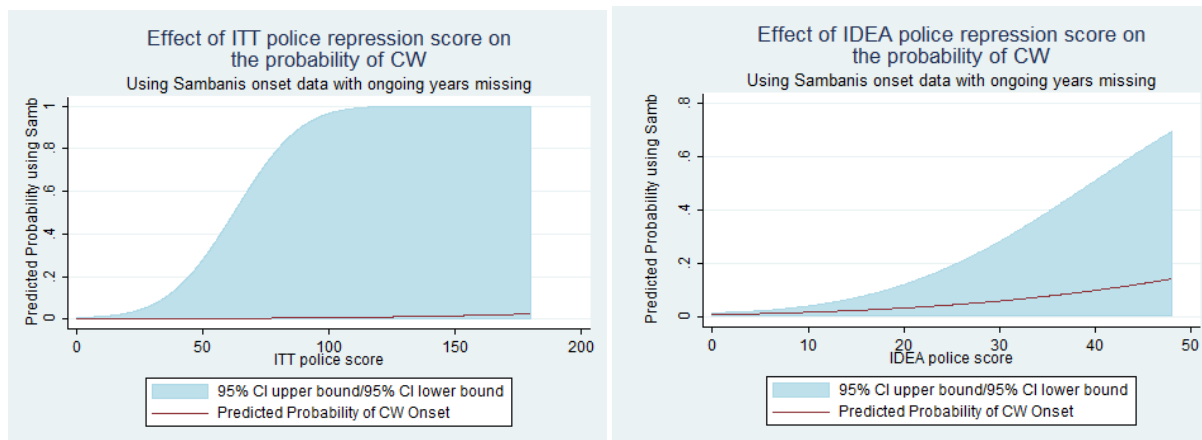
***Effect when using ITT and IDEA police scores***

The use of both the ITT and IDEA derived measures of police repression have a uniformly increasing effect on the probability of civil war onset, though in most cases the predicted probabilities exhibit low levels of statistical significance. The figures below are indicative of the general trend.

---

<sup>69</sup> One exception results from the use of the Fearon and Laitin database and ongoing years coded as zero.

**Figure 3-1 The Effect of Police Repression on the Probability of Civil War Onset using Sambanis onset data**



The two exceptions occur with the use of PRIO data for both indicators of repression and the use of COW data with the ITT measure. The finding with the COW data appears to result from some unusual combination of the independent and dependent variables since predicted probabilities approach “1,” so I treat it as an outlier. The finding with the PRIO data suggests that repression may be more strongly related to lower levels of internal violence the PRIO onset database captures.

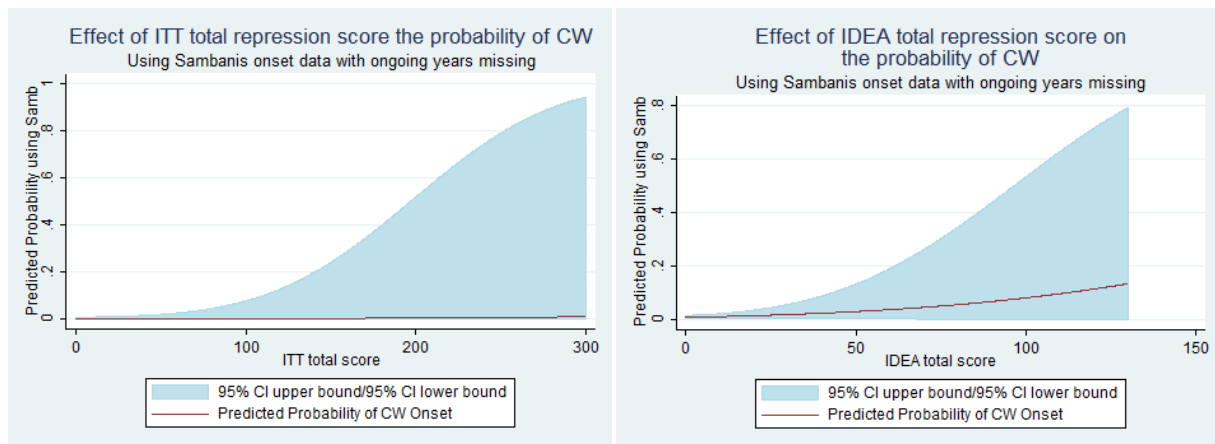
Because the uses of both ITT and IDEA measures of police corruption yield generally statistically insignificant results, I cannot conclude that increasing police repression increase the probability of civil war onset, though it may increase the possibility of lower levels of internal conflict

### ***Alternate Tests***

As a proof of principal of the previous scholarship, I also test whether repression more broadly increases the probability of civil war onset using a number of measures of repression. The first set of tests use the *Cingrinelli-Richards (CIRI) Humand Rights Dataset ver 12.10.11 Physical Integrity Index* (Cingrinelli and Richards 2011) and *Political Terror Scale (PTS)* (Wood and Gibney 2010). Tests using the CIRI and PTS datasets yield statistically significant, positive effects for all onset databases. See Appendix C - Outcome Graphs for Repression Models for a

full description of these tests as well as the CIRI and PTS datasets. These outcomes suggest that repression more broadly does contribute to the probability of civil war onset. The second proof of principal tests employ measures of total government repression, using the IDEA and ITT databases. Outcomes of these tests were very similar to those for the police repression measures. The use of all onset databases exhibited increasing trends, but with the exception of the use of the PRIO database, there were few regions of statistical significance. I attribute the lack of statistical significance chiefly to lack of data. Both the ITT and IDEA databases had relatively short time domains. The following graphs are indicative of outcomes using the other onset databases.

**Figure 3-2 Effect of increasing total repression scores on the probability of civil war onset using Sambanis**



***Results for H2b: An increasing proportion of government acts of repression conducted by the police increases the probability of civil war onset***

The table below is a summary of the outcomes of tests of the repression models. The columns reflect the specific indicator of police repression. Row 1 shows that I predict that increasing values of both ratio indicators should lead to higher probabilities of civil war onset, but as evident in row 2, I only find consistent support with the use of ITT data, and in fact use of the IDEA data most often yields outcomes that contradict my hypothesis. Row 3 describes that for a given value of repression ratio, higher values of total repression should increase the

probability of civil war onset since it would indicate higher aggregate levels of total repression, similar to those tested in the previous section. Row 4 indicates that all databases yield outcomes that support this prediction. Row 5 describes that the marginal effect of an increase in the repression ratio should be greater at lower values of repression by all other agents. In other words, increasing police repression should matter more in the presence of low levels of aggregate repression. The reason is that under such circumstances, the increase in police repression would represent a greater aberration from typical police and state agent behaviors. Row 6 portrays that the predicted effect is evident when using the ITT ratio with all onset databases, but for only one database when using the IDEA ratio. I provide more detailed discussion of the results depicted in the table in the following paragraphs.

**Table 3-4 Results of Regression Using Police Repression**

	Indicator	
	ITT ratio	IDEA ratio
Predicted effect on probability of civil war onset	Increase	Increase
CW datasets with concurring results	All	COW <sup>70</sup>
Predicted effect on probability of CW onset of increasing total repression by all other agents	Increase	Increase
CW datasets with concurring results	All	All
Predicted marginal effect on repression ratio of increasing total repression by all other agents	Decrease	Decrease
CW datasets with concurring results	COW Fearon and Laitin PRIO Toft	Fearon and Laitin

---

<sup>70</sup> In contrast to my prediction, the use of the Sambanis, PRIO, and Toft datasets result in a decreasing effect on the predicted probabilities of civil war onset.

### ***Results when using ITT and IDEA Ratios***

I attempt to parse out the effect of police repression more specifically by employing a variable that measures a ratio of police repression to repression by all other government actors using both ITT and IDEA data.<sup>71</sup> As seen in the two left-most graphs below, the use of ITT data yields a generally increasing effect with all onset databases, though regions with statistical significance vary. For the most part, areas of statistical significant only occur at higher values of repression by all other actors. This same consistency was not evident when using IDEA data. Some datasets exhibited the decreasing trends like with ITT data, but others exhibited a contradictory outcome of decreasing predicted probabilities of civil war onset as the repression ratio increases.<sup>72</sup> The two right-most graphs below depict the two contrasting outcomes. The IDEA data also differed in that areas of higher statistical significance occurred for lower ratio values.

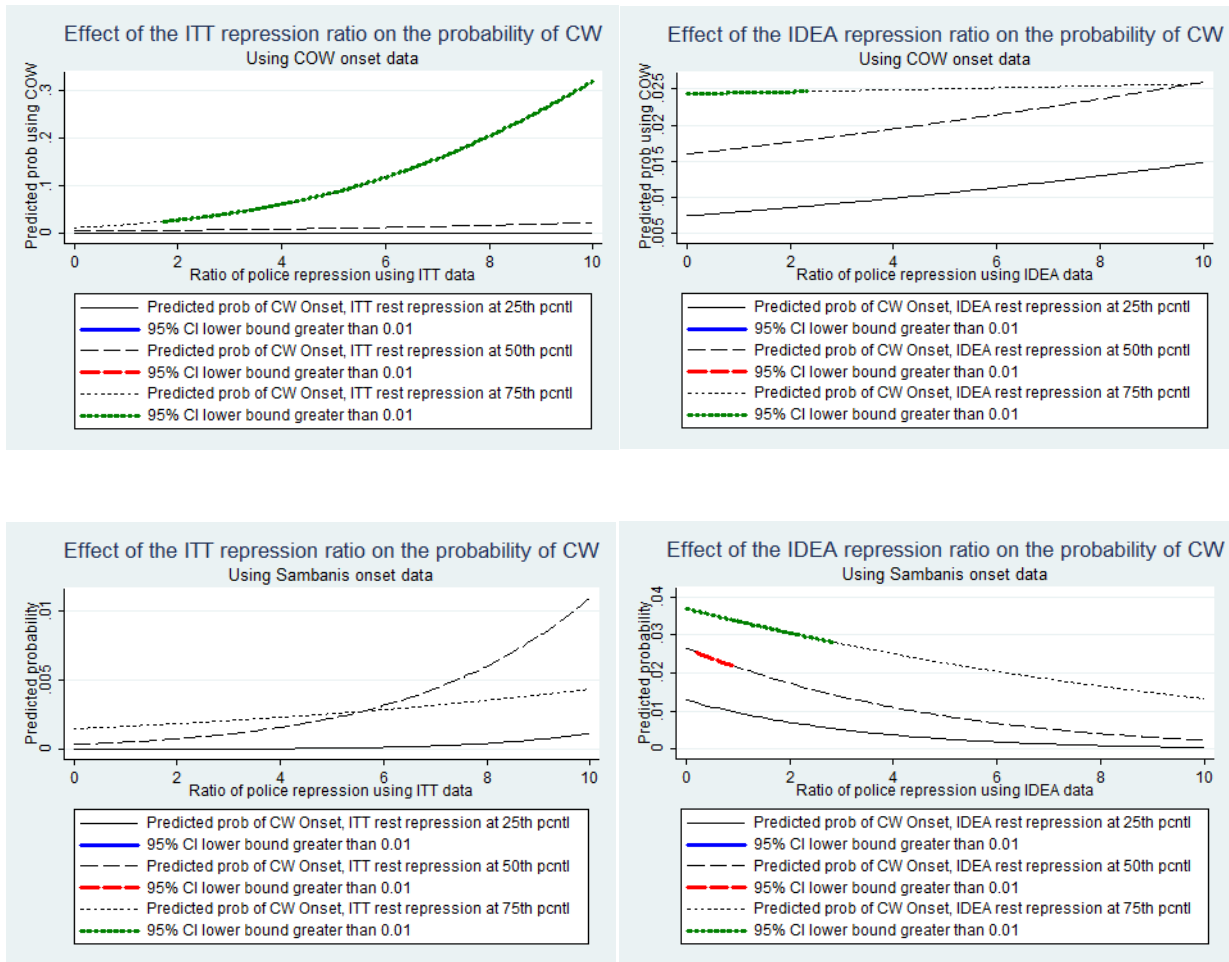
---

<sup>71</sup> Though I treat the ratio as the independent variable, I cannot compute predicted probabilities by simply varying the ratio because doing so would require me to simultaneously vary both its constituent elements simultaneously. Instead, I generate predicted probabilities by holding one of constituent terms constant while allowing the other to vary with the ratio term. I vary the police repression score from 0 to 1. I treat the inverse term of the total repression score (denominator of the ratio) as constant and run separate tests for its 25th, 50th, and 75th percentiles values. I compute the police repression scores (numerator in the ratio) by dividing the variant ratio score by the inverse of the fixed total repression score.

<sup>72</sup> The Sambanis, PRIO, and Toft datasets yielded decreasing effects for all values of repression by all other actors, and the Fearon and Laitin database yielded a mixture, with only high values of repression by all other actors resulting in an increasing effect.



**Figure 3-3 Effect of increasing the repression ratio on the probability of civil war onset**



***Effect of Total Repression by All Other Actors***

As predicted, for a given value of both repression ratios, higher levels of repression by all other government actors increases the probability of civil war onset. This finding is not surprising given the extant literature on the role of repression towards civil war onset. This relationship more strongly supports hypothesis 2a, which covers repression more broadly, but I discuss it here because it results from tests of the ratio models. I omit the graphs because the pattern of outcomes is nearly universal.

### ***Marginal Effect of Repression Ratio.***

I expect that marginal effects of an increasing ratio of police repression should be highest at low levels of repression by all other actors because, under that condition, the police behavior would represent a greater departure from typical government agents' behavior and therefore be more likely to generate grievances. Visual inspection of the predicted probability graphs above suggest that marginal effects vary depending on repression dataset. Use of ITT data yields a consistent trend of higher marginal effects as the measure of repression by all other actors increases, which contradicts my hypothesis.<sup>73</sup> This trend is evident in the two left-most graphs above, wherein predicted probabilities increase more rapidly at greater values of repression by all other actors. I can draw no conclusions from the use of IDEA data. No trend is evident when using the IDEA ratio, as seen in the right-most graphs in the figure above.

In light of the aforementioned outcomes, I find only weak support for hypothesis 2b. The use of the ITT data yielded a statistically significant, increasing effect on the probability of civil war onset with most onset databases, but use of IDEA repression did not. Moreover, use of the IDEA data always yielded a decreasing effect with some onset databases. Increasing repression by other actors generally increases the probability of civil war onset occurred as predicted, but is not novel. Additionally, changes in the marginal effects the repression ratios as repression by all other actors was either unclear, or contradictory.

---

<sup>73</sup> I make this determination by comparison of the slopes of the various predicted probability curves for different values of repression by all other actors. I do so because my choice to employ a ratio as my independent variable of interest precludes me from employing the Brambor, Clark, and Golder (2006) method for computing marginal effects. Because my method is much less mathematically precise, I only draw conclusions when the differences in marginal effects are explicit.

## Conclusion

This chapter offered two hypotheses. The first proposed that increasing levels of police repression increased the probability of civil war. The second hypothesis proposed that increasing levels of police repression in proportion to repression by all other government actors (repression ratio) should also increase the probability of civil war onset. I test each hypothesis on five different onset datasets, using a number of indicators of repression.

I find little support for the hypothesis relating police repression to civil war onset. Though the predicted probabilities increase as expected, only the use of the PRIO onset database yielded statistically significant results. This outcome suggests that police repression may be more important to lower orders of internal violence.<sup>74</sup>

I find mixed support for the hypothesis concerning police repression in proportion to repression by all other government actors. When using ITT data, an increasing police ratio increases the probability of civil war onset, with statistically significant outcomes occurring at higher values of the repression ratio. On the other hand, the marginal effects appear to be higher as repression by all other actors increases. This outcome does not contradict hypothesis 2b directly, but it does suggest that the capability to conduct repression and create grievances is not exclusive to the police. The use of IDEA data for the repression ratio generates conflicting findings, depending on the onset database. Some onset databases exhibit trends of increasing the probability of civil war onset, and some the opposite. The differing outcomes between using ITT and IDEA data may be due in part to the nature of the measures. The IDEA measure is more inclusive than the ITT measures, which only includes torture. On a scale of severity of personal integrity violations, torture is only exceeded by assassination or execution. Perhaps only egregious acts of repression by police represent a severe enough deviation from typical behavior to induce the collective action necessary for a state's inhabitants to violently challenge the state.

---

<sup>74</sup> The PRIO database employs 25 battle deaths as a threshold, whereas the other databases employ much higher thresholds, such as 1000.

## **Chapter 4 - Police Organization and Civil War**

In a previous chapter I addressed the role of police capacity on civil war onset. I did so through the theoretical lens of coercive capacity, which I operationalized primarily through measures of police density. In this chapter I expand beyond measures of coercive capacity as simply a function of size by also considering how the mode of police organization can affect the probability of civil war onset. In doing so, I tie together the ideas of all three preceding chapters. I draw upon the tenets of the principal-agent model I described in Chapter 1 for determining the demands that the central state authority places on the police, as well as the autonomy the police may enjoy in electing whether or how well to carry out these tasks. I combine these factors with the role of police repression I covered in Chapter 3 to explain how certain organizational types should be more likely to employ repression. Finally, I draw upon the ideas of police capacity from Chapter 2 and describe how certain types of organization should be more effective in deterring violent challenges to the state.

### **Police Organization in Theory**

In the following sections, I offer two competing hypotheses on the effect of police organization on the probability of civil war onset. I describe each causal mechanism separately, ending with a hypothesis. The first hypothesis relies upon the grievance school, which contends that some egregious state activity is necessary to induce a state's inhabitants to violently challenge it. I describe how police repression can serve as this egregious activity, and how more centralized police organizations could abet police repression. In the second hypothesis, I draw upon a greed based explanation for civil war onset, which holds that a state's inhabitants are inherently rebellious, and only the threat or practice of state coercion can prevent violent challenges to the state. I explain how police centralization should allow police to exercise their coercive capacity more efficiently. Before elaborating on each hypothesis, however, I draw from a seminal study for descriptions and definitions of police organizational types.

***Bayley’s Description of Police Organization***

Bayley (1985) has conducted one of the most comprehensive analyses of police organizational types. According to Bayley, modern police tend to exhibit an organization that accords with a four way typology related to the degree of centralization of command as well as the number of police commands, as depicted in Table 4-1 below. Centralization occurs when “operational control can be given routinely to subunits from a single center of control” (54). This is not to be confused with autonomy, which refers to “the capacity of the police to influence the contexts and conditions of their own work” (Marenin 1996: 315). Police may be highly centralized, but autonomous from the central state authority. Conversely, decentralized police do not necessarily enjoy more autonomy from political authority; the locus just shifts from the state to some lower level polity. In the language of the principal-agent model, the state as principal changes location and diffuses.

**Table 4-1 World Classification of Police Types**

		Centralization	
		Centralized	Decentralized
# of Commands	Single	Sri Lanka Singapore Poland Ireland Israel	N.A. <sup>75</sup>
	Multiple	Coordinated	France Finland Great Britain The Netherlands Canada India Germany Japan
		Uncoordinated	Italy Belgium Switzerland United States

\* Adapted from Bayley (1985)

<sup>75</sup> Bayley has deemed it logically impossible for a police force to exist that consists of a single, but decentralized command. By its very nature of being decentralized, such a police force would submit to multiple centers of authority, and therefore could not constitute a “single” command.

Elaboration on some of the countries depicted in the table can help explain the meanings of the classifications. In Sri Lanka, an example of a highly centralized police force with a single command, the Inspector General of Police has authority over all police manning the 2,600 police stations in the country. There are various intermediate police authorities in charge of stations and districts, but all have a direct line of authority to the Inspector General. At the other end of the extreme is the United States, wherein 99% of police officers operate under the authority of local governments (Das 2006).

Bayley also distinguishes whether countries possess single or multiple police forces (“commands” in Bayley’s language). Number of commands is distinct from centralization and simply refers to the number of police forces within a given state. Multiple centralized police forces can exist, and multiple forces may also be subdivided into whether they act in a coordinated or uncoordinated manner. Finland and Italy exemplify multiple, centralized police forces. There are centralized insofar as a state level minister is responsible for policing in both countries. They exhibit multiple commands because both countries maintain multiple police forces that are not subordinate to each other, as in Sri Lanka. They differ, however, in that all police in Finland are under the authority of the Minister of Interior, whereas one of the major police forces in Italy, the Carabinieri, report to the Ministry of Defense (Das 2006).

With a useful description of police organization types in hand, the next step is to explore how these types should affect the probability of civil war onset. In the next two sections, I offer two contrasting hypotheses on the relationships between centralization and civil war onset.

### ***Grievance and Police Organization***

A grievance/contingency based explanation for the effect of police organization on civil war would rest on the premise that some type of police organization would be likely to instigate inhabitants of a state to overcome their obstacles to collective action and respond with violence. The results I obtained Chapter 2 suggest repression can serve as the intermediate process linking police organization and civil war onset. Thus, the question of whether the type of police organization has an independent effect on civil wars boils down to whether, *ceteris paribus*, a

certain type of police organization would be more likely to repress or not. In this sub-section I describe how centralized police forces are more likely to engage in the level of repression necessary to induce the collective action necessary for civil war onset.

I do not argue that mode of police organization effects individual police officers' inclination to engage in repression. There is little theoretical reason for individual police officers in a decentralized force to be more restrained in the use of force than their counterparts in a centralized force. It is reasonable to expect that police in all types of organization should consider engaging in repression for the same reasons. Instead, I argue that repression is most likely to occur in states with centralized police forces because it creates conditions that allow the interests of the state and police in employing repression to be more likely to be aligned when rebels challenge the state.

A grievance based hypothesis relating police organization to civil war onset relies on the premise that, under certain circumstances, states will repress their inhabitants. This is not to say that all states will constantly repress their people. All the repression databases employed in previous chapters of this study illustrate that levels of repression vary both within and across states. Rather, in terms of the principal-agent model, a state as principal will attempt to direct its agents to employ repression when the use of repression serves the interest of the state in preserving its rule. Thus, I impose the restriction that the ensuing models and estimations only apply to circumstances in which the state has a strong interest in conducting repression.

The one circumstance that nearly always causes the state to engage in repression is when it faces a threat to its authority. A "Law of Coercive Responsiveness" appears to exist that stipulates that, when challenged, states generally respond with some sort of repressive actions (Davenport 2007). Two common and interrelated explanations for this behavior are regime characteristics and threats. Threat-based explanations tie increasing state repression to escalating internal threats against the regime. Regime based explanations explore which types of regimes are associated with varying levels of repression. For instance, democracies and autocracies are both less likely to employ repression than anocracies. Threats manifest themselves in several ways with differing outcomes depending upon regime type. That anocracies appear to carry out more acts of repression may not be completely attributable to regime type. Anocracies may employ repression most frequently because this type of regime tends to experience the greatest levels of threat (Regan and Henderson 2002). Nevertheless, variation on the use of repression

exists both between and within democracies and autocracies. Democracies employ repression the least but, this behavior only seems to apply to states with the highest levels of democracy (Davenport 2004; Davenport and Armstrong 2004). Among the threat and regime characteristics, however, threat appears to be the major determinant of whether states respond with repression (Regan and Henderson 2002). A high magnitude of violent dissent trumps regime type. Occurrences of violent dissent and civil war appear to be the most significant factors for whether a state will employ repression for all but those countries with the lowest restrictions on civil liberties and lowest propensities to employ violence against their citizens (Davenport 2004).

Type of threat may be an additional factor and is also related to regime type. Deviance of dissident activities from accepted cultural norms has the greatest effect on whether democracies and anocracies will employ repression, whereas the variety of threats the dissidents employ has the greatest effect on whether autocracies employ repression (Davenport 1995). Conflict frequency affects whether states employ repression regardless of regime type, but is of less importance than the aforementioned factors (Davenport 1995, King 1998).

The following table depicts my estimations of the probability of repression when taking into account the interests of the police and state.<sup>76</sup> I base my estimations on the principal-agent model, which suggests that police choose the mixture of coercion/cooperation that best balances the requirements of the state and society. The success of the police in fulfilling this function entails satisfying the demands of both the state and society without neglecting the police force's own interest.<sup>77</sup>

---

<sup>76</sup> My use of the term "state" refers only to the highest level of polity and is distinct from any sub-national polities. I have omitted consideration of society as principal under the assumption that with few exceptions, it is never in the interest of society for the police to repress.

<sup>77</sup> See Chapter 1 for a description of how this model applies to police.



**Table 4-2 Probability of Repression when taking into account State and Police Interests**

		State Interest in Repression	
		Yes	No
Police interest in Repression	Yes	I. High	IV. Uncertain
	No	II. Low	III. None

**Quadrant I** indicates that repression should be most likely when both the state and the police share interests in employing repression. I argue that this situation occurs most often in states with centralized police forces. My line of reasoning rests on the two premises that the state level of government bears ultimate responsibility for defending its sovereignty, and that the typical response of a state to violent challenges is to engage in repression (Rotberg 2004; Davenport 1995). Consequently, the central state authority should constitute the level of government that experiences the highest pressure to direct police to employ repression in response to those threats. A centralized police force enables this pressure because it places the onus for monitoring the police with the level of government that has the strongest incentive to view repression as a desirable response to violent challenges to its authority. I expect this arrangement to lead to greater overall levels of police repression for several reasons. First, there are fewer institutional hurdles preventing the shared interests of the police and state in employing repression from manifesting itself in actual repressive acts. By definition, centralized police forces have the state as the principal, so authority over the police is not diffuse.<sup>78</sup> Another reason is that a common characteristic of a centralized force is a strong chain of command that links the chief individual responsible for internal security (often the Minister of the Interior) all the way to the basic patrolman.<sup>79</sup> While this extended chain of command may increase opportunities for information asymmetries between individual police officer conduct and the

---

<sup>78</sup> Though sub-national polities may exist, their influence on the police is minimal.

<sup>79</sup> This observation is based on my readings of the descriptions of states' police force as part of my effort to determination modes of organization.

state's wishes, the benefits of centralized structures should offset the asymmetry, especially in comparison to less centralized police forces. Lastly, having a centralized police force also places the police under the same level of government that controls the military – a situation that I argue in the next chapter can contribute to greater police use of repression.

**Quadrant II** represents the situation wherein the state has an interest to engage in repression, but the police as the coercive agents do not. Reduced repression would result when the police are able to shirk the demands from the state to engage in repression.<sup>80</sup> I argue that such conditions are more likely to occur in states with decentralized police force because the diffusion of principals inherent in decentralized police structures allows the police to more easily shirk the state's calls to engage in repression. By definition, decentralized police forces have a sub-state polity as a principal, which allows the more numerous sub-state principals the ability to generate their own preferences, which may or may not accord with the state.

I rest my argument that increasing decentralization leads to a fewer incidences of police repression on the observation that civil wars often do not engulf the entire territory of a state (Cederman 2006), thereby leaving certain portion of the state unaffected by the threats and physical destruction of the war. I expect that police forces that operate in unaffected areas have less incentive to engage in repression because they face lesser threats. For instance, the police may view the state's directive to act more repressively as unduly risky. Unlike the state rulers, the police must operate in a relatively dispersed manner throughout the populace, and the police may fear that repression could provoke a violent backlash. Moreover, in a decentralized police force we would expect that the preferences of the police and their associated sub-state authorities should be more symmetrical. Both should be subject to similar dissident threat levels, or lack thereof, so the police would be less likely to shirk the principal's preferences. As a result of their shared interests, decentralized police forces that operate in unaffected areas and their associated sub-state political authorities should be more able to resist generalized calls from the central state government to engage in indiscriminate repression.

One should also observe a similar effect of decentralization when treating society as the principal. I expect that societies in states with decentralized police forces should experience less

---

<sup>80</sup> According to the tenets of the Principal-Agent model, shirking occurs when the state fails to adequately incentivize the police to engage in repression or cannot monitor police behavior.

of a principal-agent problem in restraining their police from engaging in repression than those societies with centralized police forces. This is not to say that society cannot serve as a principal for any police organizational form. Police are still agents of the state, so society should be able to influence the actions of the police through the intermediary of the state regardless of police type, as long as the societies exist in states with an accountable regime types. The difference for decentralized police forces is that they by definition consist of many police forces that answer to many societies within a given state. This arrangement should therefore entail less of a principal-agent problem with society. First, the asymmetry of information should be lower. While the gap in technical knowledge between the police and society would remain, societies with decentralized police forces should be more aware of police activities because the individual decentralized police forces should be smaller. I would also expect that the police and society would be more likely to share similar attitudes about the acceptable use of repression. The asymmetry of preferences between the society and decentralized police forces should be lower because both would face similar threats, which should have the effect of reducing the impact of acts of police repression. Societies facing significant threats appear to more tolerant of repression (Davenport 2005), and thus less likely to develop grievances from police behavior. Additionally, members of decentralized police forces should be more likely to originate from the local community, and would therefore be more likely to maintain familial or cultural/ethnic ties to it. This local affiliation could manifest itself in a greater shared understanding of what constitutes acceptable repression.<sup>81</sup>

**Quadrant IV** represents an interesting condition wherein the police have an interest in repressing, but the state does not. It is my belief that the conditions described in Quadrant IV have no clear relationship with police organizational type. The principal-agent model would suggest that the combination of interests portrayed in quadrant IV could occur because either the state has no interest in restraining the police from engaging in repression, or because the state lacks the monitoring capacity to restrain the police. From a theoretical perspective, the mode of police organization should not matter if the state has no interest in restraining the police. More

---

<sup>81</sup> The contrasting example would be a gendarme force (which is normally centralized) that may operate well outside its home base with few social or physical ties to the community (Lutterbeck 2004).

important would be regime type, and Bayley (1985) has demonstrated that centralized police forces are not exclusive to regime types that fail to honor human rights. On the other hand, if the state does have an interest in restraining police use of repression, police can only do so when the state is unable to effectively monitor police activities. Again, police organizational type should have little theoretical impact on states' monitoring capabilities. The inability of a state to monitor its agents is a characteristic of a weak or failing state (Rose-Ackerman 2004). State failure is a powerful explanation for civil war and would trump any consideration of police mode of organization.<sup>82</sup>

**Quadrant III.** The circumstances of quadrant III should not contribute to civil war onset regardless of the mode of police organization. When neither the police nor the state has an interest in engaging in repression, I do not expect repression to constitute a plausible causal mechanism for civil war onset.

The consolidation of police in Uganda in the 1960s offers an example of police centralization abetting state repression. At the time of independence in 1962, Uganda did not have a completely centralized police force. The Ugandan independence constitution allowed for the continued existence of a number of semi-autonomous kingdoms, each possessing their own police forces (Das 2006). The responsibility for the remainder of the country fell to the Ugandan National Police—a centralized force (Das 2006). Notwithstanding the constitutional provisions,

---

<sup>82</sup> At first glance, it would appear that this combination would be more common in states with decentralized police. Shirking (in this case being police use of repression) would seem to increase as the police forces become more decentralized due to increased information asymmetry and competing principals. Moreover, the sub-state polity may view threats as more severe than the central state authority. Consequently, interests between decentralized police and its state as principal would diverge, thereby exacerbating the agency problem and complicating the principal's efforts to direct the behavior of its agent. Thus, the circumstances of quadrant IV should more prevalent in decentralized police forces. While this line of reasoning seems plausible, I contend that any increased repression would be localized, and the overall effect of the decentralized police force should actually reduce the aggregate level of repression. The reason is that the resulting repression should be more specific to the area for which the decentralized police force is responsible and therefore less likely to surpass the threshold of inducing the level of collective action necessary for the onset of a civil war.

the status of the independent kingdoms was an area of continuous dispute in the years following independence because the central state authorities thought it encouraged tribal autonomy.

A subsequent president sought to reign in the autonomous regions, in part by eliminating their police forces. Following his election in 1966, Prime Minister Obote suspended the original constitution and replaced it with one that granted him greatly increased powers and revoked the semi-autonomous status of the kingdoms (Hills 2000; Toft 2010). As part of the move away from the federal system of rule, the police that served the independent kingdoms were dissolved or absorbed into the Ugandan National Police (Das 2006). Simultaneous with the structural centralization of the police, Obote increasingly employed the national police to eliminate political dissent – a move that offers strong support to the premise that centralization enables the interests of the police and state to align more readily. While the previous organizational model provided Obote with a significant number of centralized police under his direct authority, the consolidation of the police from the semi-autonomous kingdoms seems very likely to have streamlined the process for Obote to stifle dissent (Das 2006).

In light of the aforementioned discussion on the relationship between police organization and civil war onset, I offer the following hypothesis:

**H3a:** Increasing centralization of police organizations increases the aggregate level of repression the state experiences, which increases the probability of civil war onset

Having addressed the ways in which police organization should affect the probability of civil war onset through the intermediate process of repression, the next step is to explore the alternative hypothesis that centralization reduces the probability of civil war onset by increasing police effectiveness.

### ***Greed and Police Organization***

The effect of police organization on civil war, using greed/opportunity based explanations, hinges on the basic question of whether, *ceteris paribus*, one type of police organization is more effective in deterring aspiring rebels than others. Numerous studies, including Chapter 2 of this paper, have put forward weak government coercive capacity as an

explanation for both civil war onset (Tilly 2003; Collier and Hoeffler 2004, Fearon and Laitin 2003) and reoccurrence (Toft 2010). Accepting that the police are a coercive instrument of the state with the ability to suppress incipient civil wars, which form of police organization possesses greater coercive capacity?

I offer that a centralized police force is more effective for the following reasons. First, a centralized police force, which by definition is controlled by the central state authority, is able to better draw on the greater resource base of the state, compared to police that are agents of some sub-state polity. Government expenditures on police forces is one of the best indicator of police capacity (Bayley 1985: 75), and state level governments have greater capacity to extract revenue than do sub-state polities. Second, centralized police forces should be better able to create economies of scale in their training and other support facilities. Thus, for any given resourcing level, a centralized police force should be better trained and equipped. Third, centralized police forces are better able to draw upon the service of state intelligence agencies than decentralized forces. These services are important because the ability of government forces to discriminate among combatants and non-combatants is a critical factor in both the onset (Goodwin 2003) and duration of civil war (Kalyvas 2006). A counter-argument is that decentralized police forces should have a better understanding of the local environment since members of decentralized police forces are more likely to have originated from the same area they police. Moreover, police in centralized forces are often posted simply based on manning requirements with no consideration of the individual policeman's origin. While this counterargument is intuitively plausible, the information gathering advantage of decentralized police forces should be offset by the consideration that civil wars often originate in remote and inaccessible areas (Fearon and Laitin 2004), which presumably would be lightly policed, regardless of the police force's organization.

A final advantage of centralized police forces relates to the superior capability they provide the state to shift police resources to problem areas. Centralized police forces generally answer to either a Ministry of Interior or to the chief executive in the case of small forces in lightly populated states.<sup>83</sup> As a result, the ruling authority may more easily shift centralized police forces to areas requiring greater policing, under the premise that there are simply fewer

---

<sup>83</sup> This statement is based on my own observations while creating my police organization dataset.

bureaucratic hurdles to redeploying a state controlled police force than one controlled by a sub-state polity. For example, the President of the United States could not easily shift New York City Police officers to deal with unrest in Chicago, but the President of France could reposition forces from Paris to Marseilles if necessary due to the centralized organization of French police.

The greater deployability a centralized police force offers the state is especially pronounced for states with Gendarme forces. Based on their traditional mission, these forces are less territorially aligned than patrolmen/constable police (Bayley 1985: 41). Consequently rulers of states with centralized gendarme police forces should possess the greatest capability to redeploy police forces, and therefore, the greatest capacity to suppress and deter incipient rebel movements.

Examples of states centralizing their police forces in an effort to increase their effectiveness abound, especially since the latter half of the 20<sup>th</sup> century.<sup>84</sup> The trend is most common in Europe. Iceland (1972), the Netherlands (1993), and Sweden (1965) all replaced their municipal police forces with state police in a bid for greater efficiency and uniformity. Nevertheless, it is not exclusive to Europe. The Philippines consolidated their police into a centralized state force in 1975 to establish uniformity, enhance coordination across its disparate islands, and minimize police involvement with local politicians. Nicaragua also underwent centralization. When the Sandinistas overthrew the Somoza regime in 1979, they abolished the National Guard units that were responsible for policing. In the absence of a police force, levels of crime increased greatly across Nicaragua, leading the Sandanista government to create a national police force to establish and maintain order.

Nevertheless, the capacity of a state's police force may reach a point where organization no longer matters. In this case, either superior numbers or some other aspect of police capacity may take precedence over whether the police are organized centrally or not. By logical extension, we should observe a diminishing effect of centralization on civil war onset and reoccurrence as capacity increases. In light of these considerations, I offer the following hypotheses:

**H3b:** Increasing centralization of police decreases the probability of civil war onset, though the marginal effect decreases as police capacity increases.

---

<sup>84</sup> These summarizes are a compilation of Das (2006) and Kurian (1989).

## **Research Design**

In the following section, I present my research design for testing my organization based hypotheses. I first offer a description of the dependent and independent variables common to all models. I then address the variables and models specific to each hypothesis in a sub-section dedicated to each.

### ***Dependent Variable***

I continue to employ the same five datasets that I have in previous chapters.<sup>85</sup> See Appendix A - Description of Dependent Variables.

### ***Primary Independent Variable: Centralization of Police***

I draw from Bayley (1985) and employ a typology of police organization that considers police forces to be “centralized” or “decentralized.”<sup>86</sup> Because no nation possesses a purely decentralized police force, I distinguish between centralized and decentralized forces according to the level of government that wields authority over the majority of the police responsible maintenance of order. Using this criterion allows for states with primarily decentralized law enforcement agencies to also possess centralized policing agencies with special functions.<sup>87</sup> For example, the United States, which Bayley denotes as the quintessential decentralized police force, also possesses centralized federal law enforcement agencies such as the Federal Bureau of Investigation and the Marshall Service. Moreover, many U.S. states possess their own police or highway patrols. My choice of the law and order coding criterion allows me to confidently consider the United States to have decentralized police forces because the FBI and U.S. Marshall Service have specialized functions that do not consist primarily of the maintenance of order.

---

<sup>85</sup> I differ only in that, for reasons related to reducing endogeneity in one set of models, I only employ the datasets that treat ongoing war years as “missing.” I address this decision more fully in a subsequent section.

<sup>86</sup> See Table 4-3 for police organization types. I had originally intended to sub-divide decentralized police forces into moderately centralized and decentralized, but there was not enough variation in civil war onset for states with decentralized police forces, so I kept Bayley’s two categories.

<sup>87</sup> See Chapter 1 - What are Police and What do They Do? for a discussion of law enforcement functions.



In keeping with this typology, I deem a state to possess a highly centralized police force if the majority of its police principally responsible for order maintenance, who Bayley and Perito (2012) term as “core police,” answer to the highest central state authority. I deem a state to possess a decentralized police force when the police principally responsible for order maintenance answers predominately to a sub-national polity (such as states, provinces, municipalities etc.) Finally, I add a category for instances wherein no organized police force exists within a state. Examples of states in this category would include states that rely on traditional, non-governmental means for policing such as tribal authorities, as well as states that have experienced failure. The table below depicts these categories.

**Table 4-3 Types of Police Organization**

Degree of Centralization
Highly Centralized
Decentralized
None

My primary sources for assigning police to organizational categories are the *World Police Encyclopedia* (Das 2006), the *World Factbook of Criminal Justice Systems* (Newman, Bouloukos, and Cohen 1993), and *The World's Police* (Cramer 1964). These volumes provide narrative descriptions of police organizations for 193, 45, and 113 states, respectively. The most recent data is generally available from the Das volume, which covers the time period up through the 1990s. I assign a police force to one of the three categories when one or more of the police reference volumes provide an explicit description of the level of government that oversees the police, as well as a clear denotation of the date for which the description is pertinent. I consider data that does not meet these criteria to be “missing.” Once I assign a state’s police force to a category, I carry it forward in time unless I determine that a clear change in the level of government with accountability over the police occurs. With few exceptions, determination of the predominant organizational model of core police in the aforementioned references is uncomplicated. For one, the majority of states have centralized police in the time period since World War II. Additionally, those states that do possess a predominately decentralized police force are conspicuous in the references’ descriptions of their organizational form. For example, Germany (and West Germany before unification), possesses a decentralized police force because

the majority of its core police reside at the sub-national level of the German state. This is not to say that national law enforcement agencies do not exist in Germany, just that the national agencies do not constitute the core police. In the instances wherein a clear description of the predominant organizational mode of core police does not exist, it becomes missing data.

Because my coding procedures result in ordinal measures, I rely upon a common methodology and model them as additive dummy variables (Winship and Mare 1984). I treat “decentralized” as the baseline. While I create a category of “none” for police organization, I drop all observations in this category because the principal-agent relationship that underpins my hypotheses is not valid when there is no government principal at all.<sup>88</sup> This choice results in some loss of data, but observations of “none” are very rare, so the effect of the loss is negligible.<sup>89</sup>

In the next two sub-sections, I discuss variables and modeling considerations that are specific to the individual hypothesis.

### ***Research Design for Grievance based Hypothesis***

The sample domain for testing the grievance based, police organization hypotheses entails considerations that are distinct from the other hypotheses in this study. Because the models and assumptions underpinning the grievance based hypotheses operate under the limitation that the actors will operate in the predicted manner only in the presence of threats, the optimal sample would only include those observations wherein the state faces what the ruler perceives to be a plausible threat. Rather than attempt to include some form of statistical or sample technique to control for the presence of threat<sup>90</sup>, I take the opposite tack and include the

---

<sup>88</sup> Additionally, observations of states with no police force are highly conflated with state failure, which is in turn highly associated with civil war and repression. By including observations of states with no police force, I run the risk of conceptual overlap with state failure, which could subsume any other explanation.

<sup>89</sup> Only 161 of 15,979 are “none.”

<sup>90</sup> A statistical control measure could have been some measure of internal threat. A problem with this type of control is that it is not theoretically related to centralization, so spuriousness should not be present because there is no reason to think that centralization occurs as a result of threat (Bayley 1985). In the absence of such spuriousness, inclusion of a threat control variable would only increase the goodness of fit of the overall model, while not

same full sample as I do in the other tests throughout this study. This decision is conservative insofar as employing a full sample should diminish any real causal effect as long as centralization does not increase the probability of civil war through some other causal mechanism. Any substantively and statistically significant results that do emerge will have done so in the presence of increased random variation.

### ***Intervening Variables***

My first hypothesis (grievance based) relating mode of police organization to civil war onset posits repression as an intervening causal process. To operationalize this process, I rely upon repression indicators I develop in Chapter 2. I employ the ITT and IDEA indicators of police repression because they capture the concept of interest, however, I omit the ITT ratio and IDEA ratio indicators because the inclusion of the ratio terms is mathematically problematic.<sup>91</sup> I include the CIRI and PTS indicators as points of comparison because they generated the most substantively and statistically significant results in tests of the effects of repression on the probability of civil war onset.

### ***Controls.***

Because my grievance based models involve an intervening process, I employ two sets of control variables – one for repression as the dependent variable and one for civil war as the dependent variable.

---

affecting the relationship among centralization and civil war onset (Aneshensel 2002; Ray 2003). A sample control technique would entail only testing the sub-set of observations wherein threat the ruler considers to be plausible is present. From a methodological perspective, this technique is highly desirable (Achen 2002), but requires identification of the proper sub-sample, a step I consider to be more problematic than simply including the entire sample as I have chosen to do.

<sup>91</sup> The problem stems from the fact that the ratio terms are actually interactive terms. The intervening role for which I have employed repression would cause me to treat the ratio variables as a dependent variable, meaning it would be an interactive term, which I could not regress properly since I would have to also include its constituent terms on the left side as well.

### ***Controls for the Effect of Police Organization on Repression (Repression as DV)***

Candidates for control variables must be theoretically related to police organization and repression. One of the few consistent predictors of police organization is regime type. Authoritarian regimes tend to possess centralized police organizations, but not all states with centralized regime types are authoritarian. On the other hand, decentralized police forces are more likely to exist in states with non-authoritarian regimes, though not all non-authoritarian states have decentralized police forces. Where the variation among decentralized police forces does exist is the level of coordination among that exists between a state's separate forces. For example, both the United States and Canada possess decentralized police forces, but the level of coordination among their respective forces differs greatly. Canadian forces exercise a higher level of coordination between Canadian municipal police and the Royal Canadian Mounted Police (RCMP) – a national level police force. In contrast, the United States does not even possess a true state level law enforcement agency, and localized police forces tend to be overlapping and uncoordinated. An example is the absence of formal command relationship between municipal police forces and county sheriffs' departments (Bayley 1985). I model regime type by the Polity IV score.

### ***Controls for Effect of Repression on Civil War***

Modeling limitations require me to employ centralization as a proxy for increased state and police willingness to employ repression, which are the independent variables in step 2 of the Grievance based models. Candidates for control variables should therefore be theoretically and empirically related to both increased willingness to employ repression and civil war onset. Since this consideration is similar to those for selection of control variables in Chapter 2, I include the same candidates for controls as I do in that chapter.

### ***Models***<sup>92</sup>

Since my hypothesis contains an intervening process, I must portray it with two equations. The first equation depicts the effect of increasing centralization on repression (Step

---

<sup>92</sup> See Appendix D - Description of variables contained in organization models.

1), and the second equation depicts the effect of increasing repression on the probability of civil war onset (Step 2). Below is a model of Step 1.

$$\text{Model 3a.1} \quad \text{Repression}_{it} = \beta_0 + \beta_1 (\text{centralization})_{it} + \beta_2 (\text{regime type})_{it}$$

I continue to employ a GEE estimation with a ordinary least squares (OLS) link and robust standard errors for the reason I explained earlier.<sup>93</sup> I do not test step 2 (the effect of repression on civil war onset) since doing so would simply repeat the work of Chapter 3 of this study.

The second way I model the hypothesis is to employ a technique that allows me to test both steps simultaneously. I select this method rather than the mathematically simpler method of comparing the results of sequential tests of steps 1 and 2.<sup>94</sup> While the sequential method is appealing in its simplicity, it is only appropriate if the error terms of the two regression equations are uncorrelated (Paxton, Hipp, and Pyatt 2011). Thus, there could be no omitted variables that affect both repression and civil war onset. Given the number of causal factors that repression and civil war share, satisfying this requirement is unlikely.<sup>95</sup>

Because I expect the my two equations will have correlated error terms, I can treat them as “Seemingly Unrelated equations”(Zellner 1962) as long as there are no simultaneity or feedback mechanisms. In other words, the onset of a civil war cannot increase repression, which in turn cannot affect police organization. I am fairly confident that the latter relationship is not present since police organization is generally time invariant (Bayley 1985), especially in the short 50 year time domain I utilize. In contrast, there is some evidence for the former. Levels of threat are the strongest determinant of state use of repression, with civil wars being the most significant factor (Davenport 1995; Regan and Henderson 2002). I attempt to mitigate any effect of this endogeneity by portraying ongoing war years as “missing.”<sup>96</sup>

---

<sup>93</sup> See section Chapter 2 - Models for a justification of the GEE estimation technique.

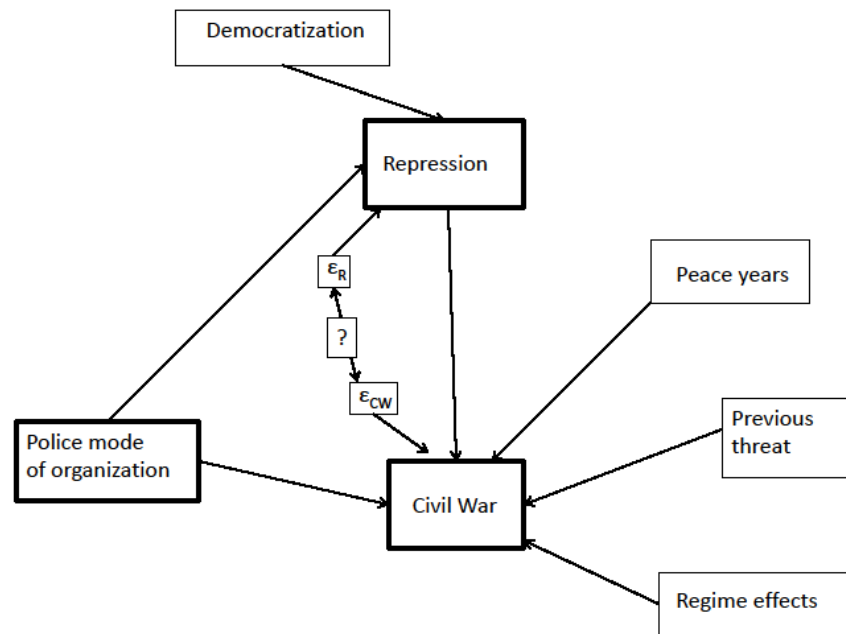
<sup>94</sup> The second test is that basis of chapter 2.

<sup>95</sup> Examples include level of democracy, state strength, and development.

<sup>96</sup> Under a time series-cross sectional design, increased state use of repression resulting from the onset of a civil war should manifest itself during the ongoing war years. By treating ongoing war years as “missing,” I eliminate the corresponding increased repression scores from the sample.<sup>96</sup> This technique does not entirely eliminate the endogenous effect in the years following termination, but my  $t$  control variable accounts for this by capturing the

Because I have modeled civil war onset as a bivariate dependent variable, common tools for conducting seemingly unrelated regressions (SUR) are not appropriate.<sup>97</sup> As a result, I employ the “conditional mixed process (cmp)” technique (Roodman 2009), which does allow for a probit function as long the equations otherwise meet the “seemingly unrelated” criteria.<sup>98</sup>

**Figure 4-1 Three Step Model of Organization, Repression, and Civil War**



Though I assert that the causal pathway is centralization → repression → civil war, ideosyncracies with the cmp command prevent me from directly computing the predicted

---

decaying effect of a previous war. See Chapter 2 - Models for a discussion of the effects of the two methods for modeling ongoing war years.

<sup>97</sup> The STATA “surreg” command only works for recursive equations wherein all dependent variables are continuous.

<sup>98</sup> A drawback of the cmp technique is that it does not offer many of the advantages of the GEE command I use elsewhere. However, I deem the benefits that the cmp offers in capturing the joint estimation of both steps to be greater than the loss efficiency from not using GEE.

probabilities of civil war onset as a function of changing the level of centralization.<sup>99</sup> I overcome this problem by making police organization an independent variable in both equation 1 and 2, as seen in the preceding figure and the model below. Doing so allows me to observe the change in predicted probabilities of civil war onset from increasing centralization while still capturing the joint effects of centralization on both dependent variables.

**Model 3a2.** 
$$\text{Repression}_{it} = \beta_0 + \beta_1 (\text{centralization})_{it} + \beta_2 (\text{regime type})_{it}$$

$$\text{Onset}_{it} = \beta_0 + \beta_1 (\text{centralization})_{it} + \beta_2 \text{peace\_years}_{it} + \beta_3 (\text{lag of threat})_{it} + \beta_4 (\text{square of Polity IV})_{it} + \beta_4 (\text{Polity IV})_{it}$$

### *Research Design for Greed based Hypotheses*

#### *Independent Variables*

I employ the same police organization variables for greed based models that I did for grievance based models, however, I use quinquennial values for these and all other variables in the greed based models because I include police capacity measures in the models.<sup>100</sup> I compute the quinquennial organization score as the organization type that is predominant during the five year period.<sup>101</sup>

#### *Interactive Variables for Greed based Hypothesis*

My greed based hypothesis relating police organization to civil war onset proposes that centralized police forces are more effective in deterring rebel movements, but this effect should diminish as overall police capacity increases. I depict this diminishing effect by interacting

---

<sup>99</sup> The problem stems from using a dummy variable for centralization. The `cmp` command will not allow me to compute predicted probabilities from varying values of the centralization variable unless I include it in the “Step 2” equation.

<sup>100</sup> See Chapter 2 - Research Design for an explanation of how I compute police capacity as quinquennial values.

<sup>101</sup> Though a tie in type of organization is theoretically possible, there are no instances in any quinquennial wherein an organizational type does not appear at least three times.

police organization with measures of police capacity. I rely upon the same measures of actual police capacity I employed in Chapter 3 – namely, police per capita and police per area.

### ***Control Variables***

The greed hypotheses involve consideration of how police centralization affects police capacity to deter challenges to the state. This relationship is very similar to what I propose in chapter 2, so I employ the same variables for models of greed hypotheses as I do in that chapter.

The drawback of using quinquennial values is that, by definition it reduces the overall sample size by 80%. With regard to this study, my choice to use quinquennial data has the effect of reducing the onset sample size by at least 60%, but I consider the value of garnering more matches between onsets and organizational data to offsets the costs of the smaller sample size.

### ***Models***<sup>102</sup>

Because I do not posit an intervening process for repression in these hypotheses, I can model the hypotheses as a CNTS probit. All variables in these two models are measures in quinquennials (t=5).

**Model 3b.1** 
$$\text{Onset}_{it} = \beta_0 + \beta_1 (\text{centralization}_{it})(\text{police per capita}_{it}) + \beta_2 (\text{centralization})_{it} + \beta_3(\text{police per capita})_{it} + \beta_5 (\text{extractive capacity})_{it} + \beta_6 (\text{bureaucratic quality})_{it} + \beta_7 (\text{military per capita})_{it}$$

**Model 3b.1** 
$$\text{Onset}_{it} = \beta_0 + \beta_1 (\text{centralization}_{it})(\text{police per area}_{it}) + \beta_2 (\text{centralization})_{it} + \beta_3(\text{police per area})_{it} + \beta_5 (\text{extractive capacity})_{it} + \beta_6 (\text{bureaucratic quality})_{it} + \beta_7 (\text{military per area})_{it}$$

---

<sup>102</sup> See Appendix D - Description of variables contained in organization models.



## Results

In the following section, I provide descriptions of the results I obtain from the aforementioned models. I subdivide the results according to whether they correspond to the greed or the grievance hypotheses.

### *Results for Grievance Hypotheses (H3a Models)*

I divide the explanations into steps. *Step 1* is the effect of police organization on repression. *Step 2* captures the effects of repression on civil war onset. The *simultaneous model* captures both steps.

#### *Results from Tests of Model 3a.1 (Step 1)*

Table 4-4 depicts the outcomes of a GEE regression on the various repression indicators, both with and without observations from United States for reasons I explain subsequently. The baseline mode of organization is “decentralized.” The results of using the CIRI and PTS data are not statistically significant, though the sign of the coefficients of the centralization dummy variable are consistent with my hypothesis that increasing centralization leads to higher levels of repression, as indicated by the PTS scores, and greater respect for physical integrity, as indicated by the CIRI score.

The use of the police specific repression indicators exhibits a contradictory effect wherein increasing centralization leads to lower levels of repression, though outcomes are only statistically significant with the full country sample of IDEA data, as indicated in column 6 of the table below. I suspect that this contrasting outcome is due to systemic bias in the way IDEA measures repression since the IDEA relies upon media reports and is sensitive to bias related to both media access and the small number of countries with decentralized police forces.<sup>103</sup> The ITT score does not rely upon media reports in the same way, but the use of ITT data did not generate any statistically significant results. I include it solely for sake of comparison.

---

<sup>103</sup> See Appendix D - Tests of Bias Effect from ITT and IDEA for a results of these tests.

**Table 4-4 Outcomes of OLS Regression of Police Organization on Repression (model 3a.1)**

Regression on repression indicators using Police modes of Organization						
VARIABLES	(1) CIRI	(2) PTS	(3) w/o USA ITT police repression	(4) with USA ITT police repression	(5) w/o USA IDEA police repression	(6) with USA IDEA police repression
Centralized	-0.0483 (0.585)	0.00224 (0.181)	-1.980 (2.390)	-2.978 (2.545)	-1.275 (0.870)	-1.620* (0.938)
Polity IV score	0.0627*** (0.0135)	-0.0266*** (0.00709)	0.104 (0.139)	0.117 (0.140)	0.0119 (0.0275)	0.0150 (0.0279)
Constant	4.764*** (0.519)	2.467*** (0.168)	7.046*** (2.011)	8.007*** (2.177)	3.103*** (0.781)	3.452*** (0.848)
Observations	2,234	2,838	614	619	1,296	1,306
Number of ccode	138	143	126	127	138	139

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

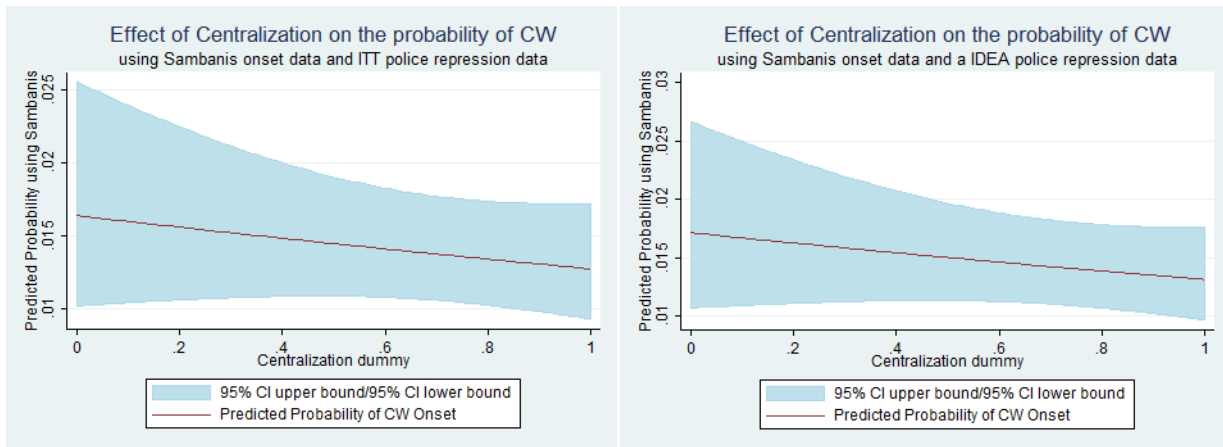
In light of the likely bias effect involving the United States in the IDEA database, I compute outcomes with and without the observations in the United States. The different outcomes are depicted for IDEA data in columns 5 and 6. Even after dropping the United States, the contradictory effects remain, but they are attenuated. This suggests that the bias is still present, though not in such an egregious way as it was for the sample that included the United States. In light of the bias associated with the United States, I drop it from the sample for the tests of the simultaneous models.

***Results from Tests of Model 3a.2. Simultaneous model (steps 1 and 2)***

Tests of the simultaneous models provide very strong statistically and substantive support for a relationship between centralization and civil war onset, but in the opposite direction of my prediction that centralization should increase the probability of civil war through the intervening process of repression. Holding control variables at their means and ranging the centralization score from zero to one, I find statistically significant results from all onset databases, regardless

of the source of the repression data.<sup>104</sup> The graphs below depict the effects of increasing centralization on the probability of civil war onset for police repression derived from both ITT and IDEA data, using the Sambanis onset dataset, and are representative of outcomes derived from the use of the other onset databases.

**Figure 4-2 Effect of Increasing Centralization on the Probability of Civil War Onset, with Repression as an Intermediate Process**



In light of the outcomes of tests of both the Step 1 model and the simultaneous models, I must reject my hypothesis that centralization increases the probability of civil war onset, through the intermediate process of repression. Moreover, the tests produced outcomes completely opposed to what I predicted. One explanation for the contradictory findings may lie in the sampling bias associated with my measures of police repression even after dropping the United States, as I discussed in the previous section. It is very possible that states with centralized police forces that experience civil war onsets are inaccessible to media or other human rights monitors.

<sup>104</sup> See Appendix D - Outcomes for Grievance Hypothesis (simultaneous models).

### ***Results for Greed Hypothesis (Model 3b)***

The hypothesis associated with these models predicted that increasing centralization of police decreases the probability of civil war onset, though the marginal effect decreases as police capacity increases. This hypothesis can restated in terms of marginal effects in two different ways:

The discrete change of centralization on the probability of civil war onset should be negative for all values of police capacity, but should be most negative at low values of police capacity, and approach zero at high values of police capacity

The marginal effect of police capacity should be negative for all values of police centralization, but should be most negative for centralized police forces.

The following table depicts the predictions and outcomes. The term “diminish” in this table means that values will decrease in absolute values, i.e. become closer to zero, and “amplify” means to increases in absolute value, i.e. become further from zero.

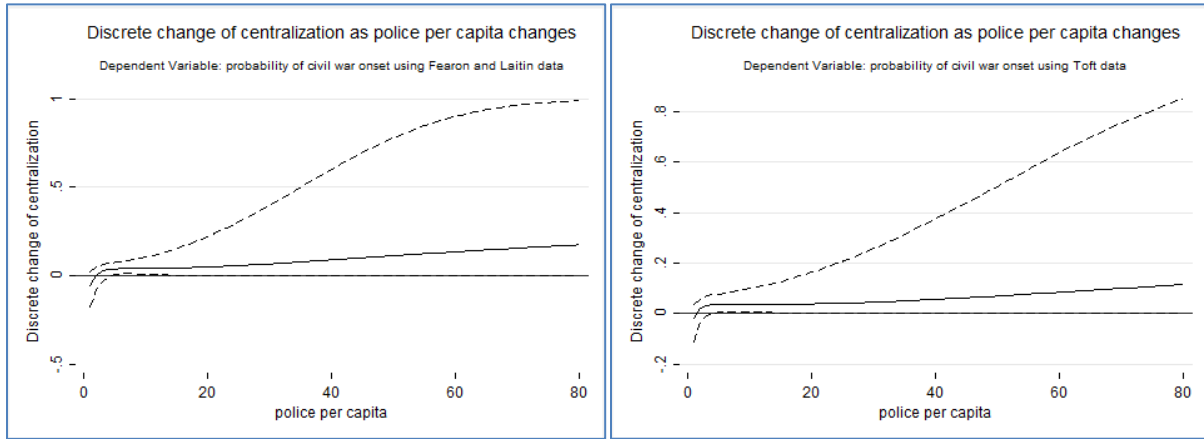
**Table 4-5 Outcomes of tests of hypothesis 3b**

	Indicators of police capacity	
	Police per capita	Police per area
Predicted discrete change of centralization on the probability of civil war onset for all values of police capacity	Negative	Negative
CW datasets with concurring results	None	All were negative, but none statistically significant
Predicted change in discrete change of centralization as police capacity increases	Diminish	Diminish
CW datasets with concurring results	None	None
Predicted marginal effect of police capacity on the probability of civil war onset for all values of centralization	Negative	Negative
CW datasets with concurring results	None	None
Predicted change in marginal effect of police capacity as police centralize	Amplify	Amplify
CW datasets with concurring results	None	None

***Discrete Change of Centralization***

Outcomes for tests of the discrete effect of centralization vary according to the indicator of police capacity. The use of police per capita measures directly contradicts my hypothesis by yielding *positive* discrete changes of centralization for all onset datasets, though only the use of the Fearon and Laitin and Toft onset databases yielded statistically significant results for values of police per capita centered around its mean. These outcomes appear in the figure below.

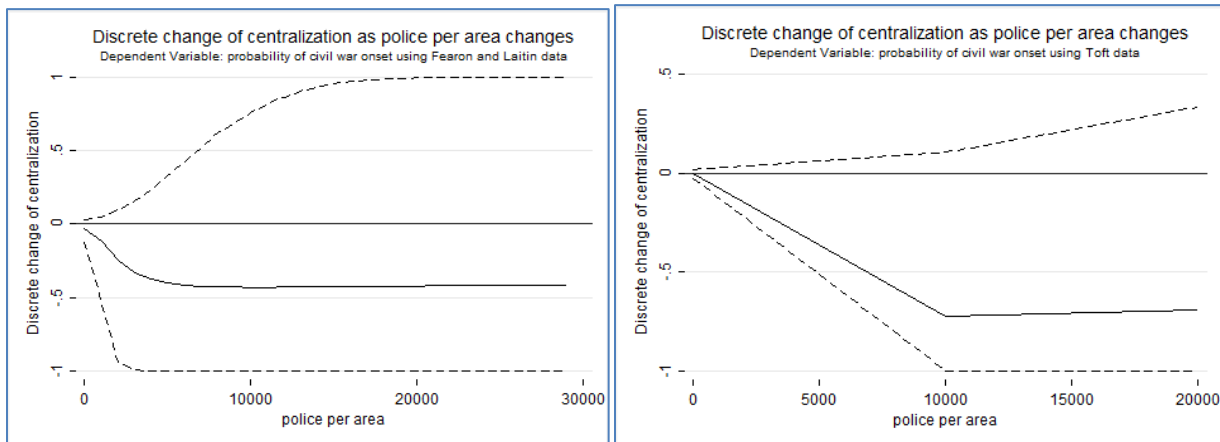
**Figure 4-3 Discrete Change of Centralization as Police per Capita Varies**



The graphs above also indicate that marginal effects, at least in the statistically significant regions, do not appear to reduce to zero as I predicted. The discrete change of centralization does flatten out as police capita increases, suggesting that while centralization appears to increase the probability of civil war onset for a range of values of police per capita, at higher values of police per capita the change is fairly constant.

In contrast, the use of police per area measures does yield the expected discrete effect with the use of all onset databases, though none generate statistically significant results. Below are graphs depicting the outcomes, again using the Fearon and Laitin and Toft onset data.

**Figure 4-4 Discrete change of centralization as police per area varies**



### *Marginal Effects of Police Capacity*

None of the tests of the marginal effects of police capacity yielded statistically significant results. Graphs are available in Appendix D - Graphs for Greed Models.

Taking into account the aforementioned outcomes, I must conclude that hypothesis 3b is unsubstantiated. Most tests yielded statistically insignificant results, and those finding that were significant exhibited outcomes that were in complete opposition to what I expected. Most surprising was the contrasting outcomes when using police per capita and police per area measures of police capacity, though some of the difference may be due to missing data. While both police per area and police per capita drew upon the police strength data, the area and population data had missing observations for different states because the area and population data came from different sources. In other words, the states missing area data were not usually those missing population data, and vice versa.

## Conclusion

I proposed that the level of organizational centralization of a state's police forces should affect the probability of civil war onset in two conflicting ways, depending on the underlying causal theory for civil war. From a grievance perspective, increasing centralization should increase the probability of civil war onset through the intervening process of repression. I tested this hypothesis with two simultaneous equations capturing the relationship between centralization and repression, and centralization and civil war onset, and the results directly contradicted my hypothesis. Predicted probabilities were low ( $>0.03$ ) and decreased as the centralization dummy increased from zero to one, rather than increase as I predicted. Outcomes from the tests were surprisingly consistent, regardless of the specific measure of police capacity or police repression.

The other hypothesis based on a greed based explanations for civil war onset predicted that increasing centralization should decrease the probability of civil war onset because centralized police forces should be more effective, though the effect of centralization should be conditional on police capacity. As police capacity increases, the marginal effect of centralization should diminish. I found little support for this hypothesis when using police per capita measures of capacity and none using police per area measures. The use of two onset databases generated positive discrete changes from centralization that remained steady despite the values of police per capita. This outcome contradicts hypothesis 3b in two ways. The first is that the marginal effect is the opposite sign to that which the hypothesis predicts. The second is that the marginal effect does not reduce to zero as police per capita increases.



## Chapter 5 - Police in War

The previous chapters have all addressed the impact of various attributes of a state's police force on the probability of civil war onset. In this chapter, I propose another way police can influence civil wars, except I restrict my analysis to the subset of civil wars considered *reoccurrences* of a previous civil war. I define a reoccurrence as a civil war that resumes between the same principal combatants over the same stakes (Toft 2010). Reoccurrence merits special attention because it may result from police conduct during the previous war. While the police and military occupy different spheres within a state's coercive function, their roles often overlap in civil wars (Bayley and Perito 2010: 75), and I propose that the experience of police serving in what are typically military functions during a civil war can increase the chances that post-war peace will not hold. In this chapter I present a hypothesis describing how the expansion of police activities into the military realm should affect the likelihood that civil war reoccurs. I then test my hypothesis by applying it to two case studies.

### Reoccurrence in Theory

To establish a theory of how police service in what are typically military roles during a civil war could increase the probability of reoccurrence, I first summarize the prevalent findings surrounding reoccurrence more broadly. As mentioned in Chapter 1, reoccurrence is a special case of onset, and as such all the other causal explanations should still apply.<sup>105</sup> Nevertheless, a few causal factors are particularly relevant to reoccurrences. First, civil war reoccurrence is less likely when the previous war ends in a clear military victory for either side (Fortna 2004). For wars that end in negotiated settlements, civil war is less likely to occur if the peace agreements contain both "carrots and sticks." An important stick is a provision that allows for adequate security forces to effectively suppress violent uprisings (Toft 2010). The characteristics of the war may also matter. Longer civil wars are less likely to experience reoccurrence, though wars that produce a high numbers of casualties experience a higher risk of reoccurrence (Doyle and Sambanis 2000; Fortna 2004). Finally, much like it did for civil war onset, repression may also play a role in civil war reoccurrence. Regime use of repression during a civil war can increase

---

<sup>105</sup> See Chapter 1 - Civil War Onset for common explanations for civil war onset.

the salience of group boundaries, which is an important pre-condition for the creation of violent opposition groups that might later challenge the state (Gurr 1981: 251). Additionally, the very experience of undergoing a civil war may induce states to employ repression more frequently in the aftermath in an effort to forestall another civil war.

### *Distinctions between the Police and the Military*

The next step is to establish the limits of typical limits of military and police functions. Although the police and military both possess coercive capacity and their roles can overlap during civil war, in nearly every country these organizations remain distinct in regard to mission, organization, and relationship to society (Hill 2009). Police are internally focused whereas the military is more generally focused on defeating external threats (Bayley 1985). Police forces also differ from the military in that they operate in small groups, and are widely diffused throughout civilian society. Thus, a state's inhabitants are much more likely to interact with the police than the military. In contrast, military forces find it difficult to act in continuously dispersed small units and hence, are ill-suited to meet the needs of policing a society (Silver 2005: 13). Moreover, police tend to operate within a legal-repressive framework with stringent rules on the use of coercion. The military is not constrained in the same way as the police and is more likely to respond to internal threats with excessive force (Crelinsten and Schmid 1992). The military expects to take and inflict casualties and, consequently, employs a level of ruthlessness the police cannot (Bittner 1972).

The differences between the police and military are evident in the paucity of coups police forces instigate in comparison to the military. At first glance, the imbalance is surprising. Police should represent a plausible coup force since they also possess coercive capabilities. Nevertheless, in practice it turns out that military forces are almost always the organization that instigates coups. One explanation for this trend is that the decentralized nature of police work inhibits the levels of organization and cooperation the police would need to present a plausible threat to the leader. Similarly, police generally do not possess the sufficiently powerful weaponry to overthrow the forces loyal to the leader (Hills 2009).

### *Why Police Fighting as Military Should Matter*

The final step is to link police conduct to reoccurrence by answering the question whether a police incursion into what is normally the province of the military during a civil war should matter? I contend that it does for a number of reasons, but foremost because it predisposes the police to engage in repression. Police encroachment into military functions during a civil war should increase the probability of reoccurrence because it can lead the police to engage in more acts of repression in the war's aftermath. Serving in a military capacity offers more opportunity for the police to encounter violent resistance, which should lead to greater levels of police repression in response – a sort of microcosm of the “Law of Coercive Responsiveness.”<sup>106</sup> As a result, we should expect that greater levels of repression should increase the likelihood of the police becoming predisposed to engaging in repression during the post-war period.<sup>107</sup> The greater prevalence of police repression in the post-war environment should increase the probability of reoccurrence for all the reasons I provide in Chapter 2.

In addition, police service in military capacities could prevent the clear government victory that tends to prevent reoccurrence. At first glance, such police conduct could be beneficial. The military may be overwhelmed or simply not available, and the police can serve as a useful surrogate to prevent what could otherwise result in rebel success. Nevertheless, I argue that while the use of police as military in civil wars may have some short term benefits, over the long term the consequences should be negative. First, any contribution the police may make is probably not that beneficial. The police simply may not be very proficient at military tasks. Just as the military is ill-suited for police work, the police are ill-suited for military work by virtue of their training, equipment, and protocols for the use of force. Additionally, a government's decision to routinely employ the police as proxies for its military can “let the military off the hook” for what should be its responsibility to conduct counterinsurgency operations – an occurrence that has been common in Afghanistan since 2004 (Bayley and Perito 2010: 24). By relegating their responsibility to fight insurgency to the police, the military can experience an atrophy of its counterinsurgency competencies. A decline in perceived

---

<sup>106</sup> See Chapter 3 - Repression in Theory for an explanation of this law.

<sup>107</sup> Past use of repression is a strong indicator of future use (Davenport 2005). This argument also draws on the hypotheses I introduce in Chapter 3 that link repression to civil war onset.

counterinsurgency capacity could play into the strategic calculus of aspiring rebels and possibly encourage violent resistance to the state.<sup>108</sup>

Finally, the use of police as military, even in the short term, can increase the probability of reoccurrence by causing the police to neglect their more traditional law enforcement responsibilities. Post-war environments place great strains on state institutions, including the police. The failure of the police to adequately provide security can amplify any lingering sense of hostility among the populace and contribute to reoccurrence of civil war (Doyle and Sambanis 2000). Police forces that are unable to provide law and order among the populace could also induce the populace to turn to other non-state sources of security, which contributes to an environment more conducive to collective violent resistance to the state. In light of these arguments, I offer the following hypothesis:<sup>109</sup>

**H4:** An increasing use of police by in military functions during a civil war increases the probability of civil war reoccurrence.

## Research Design

Putting my hypothesis to the test involves determining what constitutes excessive police involvement in what are typically military activities. Conceptually, police involvement in civil wars would entail police operating in modes well beyond the typical law enforcement responsibilities. Large N quantitative operationalization of such involvement would be a challenging endeavor, involving some subjective determination of whether a particular state's police force surpassed its mandate within a given civil war.<sup>110</sup>

---

<sup>108</sup> See Chapter for a description of how perceived capabilities can effect aspiring rebels' perceptions of the utility of war.

<sup>109</sup> Readers will note that I have not created a corollary hypothesis relating police conduct to civil war *onset*. The reason is that during times of peace, there are no military functions in which police forces could plausibly participate.

<sup>110</sup> The process would ideally entail creation of an interval measure such as percentage of the police force involved in battle or the proportion of battle involving police forces. Moreover, one would have to determine what constitutes atypical police involvement since police forces are often targets in civil wars (Bayley and Perito 2010). As a less preferable option, one could employ a dichotomous measure indicating whether police involvement.

As a solution to overcoming the quantitative operationalization challenges, I employ *Process Tracing* case studies. This technique allows me to explore the ways the several causal processes I identify in the previous section may contribute to civil war reoccurrence. Case study research is particularly beneficial for weighing the relevance of competing explanations, especially when the explanations do not lend themselves to quantitative operationalization.<sup>111</sup> Process tracing is a specific research technique for case studies and involves closely studying the unfolding of events within a case over time to determine whether the dynamics of the event reflect the same causal processes found in other cases (Collier 1993: 115).

I deviate from this definition of process tracing in that my goal is not to draw general conclusions regarding my hypotheses. In other words, I am not conducting “theory confirming case studies” (Lijphart 1971). Instead, my goal is simply to determine whether the causal processes described in my hypotheses actually took place. My method is more accurately categorized as “theory guided case studies” to explain or interpret a single event (Levy 2008: 4). Admittedly, my chosen method limits the external validity of any of my findings, but my more modest goal is simply to shed light on how police conduct during a civil war may affect reoccurrence.

I consider my independent variable to be an indication whether the police engaged in tasks more appropriate to the military during the civil war. I establish that a positive value for the independent variable requires that an organization that meets the definition of the term “police” deliberately conduct combat operations more typical of a military organization or that the police engage in conduct that significantly exceeds their traditional mandate. Because there are instances wherein military forces are responsible for policing functions, even in peacetime, I only choose cases from those countries that possess police forces that are organizationally separate from the military. I consider police activities to exceed their typical limits under two conditions. The first is when police fall under the direct control of the military. For the police to constitute a distinct element of the security sector, they must actually be distinct. When an army gains operational control of the police, even while the police maintain their typical structure, the police become an adjunct of the military, which alters the relationship of the police with the state

---

crossed some critical threshold. Both of these options would be difficult and time consuming even if adequate data was available.

<sup>111</sup> See note above.

and society. The other condition relates to use of force. Police normally operate under guidelines requiring the minimum use of force to restore order. On the other hand, the military is under no such restriction. Their mission is to employ maximum force to defeat the enemy as quickly as possible (Crelinston and Schmid 1992; Weiss 2011). Thus, I determine that police violate their typical mandate when they adopt or operate under military style rules on the use of force.

The dependent variable is a positive measure of the outbreak of a reoccurrence of civil war. I rely upon a definition of reoccurrence from Toft (2010) as a civil war that resumes between the same principal combatants over the same stakes. Because Toft does not establish a time limit for a subsequent war to be considered a reoccurrence, I use sixteen years (Hegre et al 2001).

### *Case Selection*

I conduct process tracing on two cases based on *ex ante* values of the independent and dependent variables. Specifically, I select a case wherein police fought as military and civil war reoccurred, and I draw a case wherein the police fought as military and a civil war did not occur, under the limitation that cases include adequate information about the police forces in service at the times of the civil wars.<sup>112</sup>

In the language of social science, I select two cases for which the key independent variable is constant, but the dependent variable takes on different values. In doing so, I follow the guideline that when the number of cases is small, researchers should always strive to include variation on the dependent variable (King, Keohane, and Verba 1994). The small number of cases and my selection criteria undeniably limit the generalizability of the any causal inferences I draw from analysis of these cases, but I consider these cases to be appropriate for the study's objectives. My decision to include an observation of non-reoccurrence may seem odd insofar as I deliberately contravene my own hypothesis. The reason I do so is that I have no reason to expect that police encroachment into military functions during a civil war has a deterministic

---

<sup>112</sup> I considered including a case where the police did not fight as military, and civil war still reoccurred, but I decided not to because none of my research indicates that police fighting as military was a necessary cause of civil war.

effect on reoccurrence. At most, any effect is probabilistic. My use of a case with a negative outcome should help shed light on the circumstances under which police conduct can contribute to reoccurrence, and those under which it cannot.

With these considerations in mind, I draw my cases from the Sambanis (2004) onset dataset.<sup>113</sup> I choose the series of civil wars that occurred between the government of Guatemala and a confederation of guerillas groups as my case wherein the police fought as military and civil war reoccurred. My choice for the case in which the use of police did not lead to reoccurrence is the Greek Civil War. My primary reason for selecting the Guatemalan case is that it constitutes one of the clearest examples wherein the civil wars reoccurred among the same combatants in a relatively short time period. The reason for this criterion is that my hypothesis rests on the premise that repressive police conduct should have the greatest effect among the former combatants, who should hold the strongest animosity against the government. I chose the Greek Civil War for two reasons. First, the last civil war ended in 1949, so I can confidently conclude that no additional reoccurrence took place. Second, this case is unique in that it actually consists of a series of three civil wars that appear to offer both support and refutation of my hypothesis.<sup>114</sup> Police served as military in all three phases, but the phases had very different outcomes. Police conduct in one phase appears to have led to reoccurrence, but not in others.

In the following sections I present the two case studies individually. My general approach is to provide a description of the background of each state's police force from the time of origin to the time of the civil wars under scrutiny. I then describe the major developments of

---

<sup>113</sup> Sambanis does not explicitly differentiate between subsequent wars and reoccurrences, so I apply Toft's (2010) definition to Sambanis's dataset. Several of the databases I employ for observations of civil war onset also include separate observations of civil war reoccurrence. Doyle and Sambanis (2000) and Toft (2010) both explicitly code reoccurrences. The authors address civil war reoccurrence in terms of peacebuilding success after 2, 5, 10 yrs. The authors use this data to compile indices for strict and lenient standard for peacebuilding success, yielding 71 lenient failures and 81 strict failures among the 124 civil wars. Of note, the authors' standard for the level of conflict that constitutes a failure is well below their own threshold for civil war. Toft considers a civil war to have reoccurred if war resumes between the same principal combatants over the same stakes, which results in 19 observations of reoccurrence from her 130 observations of onset. I can also draw observation of reoccurrences from databases that do not explicitly denote them if a series of wars occurred between similar combatants within what I deem to be a reasonable time frame.

<sup>114</sup> I depart somewhat from Sambanis's coding of the time domain. He only includes two wars.

the civil wars, along with how the police participated in them. I next put my hypothesis to the test by presenting and answering a series of questions intended to demonstrate how well the elements of the hypothesis apply to the cases. I conclude each case study with an overall assessment of the validity of my hypothesis.



## **Case Study #1. Guatemala**

My hypothesis predicts that police forces that fight as military during a civil war incur a predisposition to engage in repression after the war, thereby increasing the probability of a reoccurrence. The first case study to evaluate the validity of my hypothesis covers the series of civil wars that occurred in Guatemala in the 1960s and 70s. This case serves as the example wherein police fought as military during a civil war, and civil war reoccurred.

### *Case Study Characteristics*

I rely upon the Sambanis (2004) dataset for the temporal boundaries of the wars in this case.<sup>115</sup> Sambanis determines that a series of two civil wars occurred between Guatemalan government forces and similar insurgent groups from 1966-1972 and 1978-1994, respectively. His decision to divide the wars into two phases stands in contrast to scholars who tend to treat the wars as continuous. Additionally, others employ start years that vary from 1960 to 1968.<sup>116</sup> Many of the differences stem from the choice of operational definition of civil war. Sambanis determines that an internal conflict constitutes a civil war when the battle deaths exceed 500, which precludes earlier, less lethal internal violent episodes that occurred in Guatemala. Sambanis's coding rules also explain his decision to split the conflict into two phases since deaths resulting from both rebel activity and government terror diminished greatly in the interregnum (Ball, Kobrak, and Spierer 1999). I must also note that the series of civil wars in Guatemala do not represent a perfect example of a reoccurrence because the principal rebel combatant groups that opposed the government seem to be different, but I do not let this consideration prevent me from treating the second civil war as a reoccurrence. Many of combatant groups in the second war were formed around similar issues from remnants of the first war's combatant (Jones 1991).

---

<sup>115</sup> This dataset is essentially an update to Doyle and Sambanis (2000).

<sup>116</sup> COW uses 1966, Toft (2010) uses 1960, Doyle and Sambanis (2000) use 1966, and PRIO uses 1963.

### *Background of Guatemalan Police.*<sup>117</sup>

The Guatemalan police trace their roots to independence from Spain in 1821. A Congressional decree that year created a requirement for local leaders to establish auxiliary forces to monitor delinquent behavior in their municipalities. During the middle of the 19th century, a paid police force akin to a night watch emerged in Guatemala City. Through the end of the 19th century, an increasing number of towns established police forces. Responsibility for managing the country's police forces alternated between the Ministries of Interior and Defense, finally ending at the Interior Ministry, where it has remained since. The modern version of the Guatemalan police force came into being pursuant to Government Decree 901-Police Ordinance. This document consolidated various urban police forces into the National Police (*Policía Nacional*, or PN) in 1925. It also created police stations in all the country's departments, which were subject to the control of the *Directorate General*, an office within the Ministry of Interior. The primary purpose of the PN was social control and control of regime opponents. This was particularly evident during the Ubico dictatorship (1931-1944), who employed the police as his private army to suppress challenges to his rule (LaCharite 1973).

The police experienced a number of changes during the "revolutionary" era of 1944-1954 under Presidents Arévalo and Arbenz. In an effort to change the repressive character of the PN, President Arévalo changed their name to the *Guardia Civil*, and very few former members of the PN were allowed to join the new force. Additionally, the new constitution forbade militarization of the police except in extreme circumstances.

These changes proved to be short-lived. After overthrowing President Arbenz, new President Armas set about to undo the many changes of the revolutionary period. His efforts involved two imperatives: maintaining a stable climate for private, transnational investment and the elimination of popular resistance (Aguilera Peralta 1983; Jones 1991). Armas's efforts also extended to the police in the guise of "Presidential Decree 332 – Organic Law of the Police." This decree returned the police to its role as a repressive tool of the state. It also established the *Policía Nacional Ambulante* [Travelling Police], later to become the *Policía Nacional Militar* (PMA). The decree established police corps headquarters throughout Guatemala, mirroring the

---

<sup>117</sup> The following description of the background of the Guatemalan police relies heavily on the work of the Archivo Histórico de la Policía Nacional (AHPN). Unless otherwise noted, the AHPN serves the reference document for the Police Background section.

military's territorial division of the country (LaCharite 1973). In another set of ordinances, Armas created a secret police force known as the Judicial Police that had the mission of apprehending suspected communists (Huggins 1998). Also in existence at the time was the *Guardia de Hacienda* [Treasury Police], which initially had the mission of customs and revenue enforcement, but would undergo a change of mission in the 1960s (Amnesty International 1981; Das 2006).

During this time period, the United States began to provide assistance to the PN. The United States viewed a more effective Guatemalan police force as an important mechanism to identify communist subversives, though they would require much improvement. An initial assessment by the United States in 1965 considered the 3000 man PN to be seriously deficient, enjoying little respect or cooperation from the Guatemalan citizenry. Moreover, traditional police functions had fallen to the wayside. The police force had become almost wholly subordinate to the army by 1965, with a primary focus on preventing subversion and communist attacks (Holden 2004). The low quality of the police force was enabled by the army, which viewed an effective police corps as a threat to its own dominance and frequently compelled presidents to change police directors to keep the police in a state of organizational turmoil (LaCharite 1973; McClintock 1985).

### *1<sup>st</sup> Guatemalan War*

The first civil war (1966-1972) had its roots in the overthrow of Arbenz. Though the Guatemalan army retained a prominent position during the Arbenz presidency, its members' attitudes towards the president were mixed, as evidenced by their unwillingness to lend Arbenz their support when he faced the coup challenge from Armas. What support Arbenz did enjoy came from the younger officers (Jones 1991). Members of this group had become frustrated with the corruption of their military commanders and civilian leaders who succeeded Arbenz. Their frustrations were exacerbated by their indignation at the use of Guatemalan territory as a training ground for Cuban exiles intending to overthrow Cuban communist leader Fidel Castro. The officers' frustrations culminated in a coup attempt in 1960 to overthrow the Ygídoras

regime.<sup>118</sup> Although the coup failed, two of its key leaders were determined to continue resistance and formed the *Movimiento Rebelde 13 de Noviembre* (MR-13). In 1962, following a proclamation of its goal of overthrowing the Ydígoras regime, the group embarked upon a series of attacks on government facilities (Aguillera Peralta and Beverly 1980; Gott 1971).

Concurrently, another group, known as the *Movimiento 20 de Octubre*, also led by a 1960 coup participant, began guerillas activities. The Guatemalan army quickly crushed the resistance by both groups, causing the survivors to retreat to the eastern highlands to regroup (Gott 1971).

In 1962, while recuperating from their defeat, these two groups joined forces with the Guatemalan Workers' Party (PGT by its Spanish title) to form the *Fuerzas Armadas Rebeldes* (FAR). The PGT was the Guatemalan communist party, which had been outlawed since 1945. Prior to joining the FAR, the PGT had attempted armed struggle in the eastern part of the country, but quickly suffered defeat (Aguilera Peralta and Beverly 1980). The FAR served as an umbrella organization for its members to plan and coordinate their activities (Gott 1971). With the PGT serving as its political influence, the FAR was primarily a guerilla movement with a socialist orientation. Beginning in 1963, the FAR embarked on a strategy of rural *foco*.<sup>119</sup> This strategy manifested itself in a series of small scale attacks on government patrols. The FAR was able to gain success mostly due to army and police incompetence and lack of preparation (Aguilera Peralta and Beverly 1980). The relative level of success the FAR achieved was significant enough that the army lost confidence in Ydígoras and deposed him in a coup in 1963 (Aguilera Peralta 1983).

### *End of 1st Guatemalan War.*

The success of the FAR was short-lived, and its eventual defeat had two main causes. The first relates to the 1966 presidential elections. That year, Guatemalans elected Julio Méndez Montenegro, a former law professor, as president. His election marked a deviation from a long line of army officers who served as president before and after. The election had the paradoxical

---

<sup>118</sup> Ygídoras won the election in 1958, following the interim rule of Miguel Pasarelli, who replaced Armas following his assassination in 1957.

<sup>119</sup> A focismo strategy centered on building support among the rural population in preparation for a general armed uprising (Hey 1995: 35).

effect of undercutting the FAR's political basis since Mendez endorsed many of their positions. It also led to a rift between the PGT and the other elements of the FAR, culminating in the PGT splitting from the group in 1968 (Gott 1971).

The second major contributing factor to the defeat of the FAR was a focused counterinsurgency campaign by the army, beginning in 1966, in the rural area of rebel operations. Accompanying the campaign was greatly increased assistance by the United States to both the Guatemalan police and military (Holden 2004; McClintock 1985). Though ostensibly the election of a non-army member represented a break from military's hold on political power, Mendez had to cut a deal with the army to gain their continued support for his rule. Mendez agreed to give the army near impunity in the conduct of the counterinsurgency, thereby paving the way for an enormous increase in the levels of state terror (Handy 1984). With the acquiescence of Mendez in hand, the army embarked on brutal but effective campaign in the eastern highlands, led by Colonel Osorio Anañas. By the end of 1968, the guerillas were all but defeated through a combination of their own deaths and capture, as well as a loss of support from the region's inhabitants (Aguillera Peralta and Beverly 1980; Bell, Kobrak, and Spierer 1999). The loss of support was a direct result of the government campaign of terror directed at inhabitants to deter them from supporting the guerillas. The level of government terror practiced during this time period was particularly high and indiscriminate. In addition irregular clandestine anti-communist death squads began to complement the efforts of the formal security forces. Some of the members of the death squads were agents of regular security forces and some were truly irregulars (Aguillera Peralta 1980).

### *Conduct During 1<sup>st</sup> Guatemalan War*

During the war, the police essentially became a surrogate for the military. The police lost any relationship with a responsibility to protect its citizens and instead became an arm of state terror within the prevailing doctrine of national security (Das 2006: 341). The relationship was bolstered by the tendency of the Guatemalan army to encroach into policing functions. This encroachment was a function of several factors. During that period of time, Guatemala experienced no external threat due to the presence of regional security arrangements, so the army was able to focus on internal threats. The army also came to view the insurgency as a threat to

its own existence. Guerilla activities eventually increased in scope and scale to the point where the army came to see them as a communist effort to overthrow the existing power structures under which the army enjoyed great benefits (Jones 1991). The fight against subversion also provided the army with an excuse for the further militarization of the Guatemalan government, which resulted in greater state repression. Maintaining military rule demanded a mode of domination of the Guatemalan society based on repression because the military dominated government lacked democratic legitimacy and did not institute progressive policies such as wealth redistribution or social reform (Aguillera Peralta 1983).

The police abetted the army's encroachment by undergoing organizational changes in the early and mid 1960s to foster better cooperation. In 1965, the police created district headquarters to ensure greater integration with the army in dealing with the ongoing rebellion. These headquarters were staffed with army officers and had authority over the local police corps. There is strong evidence that police corps also possessed "dirty squads" to detain and kill individuals accused of subversion (Hey 1995).

Notwithstanding the relegation of the police to the army's control during that time period, both organizations did occupy separate roles within the greater national security effort. The PN were particularly active in the cities, especially in Guatemala City (Amnesty International 1981). Among all the member of the Guatemalan security sector, the PN most often responded to and investigated incidents of guerilla attacks or terrorism (LaCharite 1973).<sup>120</sup> The PN worked closely with the PMA in the cities and the regular army in the rural areas (Amnesty International 1981). The Treasury Police came to gain responsibility for protection of the borders in an effort to intercept attempted infiltrators (Amnesty International 1981; AHPN 2010). The Judicial Police, known as the National Police Detectives after 1970, shared responsibility with the Army for identification and apprehension of suspected subversives. The Judicial Police were responsible for the urban areas, whereas the military was responsible for the rural areas (Adams 1969; Weaver 1970; LaCharite 1973). The styles of violence also varied between the police and army. Army repression was more expansive and even reportedly included such activities as wholesale bombing of villages and napalm strikes (McClintock 1985). In contrast, police

---

<sup>120</sup> LaCharite makes this determination from conducting content analysis of "*El Imparcial*", the leading newspaper in Guatemala City at the time.

repression tended more towards individual killings and disappearances (Amnesty International 1981).

### *The Reoccurrence of the Guatemalan Civil War*

Though the guerillas were essentially defeated by 1968, conflict did not end completely. The FAR made two efforts between 1968 and 1972 to regain the initiative, but both suffered defeat at the hands of government forces. These actions coincided with the assumption of the presidency by Araña Osorio, the leader of the counterinsurgency campaign from 1966-1968. The combination of resurgent guerilla activities and legal resistance to his rule caused Araña to declare a “state of siege” that lasted until 1972 (Ball, Kobrak, and Spierer 1999), though the style of government terror during this time was more discriminate and death squads were less prominent. Government use of terror appears to have greatly reduced in the years after 1972 following the defeat of the FAR and the arrest of the leaders of the PGT, and most instances of terror were limited to selective assassinations (Aguilera Peralta and Beverly 1980). The period of relatively low conflict related fatalities endured through the presidency of Kjell Eugenio Laugerud García (1974-1978).

Sambanis (2004) marks the reoccurrence of civil war in Guatemala as taking place in 1978, mostly based on increased casualties resulting from government terror campaigns. Nevertheless, low levels of violence by both the state and the guerillas preceded and fueled the 1978 reoccurrence. During the interwar period, a number of processes were underway that would lead to the increased violence in 1978. Chief among these was increased popular organization and resistance to the government. Key to the organization was the high inflation that occurred in the mid-70s that disproportionately affected the poor. Another important event was the earthquake of 1976, which brought together the middle classes and the urban poor in common cause. Finally, a number of changes that President Fernando Romeo Lucas García enacted upon taking office in 1978 led to mass, though peaceful resistance (Jones 1991). A consequence of the unrest leading up to 1978 was a return of the death squads and a corresponding increase in fatalities resulting from their activities (Aguilera Peralta and Beverly 1980; Bell, Kobrak, and Spierer 1999).

During the same time period, a number of groups that would eventually turn to guerilla warfare entered the scene. For each of these groups, police use of terror contributed in some way to their decision to resort to violent resistance to the state. One of the most important was the Guerilla Army of the Poor (denoted by its Spanish acronym EGP). This group first appeared in the western highlands in 1972 (Handy 1984). Its participants were former members of the FAR, and drew important lessons from the FAR's earlier experiences. No longer did they rely upon a *foco* based strategy. Instead, they slowly built a popular following among the Maya Indians who populated that part of Guatemala. The EGP did not engage in their first violent activity until 1975, when they assassinated a landowner whom the local Maya viewed as particularly rapacious. The Guatemalan army retaliated by embarking on a terror campaign focused on punishing supporters of the EGP, instead of the EGP themselves. Rather than discourage those who supported EGP, the army's actions only increased the Maya sympathy and willingness to continue to support the EGP (Handy 1984).

Another splinter group from the original FAR, the Organization of People in Arms (ORPA), emerged during this time period in a different area of the western highlands. The ORPA's members were over 90% Indian, and it also garnered recruits as a result of army repression (Handy 1984). The PGT also reemerged by the start of 1980. Though the re-emergence of the PGT cannot be tied as directly to state terror as can the origin of the other groups, the timing of the PGT's return suggests it would not have entered the scene were it not for the presence of the other insurgent groups, who were motivated by state terror. By 1981, the various groups had achieved a level of success that the Guatemalan army came to fear for the existence of the regime (Jones 1991).

The greater success of this second wave of guerillas is due in large part to their superior appreciation of Guatemalan demographic and social characteristics. Guatemala at that time consisted predominately of two ethnic groups: the ladino and the Indian, of which the Indians constituted a slight majority. The term "ladino" is as much a social construct as it is an ethnic category and generally refers to a Spanish speaking white or mestizo. The Indians consisted of various Maya groups (Early 1974). The first wave of guerillas consisting of the FAR and PGT, considered the Indian population as unfit to serve as supporters. Instead, the FAR and PGT attempted to appeal to the "petit bourgeoisie," which was comprised of the students and small landowners. The government terror campaign easily convinced the FAR's intended groups of



supporters to remain abstain from the conflict. The new groups of guerillas did not repeat the mistakes of their predecessors and focuses on mass organization of the Indian population from the start (Aguilera-Peralta and Beverly 1980; Barry 1989).

A number of other acts of state terror were also significant in generating Indian support for the insurgency. One was the Panzos massacre in 1978. Indians from the western highlands had gathered in that town to protest appropriation of their land. The army responded to the protest by surrounding it and firing into the crowd, resulting in over 100 deaths (Handy 1984). Another significant event was the burning of the Spanish embassy in 1980. A group of Indians had occupied the Spanish embassy to protest their repressive treatment by the government. Over the objections of the Spanish ambassador, Guatemalan police stormed the building. The ensuing actions led to the deaths of 38 people. Spain considered these actions so egregious that it broke off foreign relations with Guatemala (Handy 1984; Jones 1991; Hey 1995). The Army responded to the incident by occupying the village that was home to many of the protesters. The ensuing heavy-handed actions of the army and the police force assault of the Spanish embassy proved to be the major impetus for entire Indian communities to join the guerillas (Handy 1984).

#### *Analysis of Validity of Hypothesis 4*

Having described the background of the Guatemalan police and their participation in the series of civil wars, the next step is to assess how well my hypothesis holds up in this case. To recap, my hypothesis proposes that increased police participation in military functions during a civil war causes the police to become predisposed to the use of repression, which increases the probability of civil war reoccurrence. Since this is a two part hypothesis, a test of its validity requires analysis of each part, specifically: did the experience of the police in the first war increase its propensity to engage in repression? And, did the increased repression contribute in a meaningful way to the second civil war? I address the hypothesis by posing and answering the following series of questions.

Did police serve as military during the first civil war? I find that the Guatemalan police engaged in military style practices during the war, while remaining focused on police responsibilities and functions. I make this qualified conclusion because the relationship between

the Guatemalan police and military does not lend itself to a differentiation based on roles. The Guatemalan police were a wholly subordinate organization of the army, but retained their own internal organization and functions. A better criterion to determine whether the Guatemalan police performed in the manner of the military relates to the use of force, and by this measure the Guatemalan police exhibited a clear pattern of adopting military style practices. One can make the counterargument that any police activity that satisfies their universal requirement to maintain order constitutes a conceptually valid police activity. Nevertheless, accepting this premise means that there can be no real distinction between the police and military except in their division of labor with regard to threats. Police would have an inward focus and the military an outward focus, and otherwise be identical. Relationship with society, presence, and all the other factors I note elsewhere in the study would not matter.

I argue that police and military differ by their restraints on the use of force. According to their ideal types, a military can be proactive in the use of violence when faced with threats, with no expectation of due process or individual rights from the targets of the violence. In contrast, the police should be reactive and only employ the minimum necessary level of force. The behavior of the Guatemalan police during the first civil war both validates its status as a distinct agent as well as confirms that it exceeded its traditional mandate. For example, the most common police response to guerilla acts in cities was an investigation (LaCharité 1973). That the police chose to investigate indicates that they viewed their role as different from the Army, who did not perform such activities. On the other hand, the investigations could lead to assassinations and disappearances – activities that entail a level of violence and lack of due process more appropriate for the role of the military. This pattern is also evident during the police response to the protests at the Spanish embassy. The police engaged in some amount of negotiation with the protestors, which is what we would expect from a police force. Nevertheless, the police ultimately chose to conduct an assault of the embassy, which is a clear example of the police adopting a military style tactic.

Did the police participation in military activities lead to an increased propensity to employ repression? Police repression most likely increased during the war, but whether the police became predisposed to repression as a result of their conduct during the preceding civil war is less obvious. Although it is difficult to separate police acts of terror from other

perpetrators, one can reasonably assume that police acts of repression during the war increased in proportion to the number of army acts of terror, which greatly multiplied. The activities of the death squads also serve as an indicator of police repression. While the relationship between the police and the death squads is not certain, at least some of the groups appear to have been composed of police officers (Amnesty International 1981; McClintock 1985).

Nevertheless, the elevated levels of police repression were temporary. Measures of citizen fatalities resulting from government terror decreased noticeably during the interwar period, suggesting that any police propensity to engage in repression would have become latent as the threat of insurgency subsided. Moreover, the police may have become accustomed to engaging in repression long before the first civil war. Though the reform of the revolutionary period may have had some success in purging the police force of its repressive tendencies, the policies President Armas enacted during the counter-revolution enabled the practices to reemerge well before the time of the civil wars.

Did police repression contribute to the reoccurrence? The evidence strongly suggests that police directly and indirectly contributed to the probability of civil war reoccurrence by increasing the level of support the Indians provided the guerillas. The political emergence of the Guatemalan Indians in the early and mid 1970s provided much of the base of support for the guerillas, as well as many of their members. While this political development has other explanations, government policies of terror and repression were clear contributing factors. For instance, the actions of the police in storming the Spanish embassy in 1980 were a major factor in tipping Indian support of the guerillas from passive to active. Less sensational repression in urban areas, presumably by police, also increased Indian support for the guerillas.<sup>121</sup> Many Indians were migrant workers, so the repression of trade unions damaged the Indians' means of livelihood, which left them few options other than joining the guerillas (Hey 1995).

### ***Overall Assessment of the Guatemala Case Study***

All in all, I find mixed support for my hypothesis based on the case of the Guatemalan civil wars in the 1960s and 70s. What is generally beyond dispute is that the Guatemalan police

---

<sup>121</sup> I make this assumption because the police generally had responsibility for the urban areas.

were repressive and acted under the direct control of the army. It is also clear that after a decrease in violence following the eradication of the FAR and PGT by 1972, levels of violence increased noticeably after 1978. Less clear are the causal links between these events. Whether the expanded role of the police during the war contributed to a propensity to engage in repression is difficult to discern, especially since state repression noticeably decreased following the first war. Similarly, the division of labor between the police and military during the war actually narrowed the scope of the police to urban areas rather than expanding it to new functions as my hypothesis suggests. The fact that much of the guerilla activity occurred in areas outside the typical responsibility of the police only complicates the matter because it is hard to attribute the repression that occurred there to the police. Nevertheless, while police repression may not have constituted a major portion of state terror, it appears to have played a major part in galvanizing support for the insurgency through the storming of the Spanish embassy. Though the number of casualties resulting from the incident was small, the symbolic effect proved to be much larger.

I do not find support for my other argument that the use of police in military functions allowed the military's counterinsurgency skills to wither. In fact, the narrowing of police responsibilities that resulted from the military's command of the police most likely increased the military's effectiveness. Lack of evidence makes it difficult to determine whether the police were ineffective at performing functions more typically associated with the military. The storming of the Spanish embassy was effective in that it ended the protest, but the heavy-handedness of its execution suggests it was not the police's forte. A better trained police force may have been able to evict the protestors without causing so much damage.

## **Case Study #2 The Greek Civil Wars**

The second case study involves a series of civil wars that occurred in Greece in the 1940s. This case differs from the first in that the Greek police fought as infantry throughout the civil wars, but their conduct during the final phase did not lead to a reoccurrence of civil war as it had in Guatemala. In presenting and analyzing this case, I follow the same format I used in the previous case study.

### ***Background of the Greek Police***

From the time of Greek independence in 1829 until the present, the predominant police organization in Greece has been the Gendarmerie (*Chorofylake* in Greek).<sup>122</sup> After a short period of time during which municipalities were responsible for maintaining their own police forces, the Royal Decree of 1833 established a national level Gendarmerie. This force was based on the French model and served as an auxiliary of the army to assist local police in the maintenance of order. Over the ensuing years, the Gendarmerie gradually took over responsibility for all policing in Greece except for the large cities of Athens and Piraeus, which gained municipal police forces in 1849. In 1893, the Greek government transferred all police responsibilities to the army, including that of Athens and Piraeus. Though it answered to the Army, the Gendarmerie retained its distinct organizational form and responsibility for patrolling the rural areas. In 1906, a subsequent law transferred all responsibility for policing from the Greek army to the Gendarmerie. Legislation in 1920 authorized the creation of municipal police forces in Greece's four largest cities, and these municipal forces came into existence over the remainder of the decade. From 1929 onward, the Gendarmerie and four city police forces shared responsibility for maintaining order in Greece, all under the direct authority of the Deputy Minister of the Interior. The Greek police generally kept this organizational form throughout the 20th century.

---

<sup>122</sup> Unless otherwise noted, this paragraph detailing the development of the Greek police until the 1920s is an amalgamation of information provided by Cramer (1964), Kurian (1989), and Das (2006). Due to the congruence of the descriptions among these three sources, it is difficult to denote individual citations.

### *Greek Police and a History of Repression*

The Gendarmerie earned a reputation for repression well before the civil war period of the 1940s. Two events that proved to be significant for establishing a Gendarmerie pattern of repression were the emergence of the labor movement in the 1920s and the assumption of power by Metaxas in 1936. The emergence of a Greek labor movement was somewhat coincident to the rise of the Greek Communist Party (KKE) in the early 1920s. The Greek labor movement operated in a relatively benign environment at the beginning of the 20th century, due in part to the concurrent Greek experiment with a republican form of government after having existed primarily as an authoritarian leaning constitutional monarchy (O'Ballance 1966). Nevertheless, the labor movement took on an increasingly militant tone following the Russian Revolution and transformed into more of a front for the KKE (Seferiades 2005). Though in retrospect, the movement was never much of a threat to the stability of Greece, government leaders at the time considered it the vanguard of a communist effort to overthrow their country and were determined to contain it (Samatas 1986).

The government attempted to contain the labor movement in two ways. The first was through enactment of legislation that afforded the government extraordinary powers to suppress labor activities. The second was the deliberate use of the Gendarmerie to violently respond to unrest. The most important family of legislation was the *Idonymo* Laws that “legalized state anticommunist terror” (26). The Gendarmerie had long been characterized by their rightist inclinations, and thus needed little incentive to take on a seemingly communist-dominated labor challenge (Das 2006). The Gendarmerie were also predisposed to respond with violence due to their relatively small size and great dispersion. The Gendarmerie attempted to compensate for this unfavorable force ratio by applying overwhelming force, and this style of response persisted despite improvements in Gendarmerie capabilities. The Gendarmerie continued to employ such violent tactics even though British advisor-led organizational and operational improvements and enhanced intelligence capabilities offered the option of more nuanced responses. In fact, by the end of the 1920s, the Gendarmerie responded with violence to nearly a third of all labor demonstrations (Saferiades 2005: 71-2).

The other event that influenced the Gendarmerie pattern of repression was the Metaxas dictatorship. In 1936 Ioannis Metaxas, former Army Chief of Staff and member of the monarchist Popular Front, emerged as prime minister. In anticipation of planned nation-wide

strikes by labor activists, Metaxas was able to convince the king of Greece to grant him dictatorial powers to combat what he viewed as a communist campaign to overthrow the current regime (Gerolymatos 2004). Metaxas directed the Gendarmerie to establish control over Greek society by conducting systematic surveillance of all citizens. One particularly effective way the Gendarmerie did so was to operate a program of civic-mindedness certificates. This program allowed the government to identify and reward those citizens who were loyal to the government. Individuals not in possession of a certificate could not obtain public jobs or permits for other forms of employment (Samatas 1986).

### *1<sup>st</sup> Greek Civil War*

Metaxas's rule ended with the Axis invasion and subsequent occupation of Greece in 1940. This period of time marked the roots of the ensuing three phases of civil war, as well as set the pattern of interactions between the Greek police and their eventual foes. The king and the government, along with most of the army, left Greece and formed a government in exile. As a result, the resistance movements that emerged in occupied Greece operated outside the influence of the government-in-exile. The resistance started as many scattered groups, but eventually coalesced around a few key organizations. Chief among these groups were the National Liberation front (EAM) and the National Democratic Greek League (EDES). The EAM was a leftist organization that attracted followers from across the political spectrum, but had a strong affiliation with the KKE (Iatrides 1995). The military wing of the EAM was the National People's Liberation Army (ELAS). The EDES was a coalition of republican minded Greeks dedicated to preventing the return of the king. One of its leaders was Napoleon Zervas, who would come to play a prominent role with the Greek police after the war. The EAM was the most effective of these organizations, and their efforts to reign in banditry and punish collaborators made them popular with common Greeks (Fleischer 1985). A frequent target of the EAM/ELAS was the Gendarmerie (Mazower 2000), whom the Germans occupation forces continued to employ to suppress Leftists and the KKE. After securing Greece, the Germans removed the top leadership of the Gendarmerie, but left the rank and file police intact.

Differences among the EAM and EDES over the future of the country after the anticipated liberation led to the first phase of civil war in 1943. The two groups began battling

each other even as they both separately fought the occupation forces. Concerns that the civil war would detract from their need to tie down German units in Greece led the British to coordinate a cease fire between the EAM and ELAS in 1944. The EAM acquiesced to the Greek government-in-exile and agreed to subordinate the ELAS to the British-led war effort (Gerolymatos 2004). A provisional government composed of the Greek government-in-exile and the EAM took power in Greece following the departure of the Germans. At the time of liberation in the fall of 1944, the EAM controlled much of the Greek countryside. The EAM had used the summer of 1944 to consolidate its hold there, and had even incorporated its own police force, the Civil Guard, to maintain order (Mazower 2000). The EAM/ELAS also used its power to wage a “Red Terror” of retribution on wartime collaborators – a campaign that would come to haunt the EAM once the balance of power turned (O’Ballance 1966).

The formal Greek government had strong backing from the British, but only effectively ruled in the cities. One of the major concerns of provisional Prime Minister Papandreaou and his British backers was consolidating its rule by reestablishing the army and police forces, which would entail disarming the ELAS. The EAM insisted on a complete purge of the security services to ensure no collaborators remained. However, a desire to rapidly create security services (in part to combat the power of the ELAS) left Papandreaou reluctant to agree to the demands of the EAM (Iatrides 1995).

### ***The Second Greek Civil War (December 1944)***

By November 1944, the situation between the Greek government and the EAM was tense, but both sides were still open to negotiations (Iatrides 1972). The stability broke down, however, when Papandreaou gave in to British pressure and opted to attempt to disarm the EAM. In protest, the EAM called for a general strike. In December 1944, one of the protests turned violent. Frightened Greek police fired into the crowd, killing “scores” (Iatrides 1995: 323), thus marking the beginning of the second phase of civil war – the “December Uprising” (*Dekemvriana*). Conflict intensified the next day during the funeral procession for the victims. Police and members of the right wing militia group “X” fired on marchers from overlooking rooftops. ELAS members fired back, and by the end of the day 40 people were dead. Concurrent with the events of the funeral, the EAM initiated a series of attack across Athens, and



a frequent target was police stations. The typical ELAS tactic was to seize the station and execute all of the occupants (Gerolymatos 2004). The EAM also took the opportunity to resume reprisals against war-time collaborators (a high priority of which were Gendarmerie members) and X (militia) facilities in other areas of Greece. British troops were called in to re-establish order, and the ELAS declared a truce on December 28th (Mazower 2000). The formal end of the conflict was marked by the signing of the Varkiza agreement the following February.

### *Varkiza Agreement*

In addition to marking the formal cessation of hostilities of the *Dekemvriana*, the major achievement of the Varkiza agreement was the disarmament of the EAM/ELAS. The agreement should have been a major step towards peace and stability in Greece, but instead it enabled the onset of a period known as the “White Terror.” By turning in their weapons, EAM/ELAS members opened themselves up to retribution by the police and right-wing extremist organizations. During the time between the agreement and the end of 1945, various Rightist oriented groups “engaged in wholesale persecution of anyone suspected of left-wing sympathies” (Roubatis 1987: 18). Additionally, the behavior of the ELAS during the uprising had discredited them in the eyes of many Greeks, which made their persecution more acceptable (Iatrides 1995).

The Greek police forces were at the forefront of the government campaign of persecution for a number of reasons. For one, the police were the “most exclusively and zealously anti-communist of the Greek security forces” (Close 1985: 129). The police had been the primary anti-communist instrument for a long time, but were especially active during the Metaxas regime and during the occupation. Second, the police had been a frequent target of EAM/ELAS reprisals during the war and on through the *Dekemvriana*, and thus had strong incentive to repay the EAM in kind. Finally, the Gendarmerie underwent a period of rapid growth after the Varkiza agreement. This growth not only diluted the quality of recruits, it allowed in many former collaborators, which only exacerbated the antagonisms with the EAM.

The relationship of the Greek government with the Rightist extremist organizations that constituted the main proponents of the White Terror is unclear. There is evidence that members of the police force were also active in X – one of the most prolific of the groups and one that clearly supported the current regime. Regardless of any formal involvement in the groups, the

Greek government as a minimum tolerated their existence. The government may have had little choice. The Greek police force was not sufficient, and the threat the ELAS posed caused the government to reach out to militia organizations (Mazower 2000).

### ***Roots of Second Conflict (Third Phase of Civil War)***

The event commonly viewed as the start of the third round of civil war occurred on March 30th, 1946 when EAM forces attacked a Gendarmerie outpost in a small village in the mountainous region of northeast Greece. In response to the White Terror, former ELAS members had begun organizing in the mountains of northern Greece to conduct supply raids and to exact revenge against the right-wing militias. Other Greeks with leftist sympathies sought refuge from repression with the ELAS guerillas as well (Gerolymatos 2004). Earlier in February, the leader of the KKE had announced that its members must respond to the White Terror with force. By this time the communist party had come to fully dominate the EAM. The KKE had long sought such influence, and the severity of EAM/ELAS actions during the *Dekemvriania* had caused many of its moderate members to abandon it (Iatrides 1972). Nevertheless, it appears that the KKE had not fully committed to civil war at that time, and the attack on the Gendarmerie outpost may have just represented an isolated incident. The KKE likely did not take serious action towards large-scale fighting until fall 1946, and did not completely abandon the political process until June 1947 (Fleischer 1985).

A major contributing factor to the increased fighting was the repressive policies pursued by the conservative-monarchist government of Constantine Tsaldaris, who had come to power in the March 1946 elections (Jones 1989). Tsaldaris had appointed Napoleon Zervas, former leader of the EDES, as Minister of Public Order. Zervas used his position to direct the Greek police to implement mass arrests, executions, exiles, and arbitrary punishments. Tsaldaris and Zervas relied heavily on the Gendarmerie to fight the guerillas in the time between March and the onset of major communist military operations in 1947, in part because the army at the time was untrained and filled with what the regime considered leftist sympathizers. The Gendarmerie absorbed responsibility for the curbing the Leftist reaction to the White Terror, and the tactics they employed led the Gendarmerie to be feared as much as the right-wing militants (Close 2002). The Gendarmerie also engaged in political intimidation by terrorizing Leftists and

Centrists voters during the time leading up to the September 1946 plebiscite on whether to reinstall the monarchy (Close 1985). By summer 1947, the campaign of government repression was so severe that the KKE was faced with a decision between “revolution or oblivion” (Iatrides 1995: 10), and the KKE chose revolution. By fall 1947, a full-scale civil war by any definition was underway in Greece.

### ***Police Conduct During the Third Greek Civil War***

The Gendarmerie participation in the third Greek civil war began as it had occurred in the previous phase with the Gendarmerie serving as the principal force responsible for protecting Greek villages. During much of 1946, the Gendarmerie served as static defensive forces in the villages, though its effectiveness was dampened because of limited capacity and lack of a directed mission to pursue the guerillas into their sanctuaries (Needham 1971). In response to the increasingly drastic KKE practices, Zervas reorganized the Gendarmerie into infantry battalion like units to improve their effectiveness (Close 1985). In spite of Zervas’s efforts, the Gendarmerie were unsuccessful in quelling the growing insurgency. In fact, both American and British advisors sent word to their supervisors that Greek government behavior seemed to be creating more guerillas than it was killing or capturing (Roubatis 1987). U.S. advisors were able to convince the Greeks to hand over primary responsibility for fighting the guerillas to the army by summer 1947, which coincided with the KKE’s decision to abandon guerilla warfare and instead fight conventionally. To support this new style of campaign, the Gendarmerie formed mobile forces that operated under the command of the army. The mobile forces would sweep into villages prior to an army attack and arrest suspected communists and sympathizers to prevent the KKE forces from gaining early warning of the pending attack. Following the attack, the Gendarmerie would assist local auxiliary army units with “mopping up” and remain behind to prevent guerilla re-infiltration (Needham 1971: 41).

Concurrent with the transition of the onus for fighting the communists to the military was an increase in the Gendarmerie practice of preventative arrests and executions, much of which enjoyed legal sanction. Greek legislation that took effect during the war extended extraordinary power to the police to arrest and search suspected communists. July 1947 alone saw the arrests of over 15,000 Greek citizens (Roubatis 1987: 38). Additionally, the police gained the power to

license small business, which allowed the police to impose economic punishment on those they considered a threat (Close 2002). Though police repressive measures may have induced some previously uncommitted Greeks to join the insurgency, the measures seem to have been effective. The KKE's call to its members to rise up against the government in 1947 may have failed because so many of its members were already in government detention by that time (Iatrides 1995: 14).

### *End of the War*

A number of events coincided to spell defeat for the communists. The first was the loss of support from Yugoslavia. In 1949, Soviet Premier Stalin ordered Yugoslavian leader Tito to cease his support for the Greek insurgency. Stalin's pronouncement was likely a consequence of American and British support for the Greek government. Stalin realized the Americans would never accept a communist Greece, so he saw no benefit in wasting his effort there (Jones 1989). Faced with the prospect of fighting without the material support and sanctuary from Yugoslavia, the KKE leadership elected to engage in a conventional fight to secure a quick victory against the Greek army before their supplies ran out. The KKE gamble failed, and the Greek army consistently prevailed in the conventional battles (Gerolymatos 2004). In October 1949, the KKE announced a cease fire, and by December all armed conflict effectively ceased. Despite a threat by the KKE to resume the struggle when conditions were appropriate, Greece never again experienced another civil war (Jones 1989).

### *Analysis of Validity of Hypothesis*

As in the analysis of the Guatemala case study, I test the validity of my hypothesis regarding police conduct during civil war by answering a series of questions. The questions mirror those I used for the Guatemalan case, with the exception that I add the counterfactual question of why civil war did not reoccur after 1949. I focus on the second and third phases of the Greek civil war. I treat the third phase as a reoccurrence of the second, then determine why a fourth phases never occurred, despite the fact that police exceeded their typical role during the

third phase of war. In an effort to avoid confusion, I will refer to the second phase of civil war (*Dekemvriana*) as the “initial phase” and the third phase as the “reoccurrence.”

### ***The Dekemvriana and Reoccurrence***

Did police serve as military during the initial civil war? There can be no doubt that the Greek Gendarmerie served in what were typically military functions during all three phases of Greek Civil War. At the very least, they were treated as military targets by the guerillas, a role that befell the police since the occupation. Nevertheless, the extent of Gendarmerie involvement in military style conduct did not end with simply being targets. The occupying powers relied heavily on the Gendarmerie to maintain order and suppress Leftists, and the new Greek government continued to use them this way during the *Dekemvriana*. Though this phase of civil war was relatively brief, the Gendarmerie handled the bulk of the fighting for the Greek forces, mainly due to the ineffectiveness of the Greek army at the time, and because the ELAS made Gendarmerie stations in Athens their primary target during the uprising.

Did the police participation in military activities during the Dekemvriana lead to an increased propensity to employ violence? Police participation in military activities during the war does not appear to have been the principal catalyst for a police tendency to rely on repression, but it did predispose the police to view Leftists as a serious threat to the regime. It is difficult to attribute any predisposition among the Gendarmerie toward employing repression specifically to their experience during the *Dekemvriana*. The Gendarmerie had been engaging in repressive activities well before then. What is more plausible is that their experience during the war caused them to exaggerate the threat the EAM posed following the Varkiza agreement. The experience of many members of the Gendarmerie as targets of the ELAS during the war and the *Dekemvriana* caused the Gendarmerie to become the most vehemently anticommunist of the Greek security forces and to accept the predominate view that any Leftist movement was a threat to Greek stability (Close 1985).

Did police repression contribute to the reoccurrence? Police use of repression very likely contributed to the third phase of civil war. Though the exact level of police participation is uncertain, at the very least the police tolerated the persecution Leftists suffered following the

Varkiza agreement, if not openly participated in it. I base this judgment on evidence surrounding the effect of Greek government repression more broadly. There is a nearly universal agreement among the source material on the Greek civil wars that the treatment the EAM endured during the White Terror was a significant causal factor in influencing the EAM and KKE to abandon the political process and resort to revolution.<sup>123</sup> Thus, answering the question of the effect of police repression on reoccurrence involves determining the level of Gendarmerie participation in the campaign against the Leftists. The purveyors of the White Terror were most often clandestine right-wing militia groups, the most prominent of which was “X.” While, unsurprisingly, the clandestine nature of the groups makes determination of the involvement of the Greek police difficult, it appears that strong ties existed among them. Moreover, irrespective any official involvement, the police at a minimum abetted the White Terror by their inability or unwillingness to curtail it. This behavior was evident as early as the clash with the EAM marchers that led to the *Dekemvriana*, during which the police appeared to have been complicit with X snipers positioned along the protest route (Iatrides 1972).

### ***The Third and Final Phase***

I pose and discuss the same questions in regard to the third and final phase of the Greek Civil War (reoccurrence). In doing so, I point out similarities and differences with the initial phase.

Did police serve as military during the reoccurrence of civil war? The primacy of the Gendarmerie as the Greek fighting force continued during the third phase of civil war, though the military assumed the bulk of the fighting after 1947 as a number of factors obviated the need for the Gendarmerie to fulfill that function. The army became more effective due to American aid. American advisors sensed this development and convinced their Greek counterparts to transfer responsibility for the war to the military. Additionally, the KKE switched to conventional

---

<sup>123</sup> I could not find a single source that did not acknowledge the role of rightist oppression towards inducing the Leftists to resort to violence. This explanation was present even in western biased works such as O’Ballance (1966) and Jones (1989).

tactics, which required a level of firepower and other capabilities the Gendarmerie did not possess.

Did the police participation in military activities lead to an increased propensity of employ repression? The experience of the police in fighting as infantry during the third phase of civil war does not appear to have caused the police to become predisposed to engaging in repression. No subsequent civil war broke out after 1949, but the question remains whether this period of peace occurred because the police were less repressive, or whether it occurred in spite of police behavior. The bulk of the evidence indicates that the former alternative appears to have been most plausible. Police activity in the post-civil war era tended to fall within the legal-bureaucratic framework of the “Emergency Laws” that remained in effect until the 1970s. Gone were the instances of violent police response to Leftist dissent like had occurred during the labor protests before World War II. Similarly absent were the extrajudicial killings of EAM and KKE adherents the police had conducted during the civil war period. Thus, the question remaining concerns to what extent the change in the mode of police repression contributed to the absence of a reoccurrence – leading us to the next section.

Why didn’t violence reoccur? One of the primary reasons that civil war did not reoccur in Greece after 1949 was that political (rather than physical) repression appears to have been more effective in preventing reoccurrence.<sup>124</sup> Though the war had ended, the government’s policy of persecuting suspected Leftists continued. The impetus for ongoing persecution was the government’s perceived need to consolidate the Greek anticommunist state by ensuring mass loyalty and politically excluding what remained of the Left (Samatas 1986). A major change from the wartime practices was that repression was mostly non-violent and occurred under a legal-bureaucratic guise. The basis for the persecution was emergency legislation, passed during

---

<sup>124</sup> Police activities during the final phase of civil war likely ceased to be factor over time. Hegre et al (2001) determine that the deleterious effects of experiencing a previous civil war disappear after 16 years, so I assume that the effects of police conduct follow a similar timeline. Applied to the Greek civil war, that would mean that I must determine why civil war did not occur through at least 1955. Nevertheless, I curtail this timeline to January 1952 since it marks the approval of a new constitution and the election of Papagos-two events that solidified conservative rule of Greece and affirmed the ongoing persecution of the Left (Iatrides 1995).

the civil wars but still in effect, that greatly expanded police powers. The effectiveness of the political repression was abetted by a number of factors distinct to the post-war Greek environment. For one, the decision of the KKE to turn to conventional military tactics caused it to suffer a high number of casualties. Had the KKE leadership even wanted to revert to a military struggle after 1949, it would probably have not been able to (Jones 1989). The end of hostilities also allowed the Greek army to focus its efforts on internal threats. The United States viewed a KKE resurgence as a greater threat to Greece than an external invasion, so American advisors focused their efforts on improving the Greek army's ability to maintain internal stability (Roubatis 1987). Finally, destruction resulting from the civil war allowed the Greek government to establish a high level of social control. The economy was in shambles, and many Greeks were dependent on foreign aid. This dependence allowed the Greek government, via the police, to harness economic tools to ensure loyalty to the state. Greek citizens needed to possess a "civic-mindedness certificate" to gain access to public jobs or benefits (Samatas 1986), thereby further politically and economically alienating anyone the police did not deem to be sufficiently loyal.

The differences between police conduct during the time of the White Terror and after 1949 raises the question of whether the police conduct during the later time period truly represents "repression" in the ways I have defined and employed it in other chapters of this study. I contend that police behavior after the war represented a different form of persecution. For instance, the most common mode of state repressive violence in the period after the civil war was execution resulting from sentences proscribed by special military tribunals. While the outcomes of a court ordered death sentence and a covert police assassination are the same (death), the two events are qualitatively different. The execution presumably involved some measure of due process, and is more akin to the politically oriented definition of repression Collier and Hoeffler (2004) employ in their study of the effect of repression on civil war.<sup>125</sup> An assassination offers the target no opportunity to present a defense.

---

<sup>125</sup> Paradoxically, though I criticize their definition of repression in another section of this paper, the Greek experience post-1949 lends support to their findings.



### *Overall Assessment of the Greece Case Study*

I find both direct and indirect support for my hypothesis 4 from the events surrounding the series of Greek civil wars lasting from 1944-1949. The strongest evidence comes from the *Dekemvriana*, the second phase of civil war. During that phase, the Gendarmerie clearly fulfilled a military role. They were the primary target of the ELAS guerillas and were the only effective Greek fighting force available to defend against the uprising. Though many members of the Gendarmerie were already predisposed to repressive behavior from their experiences during the occupation, their brutal treatment by the ELAS during the uprising only served to sharpen their animosity towards Leftists and heighten their need for retribution. The Gendarmerie took advantage of the ELAS disarmament following the Virkiza agreement to engage in and abet the White Terror – a campaign of violence directed at EAM/ELAS members. Though it was not the only reason the EAM/KKE decided to abandon their political efforts and resort to revolution, their treatment during the White Terror offers a compelling explanation for their choice of this path.

The experience of the police in the third and final stage also offers support for my hypothesis, but in a counterfactual way since a civil war did not reoccur. At first, the Gendarmerie fought as military like they had during the previous phase. As the war progressed, however, the Gendarmerie ceded their role to the military, thereby allowing the Gendarmerie to shift their focus to less lethal forms of repression. This lessened role also allowed the Gendarmerie to establish an expansive system of surveillance of the Greek populace – a role they perfected in the post-war era. In fact, pervasive surveillance and political repression became so effective that by the 1960s the Greek government no longer needed to take political prisoners; deterrence alone was sufficient (Samatas 1986; Close 2002). The absence of a recurrent civil war offers partial support for a portion of my hypothesis. Part of the chain of logic linking police conduct in war to an increased probability of reoccurrence is the premise that increasing police repression increases the probability of civil war. The converse of this premise is that decreasing police repression reduces the probability of civil war onset. Though I do not posit that police repression is a necessary cause of civil war, a reduction in police repression that corresponds to a period of civil peace lends some credence to my argument by offering support for its converse.

The two other casual mechanisms I proposed found mixed support. Consistent with my proposal, the police were generally unqualified to serve as the primary fighting force, which

likely prolonged the war. From an organizational or equipment perspective, the Gendarmerie should have been effective. Zervas had reorganized the Gendarmerie into infantry like battalions with similar style weapons (Needham 1972), but this change was inadequate because the ineffectiveness of the Gendarmerie stemmed mostly from weak personnel and misuse. The biggest personnel problems appear to have been lack of quality control due to a perceived need by the Greek government for their rapid growth, exacerbated by selection of officers based solely on political leanings (Close 1985). The misuse stemmed from the relatively small size of the Gendarmerie in comparison with the task of securing all of the Greek countryside (Close 2002). On the other hand, the use of the police did not cause the military's competency to erode. In contrast to my proposition, the use of the Gendarmerie to defend the villages against the communists allowed the Greek to grow and improve without the extra burden of having to fight at the same time.

## Parting thoughts on the Case Studies

I have assessed the validity of my hypothesis as it applies to the individual cases in their respective conclusions, so I will not repeat them here. My intention for this section is to identify some general trends that emerge from both cases, as well as discuss how the cases fit in with hypothesis from other chapters of this study.

Although the focus of this chapter was the effect of police fighting as military on civil war reoccurrence, the case studies do shed light on a number of topics that I address in other sections of this study. The first topic is the role of police repression versus repression by other government agents. While the police almost certainly employed repression during the series of Guatemalan civil wars, the army was responsible for the vast majority of state terror, which was an important inducement for the Indians to join the guerilla movements that participated in the second civil war. This relationship is similar to what I found in studying the effects of police repression in Chapter 3, wherein I determined that increasing levels of police repression were less important than increasing levels of overall government repression. While I did not isolate and test the effects of military repression in Chapter 3, militaries are particularly suited to engage in repression, so it is not unreasonable to assume that military acts of repression constituted a significant portion of overall government acts. In contrast, the police were the primary repressive instruments in Greece, dating from the time of the anti-labor movement in the 1920s. Of interest in the Greek case is that most police were Gendarmes, an organization type that muddles the distinction between police and military. Gendarmerie in general, and the Greek gendarmerie during the period of interest in particular, maintain a more martial style organization and possess heavier weapons than their typical urban counterparts (Lutterbeck 2004). Additionally, they are less tied to a geographic location, so their relationship with society is different as well.<sup>126</sup> During the 1940s, only four Greek cities possessed municipal police forces. Whether the Greek experience after World War Two would have been different if fewer of their police were in the Gendarmerie organizations makes an interesting counterfactual proposition.

A second observation relates to police centralization. In chapter 4, I proposed that increasing police centralization increases the probability of civil war onset through the

---

<sup>126</sup> See Chapter 4 - Greed and Police Organization for a discussion of the relationship between gendarmerie and society.

intermediate process of repression. I see strong evidence for this hypothesis in the wars in Guatemala, which has maintained a centralized police force since the 1930s when President Ubico reorganized the force to better control the population and contain challenges to his authority. Ubico's actions represent a clear example of a leader seeking to reduce monitoring costs by eliminating layers of authority between himself and his agent. Centralization also enabled state use of terror by improving coordination with the army, though a more suitable term might be "co-option." The creation of district headquarters, manned by the army, to better manage joint police-army operations would have been more difficult if the police had a decentralized organization. Centralization did not seem to be a major contributing cause to police repression in Greece. Rather, the absence of an army in the earlier periods of the civil wars appears to have been more important because it encouraged Gendarmerie use of repression in an effort to offset their numerical imbalance with the enemy. The Greek Gendarmerie would likely have felt compelled to resort to more drastic tactics regardless of their organizational type. As a final note on centralization, Bayley's (1985) conclusion that police organizational types tend to remain constant over time finds support in these two cases. In Guatemala, the basic organizational type endured through the revolutionary era in Guatemala even when President Arévalo sought to reform the police force. In Greece, the basic organizational form remained intact despite multiple regime types, including occupation by an external power.

The final topic relates to rugged terrain. Fearon and Laitin (2003) contend that rugged terrain is a significant factor in enabling violent resistance to the state because it inhibits movement of government coercive forces.<sup>127</sup> The Guatemalan and Greek civil wars both offer strong support for Fearon and Laitin's arguments. Both wars in Guatemala began in remote areas: the first in the eastern highlands and the second in the western highlands. Moreover, guerillas groups sought refuge in the rugged areas after their defeat at the hands of the government. While the guerillas' use of remote terrain appears to have aided their military efforts, it also may have unexpectedly helped them garner direct and indirect support. The remote nature of the terrain is very likely to have been a factor in the army's decision to focus efforts on terrorizing the guerillas' support network rather than chase the guerillas through the

---

<sup>127</sup> In keeping with their findings, many of my quantitative models include a measure of percent rugged terrain as a control variable.

highlands. Unfortunately for the government, their campaign of terror directed at the Indians only paradoxically served to increase the Indians support for the insurgency. Rugged terrain also played a major part in the Greek civil wars. The ELAS began their resistance to the occupation-collaboration government in the rugged areas of Greece, and by the end of the war controlled most of the areas outside the major cities. Similarly, the EAM/KKE sought refuge in the hills during the White Terror, and the KKE conventional army formed there as well. In the Greek case, the rugged hills of northern Greece also provided the benefit of a shared border with Yugoslavia, which was a major supplier of aid to the Greek guerillas.

## Chapter 6 - Conclusion

The overarching purpose of this paper is to give the role of police in civil war onset its proper due, a task that, to the best of my determination, extant studies have failed to do. Indicative of the shortcomings in the extant work is a troubling trend of treating the police as a reflection of state capacity, rather than as an agent with its own distinct attributes. Treating police this way offers no opportunity for the police to exercise any degree of agency or autonomy from the central state authority. The most egregious example of this trend has been to conflate the police and the military, lumping them into the more encompassing “security sector.” This conflation has the effect of causing the police to appear as surrogates of the military, with the two organizations distinguished only by their geographic orientation: the military looks outward and the police look inward. Viewing the police and military in this way ignores the many other differences between them— most importantly, their contrasting relationship with their state’s citizens. In short, police perform their typical functions amongst society with the minimal level of force necessary to maintain order. On the other hand, the military operates with fewer restrictions on their use of force and tends to exist more separately from society.

In an effort to address the shortcomings in extant literature, this study looked at a number of police attributes, both individually and in combination, to explore how a state’s police force could affect the probability that the state experiences an outbreak of civil war. In doing so, I drew from a wide variety of disciplines including international relations, comparative politics, history, and police sociology, especially the multiple principal-agent model. I applied this model with both the state central authority and society serving as principals to the police’s agent. Use of this model allows inclusion of considerations of how police interests may differ from those of the principals, as well as how well the police can shirk the interests of the principals.

In this chapter I provide a summary of the overall study’s major arguments and findings. I then describe how the findings contribute to the greater study of police and civil war. I next discuss how this study suggests areas for further study. I conclude with recommendations for policy makers.

## Summary of Major Arguments and Findings

This paper was organized into an introductory chapter, followed by four substantive chapters. I relied heavily on quantitative analysis because it allowed me to test my theories across a broad time and country domain most effectively. The one exception is a chapter of case studies. I changed methodologies because the variables I employed in that chapter did not lend themselves to quantitative operationalization.

The substantive portion begins with Chapter 2, which looked at the role of police capacity on civil war onset. I offered the hypothesis that increasing police capacity should decrease the probability of civil war. The proposition that state capacity should affect the likelihood of civil war is not novel. What is more, other authors have indirectly allowed for police capacity to affect civil war. Nevertheless, to best of my knowledge, no one has tested how police may impart a unique impact on the onset of civil war across as large time and country sample. In remedying the shortfall, I determined that the datasets previous authors had employed for police capacity were inadequate. As a result, I developed my own database by combining a number of existing datasets on police strength. I conceptualized police capacity as *actual capacity* and *visible capacity*, with the major difference between them being that visual capacity relates to the perception of police capacity held by aspiring rebels, whereas actual capacity indicates the actual ability of the police force to defeat a violent challenge and can include information unavailable to the rebels. I found that my measure of visible capacity has a decreasing effect on the probability of civil war onset, with relatively high levels of statistical significance for the lower 75<sup>th</sup> percentile values of police capacity. In light of these results, I can conclude that the data exhibits strong support for this hypothesis. I also proposed that police visible capacity should have less effect in anocracies and in states with a previous history of civil violence. I found mixed support for the basic premise that increasing visible capacity reduces the probability of civil war onset because with some onset databases, increasing police per capita *increases* the probability of civil war. Tests of the marginal effects of police capacity as anocratization varies did not yield results that were sufficiently statistically significant. On the other hand, tests of the discrete change of anocratization did exhibit statistically significant results. For given values of police per capita, states with anocratic regime types experience a higher probability of civil war onset, though this finding is consistent with previous studies that link anocracy to increased risk of civil war onset. I found support for the first element of the

hypothesis concerning the effect of previous levels of violence. Increasing police capacity reduced the probability of civil war onset, regardless of the previous levels of internal violence. Moreover, higher levels of previous internal violence increased the probability of civil war onset in all cases, but this finding is not novel. Nevertheless, tests of the marginal effects of police capacity as levels of violence vary did not yield sufficiently statistically significant results. Thus, I must deem this hypothesis unsubstantiated.

Chapter 3 addressed the role repression on civil war onset. I examined both police repression itself and police repression in relation to repression by all other government actors. I proposed that higher levels of both forms of repression should increase the probability of civil war. Using two different databases for repression, I found that increasing police repression increased the probability of civil war onset, but only the use of a few datasets generated statistically significant results. My second test entailed the use of a ratio variable of police repression to repression by all other government actors. I predicted that a higher ratio of police repression should lead to a greater probability of civil war because the effects should be felt more strongly in society. The outcomes were mixed and highly dependent on the choices for indicators for repression and civil war onset databases. I also predicted that the marginal effects of the repression ratios should be highest at low levels of repression by all other government actors, but tests contradicted my hypothesis and revealed that for the most part, marginal effects were higher as repression by all other actors increased, suggesting that aggregate repression may be more important than police repression.

Chapter 4 moved beyond simple measures of police strength and addressed how the organizational modes of a state's police forces could influence the probability of civil war onset. I offered two contrasting hypotheses regarding the impact of police organization. Drawing upon a grievance school of civil war explanation, I proposed that greater police centralization should increase the likelihood that police engage in repression, thereby increasing the probability of civil war. Conversely, I drew upon the greed school of explanation and proposed that increasing centralization should allow police to deter aspiring rebels in a more efficient manner, though the effect of increased centralization should diminish as police capacity increases. I modeled the grievance hypothesis as a set of equations that portrayed the simultaneous effect of centralization on repression and civil war onset. Tests of the simultaneous model yielded consistently statistically significant, *negative* effects of greater police centralization on the probability of civil



war onset, which directly contradicts my hypothesis. I found no support for my second hypothesis that increasing centralization leads to more effective police, mostly due to statistically insignificant results. Moreover, the few tests that did yield statistically significant results directly contradicted my hypothesis.

The fifth and final substantive chapter explored how police conduct during one civil war may influence the prospect that civil war reoccurs. This chapter represents the methodological exception because it contained case studies rather than quantitative tests of cross-national time series data. I proposed that the experience of police serving as military during a civil war increases the probability that a civil war reoccurs because it predisposed the police force to employ violence. I analyzed the validity of this hypothesis by employing process tracing cases studies of civil wars in Guatemala in the 1960s and 70s and in Greece in the 1940s. The Guatemalan case represents the example wherein police performed military functions during one war and civil war reoccurred. Police repression offered a compelling explanation for reoccurrence in this case because it drove passive bystanders to become active participants. The Greek case actually encompassed three civil wars, though I focused on the final two. Police were the primary fighting force during the second war. This experience likely increased the propensity of the police to view even peaceful Leftist activists as existential threats to the state. This perception led the police to tolerate and perhaps to participate in a campaign of terror directed at Leftist, which almost certainly caused the Leftists to abandon the political process and turn to revolution. The recurrent war marked the final episode of violence, however, most likely due to the army's assumption of responsibility for fighting. The police initially fought as military during this recurrent civil war, but ceded responsibility for fighting to the military as the army became more effective. This shift in responsibility allowed the police to turn their attention away from physical repression and instead direct their energies towards legally sanctioned political repression. This shift appears to have been one of the primary reasons that an additional civil war never took place.

The introductory chapter suggested that there may be some time specific factors at play in the data under analysis because most of the datasets largely covered the Cold War era. Bearing in mind the hypotheses presented in the preceding chapters, properly addressing the topic of period effects involves determining which Cold War specific factors influenced the ability of police to either prevent or cause civil war. With regard to capacity to prevent, the most

prominent period effect was to reduce the capacity of police forces in states that sided with the West due to the increased aid the rebels in those countries received from the Soviet Union (Kalyvas and Balcells 2010). Though the exact impact of Soviet aid is difficult to determine, it is reasonable to assume that the increased support improved the rebels' capacity to some extent, thereby increasing both their actual and perceived ability to successfully challenge the police. Since the actual and visible capacities of a state's police force exist in comparison to those of aspiring rebels, the increased Soviet aid had an overall effect of reducing police capacity. With regard to repression, police should have been more repressive during the Cold War. The higher number of civil wars occurring during the Cold War era should have led to higher levels of state repression in response to threats to their power (Davenport 1995). Police organization should be unaffected by period effects. Police organizations tend to endure regardless of internal threat levels (Bayley 1985). What may be more a factor for organization was the number of states gaining independence during that era. Most new states adopted centralized police forces that reflected the centralized nature of their governments.<sup>128</sup>

### **Contributions to the Study of Police and Civil War**

The previous section described how the individual chapters of this study have contributed to its greater purpose of giving the role of police in civil war onset its proper due. This section provides the broader implications of the findings and discusses what they could mean for the study of police more generally.

At the risk of stating the obvious, my first broad conclusion is that policing is not a concept that lends itself to simple analysis. Although tests of police per capita and police per area both generated meaningful results, numbers alone are inadequate measure of police capacity. One reason is that police typically operate in small numbers, dispersed throughout the population.<sup>129</sup> A better measure of police capacity would capture within-state variation (a point to which I return in the next section). The complex nature of police supports the findings of previous authors that a state's police force reflects its own unique circumstances (Bayley 1985; Marenin 1985; Merlingen and Ostrauskaite 2005). One cannot understand a police force without

---

<sup>128</sup> This statement is based on my own observations while coding police organizations.

<sup>129</sup> On the other hand, this type of analysis may not be suitable for the military either, which could explain why Hendrix (2010) and others failed to find a relationship between size of military and civil war onset.

situating it in relation to the central state authority and society. While the multiple-principal agent model has its limitations, it proved to be a useful tool for modeling this relationship.

The one variable that consistently exhibited a statistically significant effect was regime type. For instance, being an anocracy is still the strongest predictor of civil war. Additionally, my best results often came from including regime type related variables as interaction terms. While I found that increasing the size of a state's police tends to reduce the probability of civil war onset, the number required to reduce the probability to zero depended mainly on whether a state was an anocracy. This outcome is not surprising given the host of other problems that anocracies face. This type of regime tends to be the weakest form of government (Bäck and Hadenius 2008). Anocracies experiences greater levels of repression (Gupta, Singh, and Sprague 1993) and suffer more civil wars (Hegre et al 2001; Hendrix 2010) than autocracies and democracies.

This study provided strong support for Bayley's (1985) finding that police organizations are highly resistant to change. Most of the states in my sample (1940-2000) maintained the same police organization, despite experiencing such momentous events as the onset and ebb of the Cold War, internal wars, and regime changes. States that did experience a change generally became more centralized. The one prominent exception was Romania, which created a local police force to complement the national police force after the fall of the communist regime (Das 2006).

### **Suggestions for Further Study**

In the course of conducting this study, a number of topics emerged that merit scholars' further attention. The first relates to unit of analysis. As this study has demonstrated, state level data on police is an inadequate measure of police capacity. Moreover, it carries a high risk of inducing an ecological fallacy.<sup>130</sup> For instance, urban and rural areas may not require the same per capita number of police, but simple police per capita measures do not allow for this distinction. A superior indicator would measure police strength at a much more precise level.

In the same vein, a needed line of inquiry would develop a better measure of police intelligence capacity. It is one of the three major elements of police capacity and is a critical

---

<sup>130</sup> The ecological fallacy comes from improperly drawing inferences about individual characteristics from group characteristics (Przeworski and Tuene 1970: 60).

distinction between the roles of the police and the military. While it is easy to draw a conceptual boundary between intelligence capacity and the other two elements, developing a distinct indicator for police intelligence capacity is challenging. Future studies should attempt to create a measure of police intelligence capacity that is not based on measures such as size or budgets that can indicate other concepts. Also, in an effort to avoid multicollinearity, the new measure of intelligence capacity should not duplicate indicators of regime characteristics such as respect for individual rights.

Another area demanding attention relates to police autonomy. Specification of autonomy is difficult because it can be related to other regime characteristics.<sup>131</sup> Nevertheless, the marked difference between the police forces in Los Angeles and New York City regarding propensity to employ violence suggests that autonomy can act independently of regime characteristics. Both cities are strong democracies, governed by mayors, in a highly democratic country, but the Los Angeles police employ violence much more often— a difference that Chevigny (1995) attributes to the low level of accountability citizens of Los Angeles can impose on their police.

Another area demanding greater attention is societal acceptance of repression. Davenport (1995; 2004; 2007) has probably done the most work on the topic, but runs into the same problems that any study of cultural traits encounter, namely – operationalization. Davenport proxies social acceptance of violence by magnitude of threat. His choice is understandable, but is underspecified because it could indicate any number of other concepts. Consideration of cultural factors may also serve as a means to overcome the hegemony of regime type as an explanation for civil war. For example, Chevigny (1995) finds that another significant determinant of the repressive tendencies of the Los Angeles police is the high level of tolerance for police repression among Los Angeles citizens and political elites.<sup>132</sup>

---

<sup>131</sup> In fact, I originally intended to include a chapter devoted to autonomy, but opted not to because autonomy continually became bound up with regime type.

<sup>132</sup> My own experience can attest to differences in acceptance of police repression even among strong democracies. In the summer of 1993, while I was in my early twenties, I had the opportunity to travel outside the United States for the first time and spend a month with a U.S. Army unit in Germany. Soon after arrival, one of the soldiers who had been in Germany a while gave me the admonition that if the German police stopped me, don't run. If I did run and they caught me, he warned me to just lay there and take my beating because Germans had a different outlook on police brutality. Fortunately, I never had the occasion to put his admonition to the test, but the general agreement I found among Americans regarding the warning suggests it had some validity.

The final suggested topic for further study concerns the question of whether a region suffering from significant violence warrants a non-militarized police force. Bayley and Perito (2010) recommend that when an area suffers from levels of violence approaching civil war, police should not carry the onus of responsibility for fighting the insurgency. Instead, the military should bear the brunt of defeating the insurgency and free up the police to perform their usual functions. While this recommendation seems reasonable, it ignores the consideration that unless the military simply eradicates all the insurgents and their supporters, the conditions that led to the civil war may still be present after the war. Consequently, much like occurred in Greece, the police could still be targets and have to fight back, regardless of their intentions. A beneficial area of study would be to focus on whether there are any discernible tipping points or triggers to mark the time when a region has achieved a sufficient level of security to merit non-militarized law enforcement. A corollary area of study would address whether leaving the military in an area too long could create resentments and exacerbate the already precarious post-war circumstances.

### **Recommendations for Policy Makers**

I close this study with a discussion of its implications for policy makers. I do so from the perspective of a hypothetical advisor to a government aid agency wishing to assist a troubled state develop a capable police force. To avoid offering “one size fits all” solutions, I present recommendation in the form of trade-offs of risks and opportunities. Of note, underlying all the recommendations is the assumption that the police should not be the primary change agents within a state. The purpose of the police is to maintain order and preserve the status quo, which makes police a poor choice to drive such fundamental changes within a state such as democratization (Marenin 1996).

The first policy recommendation stems from a conclusion that police development cannot occur in a vacuum. This consideration is especially important for states that receive outside aid because donors may focus on the police at the expense of other recipient state institutions, which can allow the police to become too strong. In the language of the principal-agent model, the state as principal loses its monitoring ability because it can no longer provide adequate incentives to influence its agent’s behavior. The telling example of this problem occurred in Central

---

America. U.S. aid to the countries' police and military forces allowed these institutions to become strong enough to evade effective oversight from the state and society, creating "armies without nations" (Holden 2004). This is not to say that the police should not be a vital part of a state's development plan. An important element of state building is security. Economic and political development will occur more slowly, if at all, in insecure environments (Tilly 1985; North 1990; Bates 2010), so police must possess a reasonable level of coercive capacity. Policy makers will need to reconcile these competing considerations as they determine how to best situate police development in the greater development plan.

At the same time, policy makers cannot forget about society, as well as the relationship between society and the state. If the police exist at the nexus between the state and society (Marenin 1985), a police force must reflect the attributes of its two principals. For instance, states with a highly centralized government likely require a highly centralized police force because the sub-national polities are probably not capable of providing effective oversight of the police. Consequently, police will not be able to decentralize until the state central authority divests power. A related issue concerns the penetration of the state into areas where it has not done so previously. The historical trend has been for inhabitants of those areas to violently resist the growth of the power of the state, suggesting they will almost certainly resent the presence and imposition of a police force (Cohen, Brown, and Organski 1981). To expect the inhabitants to welcome the police and the loss of autonomy the police represent is unrealistic. Policy makers should plan for the possibility that police expansion may result in violence.

Another recommendation reflecting the police-state-society relationship concerns size of police. The findings of this study regarding the relationship between police size and civil war onset suggest only two general guidelines. One is that absent any other considerations, a greater number of police per capita and per area are more likely to prevent civil war. Additionally, anocracies need more police, although more police in anocracies also generates risks. Anocracies are particularly ripe for police abuses of power and stand to lose the most from corrupt and repressive police practices.

Because states and aid agencies cannot expect to determine a correct size for a recipient state's police force at the outset, they must be prepared to shift police resources as they learn more about the outcomes of their choices. One way to do so is to establish a gendarmerie force, which by their organization, equipment, and training are suited for nationwide redeployment.

Nevertheless, state and aid agencies must bear in mind that gendarmerie also come with risks due to their militarized nature. The mobility of gendarmerie causes their relationship with the policed society to be looser, so the ability of the society to monitor police becomes more difficult.

With that recommendation, I end this study. My goal was to give the role of police in civil war onset its proper consideration. Comparative political science has generally overlooked the role of police (Bayley 1985; Marenin 1985), and I hope that I made a step towards remedying this inattention. While my findings were not as robust as I would have liked, I think I have successfully advanced the body of knowledge relating police and civil war by at least giving police their due theoretically. I also hope that I have made a compelling argument that, while the police and military both share space within the coercive sector, they are different organizations with distinct responsibilities. Most importantly, they have very different relationships with society, and states should strive to keep them separate. The case studies in this paper provide clear examples of the cost of not doing so.

## References

- Achen, Christopher H. 2002. Toward a New Political Methodology: Microfoundations and ART. *Annual Review of Political Science* 5: 423-50.
- Achen, Christopher and Duncan Snidal. 1989. Rational Deterrence Theory and Comparative Case Studies. *World Politics* 41, no. 2: 143-169.
- Adams, Richard N. 1969. The Development of the Guatemalan Military. *Studies in Comparative International Development* 4, no 5: 91-110.
- Aguilera Peralta, Gabriel. 1983. The Militarization of the Guatemalan State. In *Guatemala in Rebellion: Unfinished History*. Eds. Johnathan L. Fried, Marvin E. Gettleman, Deborah T. Levenson, and Nancy Peckenham, 114-121. New York: Grove.
- Aguilera Peralta, Gabriel and John Beverly. 1980. Terror and Violence as Weapons of Counterinsurgency in Guatemala *Latin American Perspectives* 7, no 2/3: 91-113.
- Ai, Chunrong and Edward C. Norton. 2003. Interaction Terms in logit and probit models. *Economic Letters* 80: 123-129.
- Amnesty International. 1981. *Guatemala: A Government Program of Political Murder*. London.
- Aneshensel, Carol. 2002. *Theory-based Analysis for the Social Sciences*. Pine Forge: Thousand Oaks, CA.
- Archiva Histórico de la Policía Nacional-Guatemala. 2012. La Policía Nacional y sus Estructuras. Volume 2 of *Archivo Histórico de la Policía Nacional Colección de Informes*. Guatemala City (in Spanish).
- Bäck, Hanna and Axel Hadenius. 2008. Democracy and State Capacity: Exploring a J-Shaped Relationship. *Governance: An International Journal of Policy, Administration, and Institutions* 21, no. 1: 1-24.
- Ball, Patrick, Paul Kobrak, and Herbert Spierer. *State Violence in Guatemala: A Quantitative Reflection*. Washington, DC: American Association for the Advancement of Science.
- Ballentine, Karen. 2003. Beyond Greed and Grievance: Reconsidering the Economic Dynamics of Armed Conflict. *The Political Economy of Armed Conflict: Beyond Greed and Grievance*. eds. Karen Ballentine and Jake Sherman, 259-288. Boulder: Lynne Reiner
- Barry, Tom. 1989. *Guatemala: A Country Guide*. Albuquerque: The Inter-Hemispheric Education Resource Center.
- Bates, Robert H. 2010. *Prosperity and Violence: The Political Economy of Development*. 2nd ed. New York: Norton.



- Bayley, David. 1975. The Police and Political Development in Europe. In *The Formation of National States in Western Europe*, ed. Charles Tilly, 329-379. Princeton: Princeton University Press.
- Bayley, David. 1985. *Patterns of Policy: A Comparative International Analysis*. New Brunswick, NJ: Rutgers University Press.
- Bayley, David H. and Robert M. Perito. 2010. *The Police in War: Fighting Insurgency, Terrorism, and Violent Crime* Boulder: Lynne Rienner.
- Beck, Nathaniel, Jonathan N. Katz, Richard Tucker. 1998. Taking Time Seriously: Time-Series-Cross-Section Analysis with a Binary Dependent Variable. *American Journal of Political Science*. 42, no. 4: 1260-1288.
- Bell, Sam, David Cingranelli, and Amanda Murdie. Working paper. Coercion, Capacity, and Coordination: A Risk Assessment Model of the Determinants of Political Violence.
- Bernheim, B. Douglas and Michael D. Whinston. 1986. Common Agency. *Econometrica* 54, no. 4: 923-942.
- Benson, Bruce L., David W. Rasmussen, and Iljoong Kim. 1998. Deterrence and Public Policy: Trade-Offs in the Allocation of Police Resources. *International Review of Law and Economics* 18:77-100.
- Berry, William D., Jacqueline H.R. DeMeritt, and Justin Esarey. 2010. Testing for Interaction in Binary Logit and Probit Models: Is a Product Term Essential? *American Journal of Political Science* 54, no. 1: 248-266.
- Berry, William D., Matt Golder, and Daniel Milton. 2012. Improving Tests of Theories Positing Interaction. *The Journal of Politics*. 74, no. 3: 653-671.
- Bhasin, Tavishi, Amanda Murdie, and David R. Davis. 2009. Repressing the Variation? An Event-Data Study of Human Rights Violations. Paper presented at the Annual Meeting of the Midwest Political Science Association, Chicago, IL.
- Bittner, Egon. 1972. *The Functions of the Police in Modern Society*. Rockville, MD: National Institute of Mental Health Center for Studies of Crime and Delinquency.
- Boix, Carles. 2008. Civil Wars and Guerilla Warfare in the Contemporary World: Toward a Joint Theory of Motivations and Opportunities *Order, Conflict, and Violence* eds. Stathis Kalyvas, Ian Shapiro, and Tarek Masoud, 197-218. New York: Cambridge.
- Bond, Doug, Joe Bond, Churl Oh, J. Craig Jenkins, and Charles Lewis Taylor. 2003. Integrated Data for Events Analysis (IDEA): An Event Typology for Automated Events Data Development. *Journal of Peace Research* 40, no. 6: 733-745.
- Brambor, Thomas, William Roberts Clark, and Matt Golder. 2005. Understanding Interaction Models: Improving Analysis. *Political Analysis* 13: 1-20.

- Breen, R., Karlson, K.B., & Holm, A. Total, Direct, and Indirect Effects in Logit and Probit Models. *Sociological Methods & Research*, Forthcoming.
- Brewer, John D. et al. 1996. *The Police, Public Order, and the State: Policing in Great Britain, Northern Ireland, the USA, South Africa, and China*. London: MacMillan, 2nd ed.
- Brogden, Michael. 1982. *The Police: Autonomy and Consent*. New York: Academic Press.
- Bryden, Alan and Heiner Hänggi. Reforming and Reconstructing the Security Sector. In *Security Governance in Post-Conflict Peacebuilding*. eds. Alan Bryden and Heiner Hänggi Geneva, 23-42. Centre for the Democratic Control of Armed Forces (DCAF).
- Bueno de Mesquita, Bruce. 1985. Toward a Scientific Understanding of International Conflict: A Personal View. *International Studies Quarterly* 29, no. 2: 121-136.
- Bueno de Mesquita, Bruce and David Lahlman. 1988. Empirical Support for Systematic and Dyadic Explanations of War. *World Politics* 41, no. 41: 1-20.
- Bueno de Mesquita, Bruce, James D. Morrow, and Ethan Zorick. 1997. Capabilities, Perception, and Escalation. *The American Political Science Review* 91, no. 1: 15-27.
- Bueno de Mesquita et al. 2005. *The Logic of Political Survival*. Cambridge, MA: MIT Press.
- Call, Charles T. and William Stanley. 2002. Civilian Security. In *Ending Civil Wars: The Implementation of Peace Agreements*, eds. Stephen John Stedman, Donald Rothchild, and Elizabeth Cousens, 303-326. Boulder: Lynne Rienner.
- Calvert, Peter. 1985. *Guatemala: A Nation in Turmoil*. Boulder: Westview.
- Carter, David B and Curtis S. Signorino. 2010. Back to the Future: Modeling Time Dependence Data. *Political Analysis* 18:271-292.
- Cederman, Lars. 2008. Articulating the Geo-cultural Logic of Nationalist Insurgency. In *Order, Conflict, and Violence*, eds. Stathis N. Kalyvas, Ian Shapiro and Tarek Masoud, 271-300. New York : Cambridge.
- Chalk, Peter. 2007. Case Study: The Pakistani-Afghan Border Region. In *Ungoverned Territories : Understanding and Reducing Terrorism Risks*, eds Angel Rabasa et al, 49-76. Santa Monica, CA: RAND.
- Chevigny, Paul. 1995. *Edge of the Knife: Police Violence in the America*. New York: The New Press.
- Chilcote, Ronald H. 1994. *Theories of Comparative Politics: The Search for a New Paradigm Reconsidered*. 2nd ed. Boulder: Westview Press.

- Cingranelli, David L. and David L. Richards. 2008. *The Cingranelli-Richards (CIRI) Human Rights Data Project Coding Manual Version 2008.3.13*.  
[http://ciri.binghamton.edu/documentation/ciri\\_coding\\_guide.pdf](http://ciri.binghamton.edu/documentation/ciri_coding_guide.pdf).
- Cingranelli, David L. and David L. Richards. 2011. *The Cingranelli-Richards Human Rights Dataset Version 2011.10.12*. <http://www.humanrightsdata.org>
- Clark, William Roberts, Michael J. Gilligan, and Matt Golder. 2006. A Simple Test for Asymmetric Hypotheses. *Political Analysis* 14: 311-331.
- Close, David H. 1995. The Changing Structure of the Right, 1945-1950. In *Greece at the Crossroads: The Civil War and its Legacy* eds. John O. Iatrides and Linda Wrigley, 122-156. University Park, PA: Pennsylvania State University Press.
- Close, David H. 2002. *Greece Since 1945: Politics, Economy, and Society*. New York: Longman.
- Cohen, Youssef, Brian R. Brown, and A.F.K. Organski. 1981. The Paradoxical Nature of State Making: The Violent Creation of Order. *The American Political Science Review* 75, no. 4: 901-910.
- Collier, David. 1993. The Comparative Method. In *Political Science: The State of the Discipline II*, ed. Ada Finifter, 105-119. Washington D.C.: The American Political Science Association
- Collier, Paul and Anke Hoeffler. 2004. Greed and Grievance in Civil War. *Oxford Economic Papers* 56: 563-595.
- Conrad, Courtenay and Will H. Moore. 2011. The Ill-Treatment and Torture (ITT) Data Collection Project Specific Allegation Data- Beta Version, revised 12 December 2011.
- Correlates of War Project. 2008. State System Membership List, v2008.1. Online, <http://correlatesofwar.org>.
- Cramer, James. 1964. *The World's Police*. London: Cassell.
- Davenport, Christian. 1995. Multi-Dimensional Threat Perception and State Repression: An Inquiry into Why States Apply Negative Sanctions. *American Journal of Political Science* 39, no. 3: 683-713.
- Davenport, Christian. 2004. The Promise of Democratic Pacification. *International Studies Quarterly* 48, no. 3: 539-560.
- Davenport, Christian. 2007. State Repression and Political Order. *Annual Review of Political Science* 10: 1-23.

- Davenport, Christian and David A. Armstrong III. 2004. Democracy and the Violation of Human Rights: A Statistical Analysis from 1976-1996. *American Journal of Political Science* 48, no. 3: 538-554.
- Den Boer, Monica. 1996. Forza Polizia: Time to Change the Italian Policing System? *Policing Change, Changing Police*, ed. Otwin Marenin, 135-170. New York: Garland Publishing.
- DeRouen, Karl R. and David Sobek. 2004. The Dynamics of Civil War Duration and Outcome. *Journal of Peace Research* 41, no. 3: 303-320.
- Dixon, Jeffrey. 2009. What Causes Civil Wars? Integrating Quantitative Research Findings. *International Studies Review* 11: 707-735.
- Doyle, Michael W. and Nicholas Sambanis. 2000. International Peacebuilding: A Theoretical and Quantitative Analysis. *The American Political Science Review* 94, no. 4: 779-801.
- Early, John D. 1974. Revision of Ladino and Maya Census Populations of Guatemala, 1950 and 1964. *Demograph* 11, no. 4: 105-117.
- Eckstein, Harry. 1980. Theoretical Approaches to Explaining Collective Violence. In *Handbook of Political Conflict: Theory and Research*, ed. Ted Robert Gurr, 135-166. New York: The Free Press.
- Englehart, Neil A. 2009. State Capacity, State Failure, and Human Rights. *Journal of Peace Research* 46, no. 2: 163-180.
- Evans, Peter, Dietrich Rueschemeyer, and Theda Skocpol . 1985. On the Road to a More Adequate Understanding of the State. In *Bringing the State Back In*, eds. Peter Evans, Dietrich Rueschemeyer, and Theda Skocpol, 347-366. Cambridge: Cambridge University Press
- Farrell, Graham, Erin Lane, Ken Clark, and Andromachi Tseloni. 2001. What Does the World Spend on Policing? *International Journal of Comparative Sociology* 42, nos. 1-2: 59-73.
- Fearon, James D. 1995. Rationalist Explanations for War. *International Organization* 49, no. 3: 379-414.
- Fearon, James and David Laitin. 2003. Ethnicity, Insurgency, and Civil War. *The American Political Science Review* 97, no. 1: 75-90.
- Fjelde, Hanne and Indra DeSoysa. 2009. Coercion, Co-option, or Cooperation: State Capacity and the Risk of Civil War, 1961-2004. *Conflict Management and Peace Science* 26, no. 1: 5-25.
- Fleischer, Hagen. 1995. The National Liberation Front (EAM), 1941-1947. In *Greece at the Crossroads: The Civil War and its Legacy* eds. John O. Iatrides and Linda Wrigley, 48-89. University Park, PA: Pennsylvania State University Press.

- Fortna, Virginia. 2004. Does Peacekeeping Keep Peace? International Intervention and the Duration of Peace after Civil War. *International Studies Quarterly* 48, no. 2: 269-292.
- Friedrich, Robert J. In Defense of Multiplicative Terms in Multiple Regression Equations. *American Journal of Political Science* 26, no. 4: 797-833.
- Fukuyama, Francis. 2004. *State-Building*. Ithaca: Cornell.
- Fukuyama, Francis ed. 2006. *Nation-Building: Beyond Afghanistan and Iraq*. Baltimore: Johns Hopkins.
- Gates, Scott, Håvard Hegre, Mark P. Jones and Håvard Strand. 2006. Institutional Inconsistency and Political Instability: Polity Duration 1800-2000. *American Journal of Political Science* 50, no. 4: 893-908.
- Gerolymatos, Andre. 2004. *Red Acropolis, Black Terror*. New York: Basic Books.
- Gleditsch, Kristian S. & Michael D. Ward .1999. Interstate System Membership: A Revised List of the Independent States since 1816. *International Interactions* 25: 393-413.
- Gleditsch, Nils Peter, Peter Wallensteen, Mikael Eriksson, Margareta Sollenberg, and Håvard Strand. 2002. Armed Conflict 1946-2001: A New Dataset. *Journal of Peace Research* 39, no. 5.
- Goldstein, Robert Justin. 1978. *Political Repression in Modern America, From 1870 to Present*. Boston: G. K. Hall.
- Goodwin, Jeff. 2001. *No Other Way Out: States and Revolutionary Movements, 1945-1991*. New York: Cambridge.
- Gott, Richard. 1970. *Guerilla Movements in Latin America*. London: Nelson.
- Green, William. 2010. Testing Hypotheses about Interaction Terms in Nonlinear Models. *Economics Letters* 107: 291-296.
- Gupta, Dipak K., Hardinder Singh, and Tom Sprague. 1993. Government Coercion of Dissidents: Deterrence or Provocation? *The Journal of Conflict Resolution* 37, no. 2: 301-339.
- Gurr, Ted. 1968. A Causal Model of Civil Strife: A Comparative Analysis Using New Indices *American Political Science Review* 62(4):1104-1124.
- Gurr, Ted Robert. 1980. On the Outcomes of Violent Conflict. In *Handbook of Political Conflict: Theory and Research*, ed. Ted Robert Gurr, 238-296. New York: The Free Press.
- Haldén, Peter. 2010. Systems-building Before State-building: on the Systemic Preconditions of State-Building. *Conflict, Security & Development* 10, no. 4: 519-545.

- Hanmer, Michael J. and Kerem Ozan Kalkan. 2013. Behind the Curve: Clarifying the Best Approach to Calculating Predicted Probabilities and Marginal Effects from Limited Dependent Variable Models. *American Journal of Political Science* 57, no. 1: 263–277.
- Handy, Jim. 1984. *Gift of the Devil: A History of Guatemala*. Boston: South End.
- Hänggi, Heiner. 2004. Conceptualizing Security Sector Reform and Reconstruction. In *Reform and Reconstruction of the Security Sector*. eds. Alan Bryden and Heiner Hänggi, 1-11. Geneva Centre for the Democratic Control of Armed Forces (DCAF).
- Hänggi, Heiner. 2005. Approaching Peacebuilding from a Security Governance Perspective. In *Security Governance in Post-Conflict Peacebuilding*. eds. Alan Bryden and Heiner Hänggi, 3-19. Geneva Centre for the Democratic Control of Armed Forces (DCAF).
- Harbom, Lotta and Peter Wallensteen. 2010. Armed Conflict, 1946-2009. *Journal of Peace Research* 47, no. 4:
- Harrendorf, Stefan and Paul Smit. Attributes of Criminal Justice Systems: Resources, Performance and Punitivity. In *International Statistics on Crime and Justice*, eds. S. Harrendorf, M. Heiskanen, S. Malby, 113-152. Helsinki: European Institute for United Nations Office on Drugs and Crime (UNODC) Crime Prevention and Control.
- Hegre, Håvard and Nicholas Sambanis. 2006. Sensitivity Analysis of Empirical Results on Civil War Onset. *The Journal of Conflict Resolution* 50, no. 4: 508-535.
- Hegre, Håvard, Tanja Ellingsen, Scott Gates, and Nils Petter Gleditsch. 2001. Towards a Democratic Civil Peace? Democracy, Political Change, and Civil War. *The American Political Science Review* 95, no. 6: 33-48.
- Hendrix, Cullen S. 2010. Measuring State Capacity: Theoretical and Empirical Implications for the Study of Civil Conflict. *Journal of Peace Research* 47, no. 3: 273-285.
- Herbst, Jeffrey. 2004. African Militaries and Rebellion: The Political Economy of Threat and Combat Effectiveness. *Journal of Peace Research* 41, no. 3: 357-369.
- Hey, Hilde. 1995. *Gross Human Rights Violations: A Search for Causes*. Boston: Martinus Nijhoff.
- Hibbs, Douglas A. *Mass Political Violence: A Cross-National Causal Analysis*. New York: John Wiley and Sons.
- Hills, Alice. 2009. Henchmen—Or Why Police Don't Mount Coups. *RUSI Journal* 154, no. 4: 14-19.
- Holden, Robert H. 2004. *Armies without Nations: Public Violence and State Formation in Central America 1821-1960*. New York: Oxford.

- Huggins, Martha K. 1988. *Political Policing: The United States and Latin America*. Durham NC: Duke.
- Iatrides, John O. 1972. *Revolt in Athens: The Greek Communist "Second Round," 1944-1945*. Princeton, NJ: Princeton.
- Iatrides, John O. 1995. Greece at the Crossroads, 1944-1950. In *Greece at the Crossroads: The Civil War and its Legacy* eds. John O. Iatrides and Linda Wrigley, 1-30. University Park, PA: Pennsylvania State University Press.
- Innocent, Malou. 2008. A Model for Modern Insurgency. *Armed Forces Journal* (August).
- International Crisis Group (ICG). 2009. *Pakistan: Countering Militancy in FATA*. Asia Report N°178.
- The International Monetary Fund. *International Government Finance Statistics*. <http://www.imfstatistics.org/imf/>. (accessed November 15-30, 2010).
- Jagers, Keith and Ted Robert Gurr. 1996. POLITY III: Regime Change and Political Authority, 1800-1994. [computer file] (Study #6695). 2nd ICPSR version. Boulder, CO: Keith Jagers/College Park, MD: Ted Robert Gurr [producers], 1995. Ann Arbor, MI: Inter-University Consortium for Political and Social Research [distributor], 1996.
- Jonas, Susanne. 1991. *The Battle for Guatemala: Rebels, Death Squads, and U.S. Power*. Boulder: Westview.
- Jones, Howard. 1989. "A New Kind of War" *America's Global Strategy and the Truman Doctrine in Greece*. New York: Oxford.
- Jones, Seth G. and C. Christine Fair. 2010. *Counterinsurgency in Pakistan*. Santa Monica, CA: RAND.
- Kalyvas, Stathis N. 2006. *The Logic of Violence in Civil War*. New York: Cambridge.
- Kalyvas, Stathis and Laia Balcells. 2010. International System and Technologies of Rebellion: How the End of the Cold War Shaped Internal Conflict. *American Political Science Review* 104, no. 3: 415-429.
- Kaufmann, Daniel, Aart Kraay, and Massimo Mastruzzi. 2010. The Worldwide Governance Indicators: Methodology and Analytical Issues. World Bank Policy Research Working Paper No. 5430. Available at SSRN: <http://ssrn.com/abstract=1682130>.
- Kelling, George L. and Mark H. Moore. 1988. The Evolving Strategy of Policing. *Perspectives on Policing* no 4.
- King, Gary, Robert O. Keohane, and Sidney Verba. 1994. *Designing Social Inquiry: Scientific Inference in Qualitative Research*. Princeton: Princeton.

- King, Gary and Will Lowe. 2003a. An Automated Information Extraction Tool for International Conflict Data with Performance as Good as Human Coders: A Rare Events Evaluation Design. *International Organization* 57 (Summer): 617–642.
- King , Gary and Will Lowe, 2003b, 10 Million International Dyadic Events. <http://hdl.handle.net/1902.1/FYXLAWZRIA> UNF:3:dSE0bsQK2o6xXlxeaDEhcg== IQSS Dataverse Network [Distributor] V3 [Version]. (accessed May 19, 2012).
- King, Gary, and Langche Zeng. 2001. Logistic Regression in Rare Events Data. *Political Analysis* 9: 137-163.
- King, John. 1998. Repression, Domestic Threat, and Interactions in Argentina and Chile. *Journal of Political and Military Sociology* 26, no. 2: 1-27.
- Krasner, Stephen D. 1984. Review: Approaches to the State: Alternative Conceptions and Historical Dynamics. *Comparative Politics*, 16, no. 2: 223-246.
- Kronmal, Richard. 1993. Spurious Correlation and the Fallacy of the Ratio Standard Revisited. *Journal of the Royal Statistical Society, Series A (Statistics in Society)* 156, no. 3: 379-392.
- Kurian, George Thomas. 1989. *World Police Encyclopedia of Police Forces and Penal Systems*. New York: Facts on File.
- LaCharité, Norman A. 1973. *Political Violence in Guatemala, 1963-1967: Its Social, Economic, Political, and Historical Origins, and its Patterns and Sequences*. Ph.D. diss, The American University.
- Lacy, Mark. 2011. U.S. Finds Pervasive Bias Against Latinos by Arizona Sheriff. *New York Times*. December 15.
- Laffont, Jean-Jacques and David Martimort. 2001. *The Theory of Incentives I: The Principal-Agent Model*.
- Lake, David A. and Donald Rothchild. 1996. Containing Fear: the Origins and Management of Ethnic Conflict. *International Security* 21, no. 2: 41-75.
- Landman, Todd. 2006. *Studying Human Rights*. London: Routledge.
- Lange, Matthew and Hrag Balian. 2008. Containing Conflict or Instigating Unrest? A Test of the Effects of State Infrastructural Power on Civil Violence. *Studies in Comparative International Development* 43: 314-333.
- Levi, Margaret. 1988. *Of Rule and Revenue*. Berkley: University of California Press.
- Levi, Margaret. 2002. The State of the Study of the State. In *Political Science: the State of the Discipline* eds. Ira Katzelson and Helen Milner, 33-55. New York: Norton.



- Levy, Jack S. 2008. Case Studies: Types, Designs, and Logic of Inference. *Conflict Management and Peace Science* 25, no. 1.
- Lichbach, Mark Irving. 1987. Deterrence or Escalation? The Puzzle of Aggregate Studies of Repression and Dissent. *The Journal of Conflict Resolution* 31, no. 2:266-297.
- Lijphart, Arend. 1971. Comparative Politics and the Comparative Method. *The American Political Science Review* 65, no. 3: 682-693.
- Lutterbeck, Derek. 2004. Between Police and Military: The New Security Agenda and the Rise of Gendarmeries. *Cooperation and Conflict*. 39, no. 1: 45-68.
- Mahoney, James and Gary Goertz. 2006. A Tale of Two Cultures: Contrasting Quantitative and Qualitative Research. *Political Analysis* 14: 227–249.
- Mann, Michael. 1986. The Autonomous Power of the State: Its Origins, Mechanisms, and Results. *European Journal of Sociology* 25, no. 2: 185-213.
- Mann, Michael. 2008. Infrastructural Power Revisited. *Studies in Comparative International Development* 43: 355-365.
- Mansfield, Edward D. and Jack Snyder. 2002. Democratic Transitions, Institutional Strength, and War. *International Organizations* 56, no. 2: 297-337.
- Manz, Beatriz. 1988. *Refugees of a Hidden War: The Aftermath of Counterinsurgency in Guatemala*. Albany: State University of New York.
- Marenin, Otwin. 1985. Review: Police Performance and State Rule: Control and Autonomy in the Exercise of Coercion. *Comparative Politics* 18, no. 1: 101-122.
- Marenin, Otwin. 1996. Changing Police, Policing Change: Towards More Questions. In *Policing Change, Changing Police*, ed. Otwin Marenin, 309-330. New York: Garland Publishing.
- Marenin, Otwin. 2005. *Restoring Policing Systems in Conflict Torn Nations: Process, Problems, Prospects*. Occasional Paper No. 7. Geneva: Geneva Centre for the Democratic Control of Armed Forces (DCAF).
- Marshall, Monty G., Ted Robert Gurr, and Barbara Harff. 2011. Polity IV Data Series Version 2010. <http://www.systemicpeace.org/polity/polity4.htm> (accessed February 17, 2012).
- Marshall, Monty G. Ted Robert Gurr, and Barbara Harff. 2010. PITF – State Failure Problem Set: Internal Wars and Failures of Governance, 1955-2009. <http://www.systemicpeace.org/inscr/inscr.htm> (accessed February 1, 2012).
- Mason, David T. and Patrick J. Fett. 1996. How Civil Wars End: A Rational Choice Approach. *The Journal of Conflict Resolution* 40, no. 4: 546-568.

- Mazower, Mark. 2000. Introduction. In *After the War was Over: Reconstructing the Family, Nation, and State in Greece, 1943-1960*, ed Mark Mazower, 1-23. Princeton, NJ: Princeton.
- Mazower, Mark. 2000. Three Forms of Political Justice: Greece 1944-1945. In *After the War was Over: Reconstructing the Family, Nation, and State in Greece, 1943-1960*, ed Mark Mazower, 24-41. Princeton, NJ: Princeton
- McClintock, Michael. 1985. *State Terror and Popular Resistance in Guatemala*. Vol. 2 of *The American Connection*. London: Zed.
- Merlingen, Michael and Rasa Ostrauskaite. 2005. ESDP Police Missions: Meaning, Context and Operational Challenges. *European Foreign Affairs Review* 10: 215-235.
- Miller, Gary J. 2005. The Political Evolution of Principal-Agent Models. *Annual Review of Political Science* 8: 203-225.
- Mitchell, Michael N. and Xiao Chen. 2005. Visualizing Main Effects and Interactions for Binary Logit Models. *The Stata Journal* 5, no. 1: 64-82.
- Moore, Will. 1998. Repression and Dissent: Substitution, Context, and Timing. *American Journal of Political Science* 42, no. 3: 851-873.
- Morgan, Rhiannon. 2009. Chapter 1: Human Rights Research and the Social Sciences. In *Interpreting Human Rights: Social Science Perspectives*, eds. Rhiannon Morgan and Brian Turner, 1-15. London: Routledge.
- Muller, Edward N. 1985. Income Inequality, Regime Repressiveness, and Political Violence. *American Sociological Review* 50, no. 1: 47-61.
- Needham, William R. 1971. *Paramilitary Forces in Greece, 1946-1949*. Carlisle, PA: U.S. Army War College.
- Neild, Rachel. 2001. Democratic Police Reforms in War-torn Societies. *Conflict, Security, and Development* 1, no. 1: 21-43.
- Newman, Graeme, Adam C. Bouloukos, and Debra Cohen. U.S. Department of Justice. World Factbook of Criminal Justice Systems. Office of Justice Programs. Bureau of Justice Statistics. <http://www.bjs.gov/content/pub/html/wfcj.cfm#new>
- North, Douglas C. 1990. *Institutions, Institutional Change, and Economic Performance* New York: Cambridge University Press.
- North, Douglas and Robert Paul Thomas. 1973. *The Rise of the Western World: A New Economic History* London: Cambridge University Press.

- North, Douglas C., John Joseph Weingast, and Barry R. Weingast. 2009. *Violence and Social Orders: A Conceptual Framework for Interpreting Recorded Human History* New York: Cambridge University Press.
- Norton, Edward C., Hua Wang, and Chunrong Ai. 2004. Computing Interaction Effects and Standard Errors in Logit and Probit Models. *STATA Journal* 4, no. 2: 154-167.
- O'Ballance, Edgar. 1966. *The Greek Civil War, 1944-1949*. Praeger: New York.
- Organski, A.F.K. and Jacek Kugler. 1980. *The War Ledger*. Chicago: University of Chicago.
- Oxford Analytica. 2007. *Pakistan is ill-equipped for 'war on terror.'* An Oxford Analytica Profile.
- Paxton, P., J. Hipp, and S. Marquart-Pyatt. 2011. Nonrecursive Models: Endogeneity, Reciprocal Relationships, and Feedback Loops. SAGE Publications, Quantitative Applications in the Social Science (QASS) Series #07-168.
- Petersen, Trond. 1993. Recent Trends in: The Economics of Organization: The Principal-Agent Relationship. *Acta Sociologica* 36, No. 3: 277-293.
- Przeworski, Adam and Henry Teune. 1970. *The Logic of Comparative Inquiry*. New York: Wiley.
- Ray, James Lee. 2003. Explaining Interstate Conflict and War: What Should Be Controlled For? *Conflict Management and Peace Science* 20, no. 1: 1-31.
- Regan, Patrick M. and Errol A. Henderson. 2002. Democracy, Threats and Political Repression in Developing Countries: Are Democracies Internally Less Violent? *Third World Quarterly* 23, no. 1: 119-136.
- Regan, Patrick M. and Daniel Norton. 2005. Greed, Grievance, and Mobilization in Civil Wars. *Journal of Conflict Resolution* 49, no. 5: 319-336.
- Reiner, Robert. 2000. *The Politics of the Police* New York: Oxford. 3rd ed.
- Robben, Antonius. 2005. *Political Violence and Trauma in Argentina*. Philadelphia: University of Pennsylvania.
- Rose-Ackerman, Susan. 2004. Establishing the Rule of Law. In *When States Fail: Causes and Consequences*, ed. Robert I. Rotberg, 182-221. Princeton: Princeton University Press.
- Ross, Stephen. 1973. The Economic Theory of Agency: The Principal's Problem. *American Economic Review* 63, no. 2: 134-139.
- Rotberg, Robert I. 2004. The Failure and Collapse of Nation States: Breakdown, Prevention, and Repair. In *When States Fail: Causes and Consequences*, ed. Robert I. Rotberg, 1-50. Princeton: Princeton University Press.

- Roubatis, Yiannis P. 1987. *Tangled Webs: The U.S. in Greece 1947-1967*. New York: Pella.
- Samatas, Minos. 1968. Greek McCarthyism: A Comparative Assessment of Greek Post-Civil War Repressive Anticommunism and the U.S. Truman-McCarthy Era. *Journal of the Hellenic Diaspora*. 13, no 3-4: 4-75.
- Sambanis, Nicholas. 2004. What is Civil War? Conceptual and Empirical Complexities of an Operational Definition. *The Journal of Conflict Resolution* 48, no. 6: 814-858.
- Sambanis, Nicholas. Unpublished Working Paper. Short and Long Term Effects of United Nations Peace Operations: Post Conflict Transitions Working Paper No. 11.
- Sanín, Francisco Gutiérrez. 2008. Clausewitz Vindicated? Economics and Politics in the Colombian War. In *Order, Conflict, and Violence* eds. Stathis Kalyvas, Ian Shapiro, and Tarek Masoud, 219-241. New York: Cambridge.
- Sarkees, Meredith Reid. 2010. Codebook for the Intra-State Wars v.4.0. available at <http://www.correlatesofwar.org/>.
- Sarkees, Meredith Reid and Frank Wayman. 2010. *Resort to War: 1816 - 2007*. CQ Press.
- Schrodt, Philip A. 2010. Seven Deadly Sins of Contemporary Quantitative Political Analysis. Paper presented at Annual Meeting of the American Political Science Association, Washington, September.
- Seferiades, Seraphim. 2005. The Coercive Impulse: Policing Labour in Interwar Greece. *Journal of Contemporary History* 40, no. 1: 55-78.
- Silver, Allan. 2005. The Demand for Order in Civil Society. In *Policing: Key Readings*, ed. Tim Newburn, 7-24. Portland, OR: Willan.
- Singer, J. David. 1987. Reconstructing the Correlates of War Dataset on Material Capabilities of States, 1816-1985 *International Interactions*, 14: 115-32.
- Skocpol, Theda. 1985. Bringing the State Back In: Strategies of Analysis in Current Research. In *Bringing the State Back In*, eds. Peter Evans, Dietrich Rueschemeyer, and Theda Skocpol, 3-37. Cambridge: Cambridge University Press.
- Small, Melvin and J. David Singer. 1982. *Resort to Arms: International and Civil Wars, 1816-1980*. Beverly Hills, CA: Sage.
- Smith, Chris. 2001. Security-sector Reform: Development Breakthrough or Institutional Engineering? *Conflict, Security & Development* 1, no. 1: 5-20.
- Smith, Ole L. 1995. Communist Perceptions, Strategy, and Tactics, 1945-1949. In *Greece at the Crossroads: The Civil War and its Legacy* eds. John O. Iatrides and Linda Wrigley, 90-121. University Park, PA: Pennsylvania State University Press.

- Soifer, Hillel and Matthias vom Hau. 2008. Unpacking the *Strength* of the State: The Utility of State Infrastructural Power. *Studies in Comparative International Development* 43: 219-230.
- Stepan, Alfred. 1999. Toward a New Comparative Analysis of Democracy and Federalism: Demos Constraining and Demos Enabling Federations. Paper presented at the conference on Federalism, Democracy, and Public Policy Centro de Investigación y Docencia Económicas, Mexico City, Mexico June 14-15, 1999.
- Tammen, Ronald and Jacek Kugler eds. 2012. *Performance of Nations*. Rowman and Littlefield.
- Taylor, Charles and Michael C. Hudson. 1973. *World Handbook of Political and Social Science Indicators*, 2nd ed. Ann Arbor, MI: International Consortium for Political Research.
- Tilly, Charles. 1985. War Making and State Making as Organized Crime. In *Bring the State Back In*, eds. Peter Evans, Dietrich Rueschemeyer, and Theda Skocpol, 169-190. Cambridge: Cambridge University Press.
- Tilly, Charles. 2003. *The Politics of Collective Violence* New York: Cambridge.
- Toft, Monica Duffy. 2010. *Securing the Peace: The Durable Settlement of Civil Wars*. Princeton: Princeton.
- Thoms, Oskar N.T. and James Ron. 2007. Do Human Rights Violations Cause Internal Conflict? *Human Rights Quarterly* 29: 674-705.
- United State Government Accounting Office (GAO). 2008. *Combating Terrorism: The United States Lacks Comprehensive Plan to Destroy the Terrorist Threat and Close the Safe Haven in Pakistan's Federally Administered Tribal Areas*. GAO-08-622. Washington DC.
- United Nations Office on Drugs and Crime. "United Nations Surveys on Crime Trends and the Operations of Criminal Justice Systems (CTS)" <http://www.unodc.org/unodc/en/data-and-analysis/United-Nations-Surveys-on-Crime-Trends-and-the-Operations-of-Criminal-Justice-Systems.html> (accessed November 1st, 2010).
- Vagg, Jon. 1996. The Legitimations of Policing in Hong Kong: A Non-Democratic Perspective. In *Policing Change, Changing Police*, ed. Otwin Marenin, 107-134 . New York: Garland Publishing.
- Walt, Stephen M. 1999. Rigor or Rigor Mortis?: Rational Choice and Security Studies. *International Security*. 23, no. 4: 5-48.
- Walter, Barbara. 2002. *Committing to Peace*. Princeton: Princeton University Press.
- Walter, Barbara F. 2004. Does Conflict Beget Conflict? Explaining Recurring Civil War. *Journal of Peace Research* 41, no. 3 (May): 371-388.

- Waltz, Kenneth. 1959. *Man, the State, and War*. New York: Columbia University Press.
- Waterman, Richard W. and Kenneth J. Meier. 1998. Principal-Agent Models: An Expansion? *Journal of Public Administration Research and Theory* 8, no. 2: 173-202.
- Weaver, Jerry L. 1970. Political Style of the Guatemalan Elite. *Studies in Comparative International Development* 5, no. 4: 63-81.
- Weber, Max. [1918] 2010. Politics as Vocation. In *Essential Readings in Comparative Politics* 3rd ed., eds. Patrick H. O'Neil and Ronald Rogowski, 22-28. New York: Norton.
- Weiss, Tomás. 2011. The Blurring Border Between the Police and the Military: A Debate without Foundations. *Cooperation and Conflict* 46, no. 3: 396-405.
- Widner, Jennifer. 2004. Building Effective Trust in the Aftermath of Severe Conflict. In *When States Fail: Causes and Consequences*, ed. Robert I. Rotberg, 222-236. Princeton: Princeton University Press.
- Wimmer, Andreas, Lars-Erik Cederman, and Brian Min. 2009. Ethnic Politics and Armed Conflict: A Configurational Analysis of a New Global Data Set. *American Sociological Review* 74: 316-337.
- Wood, Reid M. and Mark Gibney. 2010. The Political Terror Scale (PTS): A Re-introduction and a Comparison to CIRI. *Human Rights Quarterly* 32, no. 2: 367-400.
- World Bank. 2010. World Development Indicators (WDI). <http://data.worldbank.org/indicator> (accessed November 15-30, 2010).
- Wulf, Herbert. 2004. *Security Sector Reform in Developing and Transitional countries*. Berghof Research Center for Constructive Conflict Management.
- Zellner, Arnold. 1968. An Efficient Method of Estimating Seemingly Unrelated Regressions and Tests for Aggregation Bias *Journal of the American Statistical Association* 57, no. 298: 348-368.
- Zorn, Christopher J.W. 2001. Generalized Estimating Equation Models for Correlated Data: A Review with Applications. *American Journal of Political Science* 45, no. 2: 470-490.

## Appendix A - Description of Dependent Variables

My primary dependent variable throughout this study is *Civil War Onset* (Onset). My conceptual definition for civil war is “armed combat within the boundaries of a recognized sovereign entity between two parties subject to a common authority at the outset of hostilities” (Kalyvas 2006). I opt for this definition because it is general enough to include the many competing definitions of civil war mentioned by studies that differ mainly on quantitative threshold issues (Sambanis 2004). A civil war onset, therefore, is the event marking the beginning of a conflict that qualifies as a civil war.

I elect to draw from existing datasets to the maximum extent possible. I mitigate for the idiosyncratic biases present in individual databases by drawing from five different sources. My selection guidelines include prevalence in the civil war literature and maximal temporal domain. I also seek to select datasets that exhibit a variety of in their operationalization criteria for civil war. Below I offer a description of each of the five databases. The paragraph heading includes each dataset’s moniker I employ throughout this paper. Abbreviations are in parentheses.

### COW

One source of variation among civil war datasets is the threshold of casualties. The first four of the datasets I employ share a common casualty threshold. Among these four, the most prevalent in the civil war literature is the Correlates of War (COW) Intra-State War Dataset (v4.0) (Sarkees, Reid and Wayman 2010). The COW definition of civil war can be summarized as military action internal to the metropole, requiring the active participation of the national government, with effective resistance by both sides. State violence should be sustained and reciprocated and casualties should exceed 1,000 in a given 12 month period (Small and Singer 1982).<sup>133</sup> The temporal domain is 1816-2007. The COW divides intrastate wars into three general types depending upon the status of the combatants: wars of the government of the state against a non-state entity, wars of the government of a regional subunit against a non-state entity, and intercommunal wars. I choose to only include the first category since the focus of my study is the role of police on civil war onset, and police do not factor into the other two categories of

---

<sup>133</sup> The elaboration of this definition relies on Sambanis (2004) and Sarkees (2010).

civil war. I also choose to eliminate “internationalized” civil wars since the presence of a third party state alters the relationship of a state’s police force to its society and to the state central authority. Following my aforementioned methodology results in 113 observations of civil war onset that occur between 1940 and 2007. I restrict myself to this timeframe for purposes of comparison since the other datasets do not contain data for wars that occurred before 1940, nor do most of the independent variables include observations before that time.

### **Sambanis**

A second dataset developed by Sambanis (2004) is an update to a commonly used dataset developed by Doyle and Sambanis (2000). The Sambanis alters the COW definition according to a number of factors, chief among them that a civil war onset can occur when at least 500 casualties occur in the first year. Using this definition, Sambanis develops an original dataset of 119 civil wars onset that occurred between 1945 and 1999.

### **Fearon and Laitin (FL)**

The third dataset comes from Fearon and Laitin (2003). These authors consider civil wars as having met the following criteria:

(1) They involved fighting between agents of (or claimants to) a state and organized, nonstate groups who sought either to take control of a government, to take power in a region, or to use violence to change government policies. (2) The conflict killed at least 1,000 over its course, with a yearly average of at least 100. (3) At least 100 were killed on both sides (including civilians attacked by rebels). The last condition is in-tended to rule out massacres where there is no organized or effective opposition.

Again, this dataset is very similar to the COW Intrastate War Dataset. The primary difference is that Fearon and Laitin include of wars of independence. The authors’ justification for including these types of wars is that other datasets that exclude successful wars of independence as valid observations of a civil war do consider unsuccessful attempts to be valid instances of onset. Fearon and Laitin consider this distinction to be arbitrary. By applying their own criteria, Fearon and Laitin generate 114 observations of civil war onset between 1945 and 1999.

### **Toft**

The fourth dataset that shares the common COW casualty threshold is the “Civil War Dataset” (Toft 2010). This dataset is the most recent dataset and has a time domain of 1940 to



2008. Toft employs the Correlates of War definition for civil war. Toft draws upon each of the aforementioned civil war datasets, but differs in that she includes instances of wars of independence, she holds to the threshold of 1000 casualties more strictly, and she disaggregates episodes into new onsets differently. Toft's methods result in 134 cases of civil war onset.

## **PRIO**

The final dataset on civil war is the Uppsala Conflict Data Program (UCDP)/ Peace Research Institute Oslo (PRIO) Armed Conflict Dataset v.4-2010 (Harbom, Lotta, and Wallensteen 2010; Gleditsch et al 2002). This dataset is distinct in that it utilizes a threshold of violence is 25 deaths for onsets of "minor armed conflicts"— far lower than the threshold of 1000 deaths per year the other studies employ. The PRIO dataset contains annual observations of intrastate armed conflict for all states in the international system, as defined by Gleditsch and Ward (1999), between 1946-2009. Armed conflict is "a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, resulting in at least 25 battle-related deaths." Intrastate wars can consist of *internal armed conflict* without intervention from other states or *internationalized internal armed conflict* between the government of a state and one or more internal opposition group(s) with intervention from other states (secondary parties) on one or both sides. The UCDP/PRIO datasets includes 331 observations of intrastate war onsets between 1946 and 2009.

## Appendix B - Supporting Information for Chapter 2

### Statistical Comparisons of Sampling Bias

This section contains a description of the possible bias effects resulting from use of certain independent variables, stemming from reduced sample size due to missing data. To determine if any bias effect results, I compare the means and standard deviations of the unconstrained sample to the means and standard deviations of the restricted samples. I then draw upon extant theory to discern any bias effects from any resulting differences in means and standard deviations.

#### *Bias Effects of Including Police Capacity Data*

This sub-section addresses possible bias resulting from inclusion of data on police capacity. The table below depicts summary statistics of the quinquennial average polity IV score (polity5) for unconstrained dataset. T is measured in quinquennials.

**Table B-1 Polity5 Statistics for Unconstrained Sample**

Variable	Mean	Std. Dev.	Min	Max	Observations
polity overall	-.6238209	7.398527	-10	10	N = 1258
between		6.411547	-10	10	n = 167
within		3.681265	-12.42382	13.25618	T = 7.53293

The next two tables depict the summary statistics for the *polity* measure of those country-years with corresponding police data. The first table is for police per capita and the second table is for police per area.

**Table B-2 Polity Statistics when including Police per capita**

Variable	Mean	Std. Dev.	Min	Max	Observations
polity overall	2.217546	7.514041	-10	10	N = 455
between		6.951734	-10	10	n = 137
within		3.171809	-13.38245	13.41755	T = 3.32117

**Table B-3 Polity Statistics when including Police per Area**

Variable	Mean	Std. Dev.	Min	Max	Observations
polity overall	2.196966	7.462801	-10	10	N = 467
between		6.868447	-10	10	n = 138
within		3.223377	-13.40303	13.39697	T = 3.38406

It is evident that the countries with corresponding measures of police capacity are more democratic, as the mean value increases from 0.6 to 2.2, though the effect of any bias resulting from inclusion of police measures is unclear. While higher levels of democracy are associated with low levels of civil war, it is possible that the increase in mean values could represent a shift from autocracy to anocracy, which are associated with higher levels of civil wars. Standard deviations do not exhibit much change, thus the amount of variation in the scores remains relatively constant even though the mean values increases. If there had been an increase in the within country measures of standard deviation, it could have indicated a bias because the process of democratization serves to increase the probability of civil war onset (Hegre et al 2001).

This table depicts the summary statistics for a measure of energy consumption per capita. The source of energy data is the Primary Energy Consumption (PEC) measure from the COW National Material Capabilities dataset (Singer 1987).

**Table B-4 Encap Statistics for Unconstrained Sample**

Variable		Mean	Std. Dev.	Min	Max	Observations
development	overall	3.246447	8.69467	-.0857143	116.9046	N = 1353
	between		8.658087	-.0857143	83.45844	n = 193
	within		3.984572	-27.72583	53.5437	T-bar = 7.01036

The next two tables depict the effect of including *development* on the two measures of police capacity. While the effect on the means is minimal, standard deviation between countries reduces, indicating a bias towards countries that are closer to the mean. The bias effect of this clustering is unclear since it indicates an exclusion of countries with both higher and lower levels of development. On the other hand, standard deviations within countries increases, indicating a bias towards developing countries- a phenomena associated with a lower risk of civil war (Fearon and Laitin 2004; Hegre and Sambanis 2006).

**Table B-5 Encap Statistics when Including Police per capita**

Variable		Mean	Std. Dev.	Min	Max	Observations
development	overall	3.929305	8.327966	0	81.72714	N = 475
	between		6.337399	0	43.98705	n = 150
	within		5.093125	-27.04297	54.22655	T = 3.16667

**Table B-6 Encap Statistics when Including Police per area**

Variable		Mean	Std. Dev.	Min	Max	Observations
development	overall	3.841276	8.283921	0	81.72714	N = 471
	between		6.316462	0	43.98705	n = 148
	within		5.037809	-27.131	54.13852	T = 3.18243

***Bias effects of including the MAR variable***

The following tables represent the effect on polity score statistics that result from restricting the sample to only those country-years with corresponding MAR data and police per capita data. The first table depicts the statistical for measures of police per capita and the second for measures of police per area. The overall effect is to reduce the mean and bring it closer to the mean of the unconstrained sample. Standard deviations remain relatively unchanged. The effect of this shift in means is mixed. If the shift represents a move away from democratic states, then it should represent a bias towards more civil war prone countries. If it represents a move of anocracies towards autocracy, then it should indicate a bias towards less civil war.

**Table B-7 Polity Statistics when Including MAR variable and Police per capita measure on**

Variable		Mean	Std. Dev.	Min	Max	Observations
polity	overall	1.556796	7.389224	-10	10	N = 309
	between		6.676888	-9	10	n = 92
	within		3.228032	-8.893204	12.7568	T = 3.3587

**Table B-8 Polity Statistics when Including MAR variable and Police per area Measure**

Variable		Mean	Std. Dev.	Min	Max	Observations
polity	overall	1.529383	7.385494	-10	10	N = 308
	between		6.615229	-9	10	n = 91
	within		3.233285	-8.920617	12.72938	T = 3.38462

The next two tables represent the summary statistics on energy consumption per capita for country years with corresponding values for police capacity and MAR scores. Overall means reduce only slightly. Both overall and between standard deviations decrease – indicating a cluster of country-scores towards the mean. Again, any resulting bias effect is unclear since states with both high and low scores appear to have dropped out. Within country standard

deviations is similar to the unconstrained dataset, suggesting no bias towards developing countries.

**Table B-9 Encap Statistics when Including MAR and Police per capita**

Variable		Mean	Std. Dev.	Min	Max	Observations
development	overall	3.049861	6.426241	0	59.45317	N = 315
	between		4.851339	0	40.51031	n = 95
	within		3.161653	-24.32209	21.99272	T = 3.31579

**Table B-10 Encap Statistics when Including MAR and Police per area Measure**

Variable		Mean	Std. Dev.	Min	Max	Observations
development	overall	3.021894	6.41727	0	59.45317	N = 314
	between		4.772506	0	40.51031	n = 94
	within		3.1667	-24.35006	21.96476	T = 3.34043

## Effect on Sample of Including Police Capacity

The following tables depict the reduction in sample sizes of the onset databases resulting from inclusion of the police capacity data. The table below depicts the differences between the original number of onsets and those onset country-years with corresponding police strength data.

**Table B-11 Onset databases with corresponding Police Data**

Database (1950 and later)	Original number of onsets	Onsets with matching UNCTS and ICPSR police strength data
COW	105	6
Doyle and Sambanis	135	13
Fearon and Laitin	101	7
PRIO	314	22
Toft	108	10

The following table depicts the sample sizes resulting from the use of quinquennial police capacity data in column 2 and the resulting sample sizes from the use of the additional police strength sources in column 3. A comparison between column 3 and column 2 of the following table represent the differences between using yearly and quinquennial data.

**Table B-12 Onset Sample size with Additional Police Capacity Data**

Database (1950 and later)	Original number of onsets by quinquennial	Onsets with matching quinquennial UN police strength data	Onsets with additional police data*
COW	98	23	25
Doyle and Sambanis	125	35	42
Fearon and Laitin	97	31	34
PRIO	249	66	81
Toft	93	30	31

\* The additional sources are the Das (2006) and Newman, Bouloukos, and Cohen (1993)

## Description of Variables Contained in the Capacity Models

Below are the models reflecting the hypotheses pertaining to the effects of police capacity on civil war onset. I first list the models, and then provide a table describing the variables.

The models below depict hypothesis 1a. All variables are measured in quinquennials ( $t=5$ ).

$$\text{Model 1.a.1: } \text{onset}_{it} = \beta_0 + \beta_1 (\text{police per capita})_{it} + \beta_2 (\text{extractive capacity})_{it} \\ + \beta_3 (\text{bureaucratic quality})_{it} + \beta_4 (\text{military per capita})_{it}$$

$$\text{Model 1.a.2: } \text{onset}_{it} = \beta_0 + \beta_1 (\text{police per area})_{it} + \beta_2 (\text{extractive capacity})_{it} \\ + \beta_3 (\text{bureaucratic quality})_{it} + \beta_4 (\text{military per area})_{it}$$

These models depict hypothesis 1b.

$$\text{Model 1.b.1: } \text{onset}_{it} = \beta_0 + \beta_1 (\text{police per capita})_{it} + \beta_2 (\text{anocracy})_{it} \\ + \beta_3 (\text{anocracy} * \text{police per capita})_{it} + \beta_4 (\text{extractive capacity})_{it} \\ + \beta_5 (\text{bureaucratic quality})_{it} + \beta_6 (\text{military per capita})_{it}$$

$$\text{Model 1.b.2: } \text{onset}_{it} = \beta_0 + \beta_1 (\text{police per area})_{it} + \beta_2 (\text{anocracy})_{it} \\ + \beta_3 (\text{anocracy} * \text{police per area})_{it} + \beta_4 (\text{extractive capacity})_{it} \\ + \beta_5 (\text{bureaucratic quality})_{it} + \beta_6 (\text{military per area})_{it}$$

The models below depict hypothesis 1c:

$$\text{Model 1.c.1: } \text{onset}_{it} = \beta_0 + \beta_1 (\text{police per capita})_{it} + \beta_2 (\text{past civil strife})_{it} \\ + \beta_3 (\text{police per capita} * \text{past civil strife})_{it} + \beta_4 (\text{extractive capacity})_{it} \\ + \beta_5 (\text{bureaucratic quality})_{it} + \beta_6 (\text{military per capita})_{it}$$

$$\text{Model 1.c.2: } \text{onset}_{it} = \beta_0 + \beta_1 (\text{police per area})_{it} + \beta_2 (\text{past civil strife})_{it} \\ + \beta_3 (\text{police per area} * \text{past civil strife})_{it} + \beta_4 (\text{extractive capacity})_{it} \\ + \beta_5 (\text{bureaucratic quality})_{it} + \beta_6 (\text{military per area})_{it}$$



Table B-13 Variables for Capacity Hypotheses

Variable label	Variable concept	Measure	Source
Onset	Civil War onset	Dummy for onset that time period	Various (See Annex A)
Police per capita	Police capacity	Police per 1000 inhabitants	Various
Police per area	Police capacity	Police per 1000 sq kms	Various
Extractive capacity	state capacity	RPC	RPC
Bureaucratic quality	Regime instability	$2^{(\text{durable}/0.5)}$	Polity IV
Military per capita	Military capacity	Military per 1000 inhabitant	COW
Military per area	Military capacity	Military per 1000 sq kms	COW
anocracy	Anocracy	Dummy for Polity IV score <6 and >-6	Polity IV
Past civil strife	Rebel learning of police capacity	Lagged MAR score	MAR

## Correlation matrices

**Table B-14 Correlations among potential control variables**

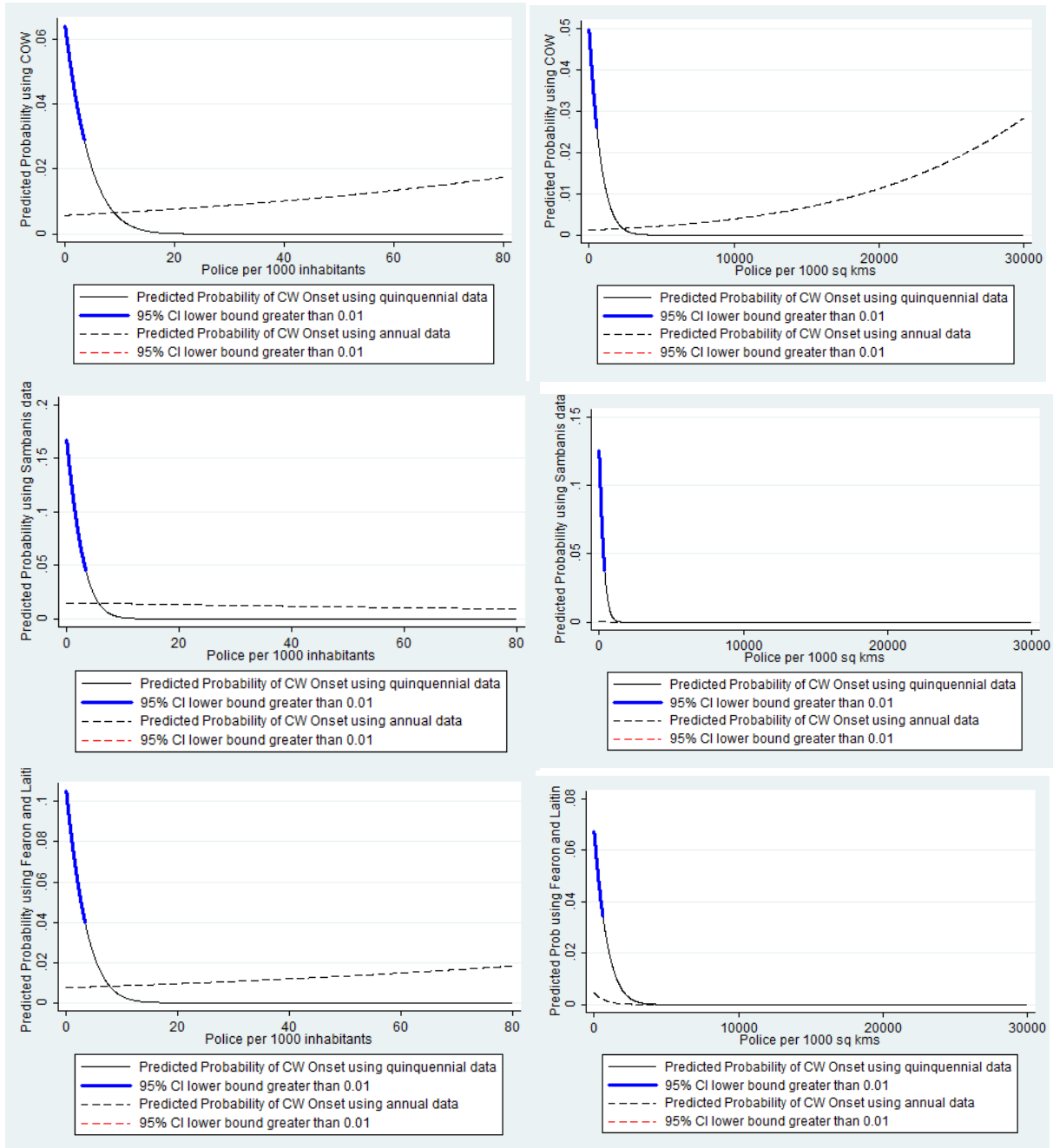
	police per 1000 inhabitants	Police per 1000 sq km	Extractive Capacity	Bureaucratic quality	Military personnel per 1000 inhabitants	Military personnel per 1000 sq km	ln of gdp per cap	real GDP per capita
police per 1000 inhabitants	1							
Police per 1000 sq km	0.19	1						
Extractive Capacity	0.14	-0.04	1					
Bureaucratic quality	-0.04	-0.02	-0.1	1				
Military personnel per 1000 inhabitants	0.14	0.16	0.07	0.01	1			
Military personnel per 1000 sq km	0.01	0.8	-0.06	-0.03	0.24	1		
ln of gdp per cap	0.13	0.14	0.11	-0.2	0.13	0.13	1	

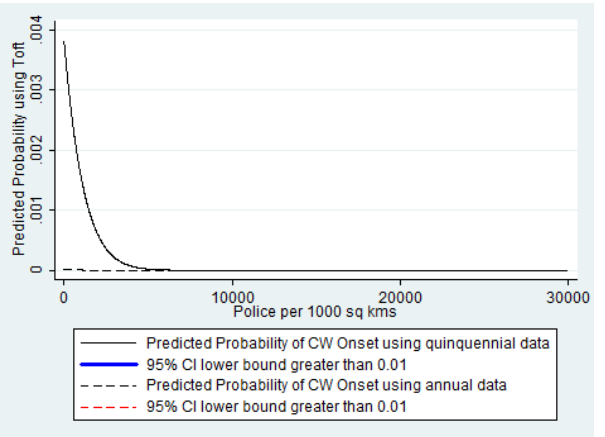
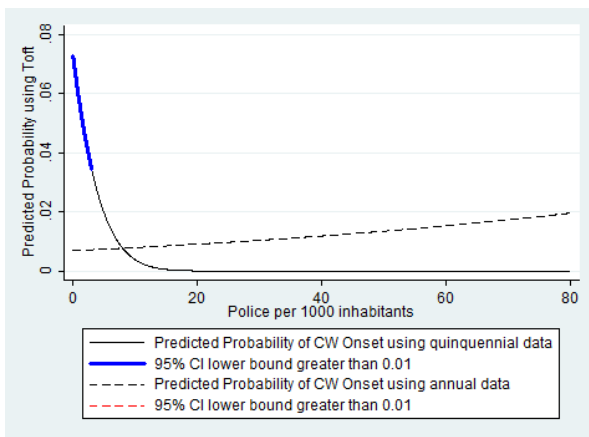
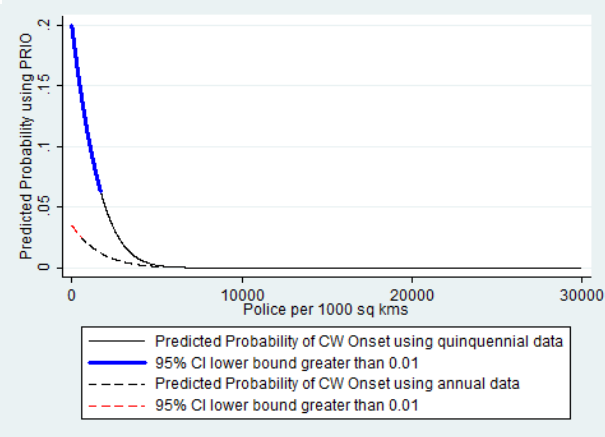
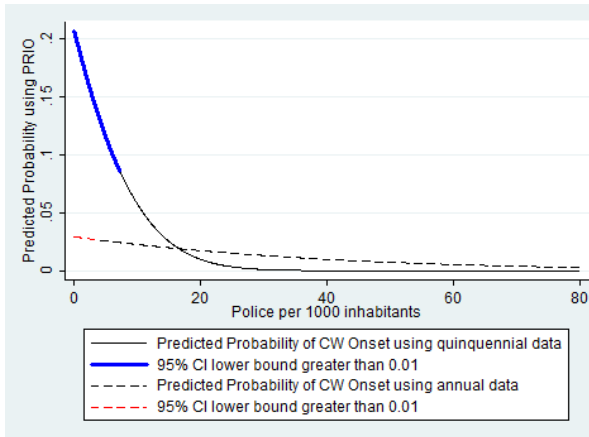
**Table B-15 Correlations among independent variables in models**

	Police per 1000 inhabitants, quinquennial average	Police per 1000 sq kms, quinquennial average	Extractive capacity, quinquennial average	Bureaucratic quality, quinquennial maximum	military personnel per 1000 inhabitants, quinquennial average	military personnel per 1000 sq kms, quinquennial average	dummy for anocracy	Lag of MAR score
Police per 1000 inhabitants, quinquennial average	1							
Police per 1000 sq kms, quinquennial average	0.17	1						
Extractive capacity, quinquennial average	0.17	-0.03	1					
Bureaucratic quality, quinquennial maximum	-0.09	-0.06	-0.08	1				
military personnel per 1000 inhabitants, quinquennial average	0.18	0.16	0.08	-0.11	1			
military personnel per 1000 sq kms, quinquennial average	0.02	0.86	-0.06	-0.06	0.25	1		
dummy for anocracy	-0.05	0.16	-0.05	0.39	-0.14	0.09	1	
Lag of MAR score	-0.11	-0.07	0.01	0.15	0.02	-0.06	0.03	1

## Comparison of annual and quinquennial time domains

**Figure B-1** Graphs of comparison of the use of annual and quinquennial time domains





## Regression Outcomes for Police Capacity

The following tables depict regression outcomes using various interactions with measures of police capacity. The column in each table represents the outcome derived from using the specified civil war onset database.

**Table B-16 Regression outcome using police per capita measure of police capacity**

VARIABLES	(1) COW	(2) Sambanis	(3) Fearon and Laitin	(4) PRIO	(5) Toft
Police per 1000 inhabitants, quinquennial average	-0.108 (0.125)	-0.214 (0.175)	-0.148 (0.153)	-0.0697 (0.0854)	-0.121 (0.170)
Extractive capacity, quinquennial average	0.122 (0.239)	0.133 (0.216)	0.177 (0.217)	-0.0535 (0.197)	0.00626 (0.264)
Bureaucratic quality, quinquennial maximum	0.813*** (0.234)	0.946*** (0.201)	0.820*** (0.216)	0.453** (0.184)	0.569** (0.249)
military personnel per 1000 inhabitants, quinquennial average	-0.00101 (0.0176)	-0.0111 (0.0202)	-0.0255 (0.0203)	-0.00626 (0.0182)	- 0.0528* (0.0296)
Constant	-1.829*** (0.448)	-1.277*** (0.436)	-1.486*** (0.446)	-0.846*** (0.320)	- 1.285** (0.549)
Observations	434	367	369	434	434
Number of ccode	123	120	120	123	123

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

**Table B-17 Regression outcome using a police per area measure of police capacity**

VARIABLES	(1) COW	(2) Sambanis	(3) Fearon and Laitin	(4) PRIO	(5) Toft
Police per 1000 sq kms, quinquennial average	-0.000542 (0.000626)	-0.00165 (0.00126)	-0.000517 (0.000528)	-0.000382 (0.000272)	-0.000266 (0.000443)
Extractive capacity, quinquennial average	0.0404 (0.248)	0.0113 (0.190)	0.0112 (0.207)	-0.0881 (0.201)	-0.122 (0.257)
Bureaucratic quality, quinquennial maximum	0.771*** (0.211)	0.883*** (0.183)	0.763*** (0.189)	0.433** (0.172)	0.500** (0.195)
military personnel per 1000 sq kms, quinquennial average	-2.13e-05 (0.000126)	-2.90e-05 (0.000177)	-8.39e-05 (9.56e-05)	3.64e-05 (4.01e-05)	-0.000760** (0.000323)
Constant	-1.844*** (0.295)	-1.350*** (0.221)	-1.572*** (0.228)	-0.934*** (0.248)	-1.330*** (0.267)
Observations	435	368	370	435	435
Number of ccode	123	120	120	123	123

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

**Table B-18 Regression outcomes using police per area, conditional on regime type**

VARIABLES	(1) COW	(2) Sambanis	(3) Fearon and Laitin	(4) PRIO	(5) Toft
Interaction of police per capita and anocracy dummy	0.464*** (0.129)	0.466** (0.212)	0.594*** (0.169)	0.0792 (0.148)	0.383** (0.177)
Police per 1000 inhabitants, quinquennial average	-0.436*** (0.127)	-0.501** (0.199)	-0.577*** (0.160)	-0.0979 (0.144)	-0.340** (0.167)
dummy for anocracy	-0.600* (0.334)	-0.315 (0.428)	-0.423 (0.329)	0.161 (0.353)	-0.335 (0.428)
Extractive capacity, quinquennial average	0.0825 (0.260)	0.0131 (0.227)	0.125 (0.238)	0.00425 (0.200)	-0.0549 (0.277)
Bureaucratic quality, quinquennial maximum	0.668** (0.263)	0.716*** (0.239)	0.571** (0.243)	0.337* (0.205)	0.400 (0.301)
military personnel per 1000 inhabitants, quinquennial average	-0.00425 (0.0224)	-0.0212 (0.0230)	-0.0391 (0.0242)	-0.00894 (0.0192)	-0.0664** (0.0323)
Constant	-1.289*** (0.377)	-0.787** (0.332)	-0.875*** (0.339)	-0.893** (0.391)	-0.886** (0.382)
Observations	432	365	367	432	432
Number of ccode	123	120	120	123	123

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



**Table B-19 Regression results using police per area, conditional on regime type**

VARIABLES	(1) COW	(2) Sambanis	(3) Fearon and Laitin	(4) PRIO	(5) Toft
Interaction of police per area and anocracy dummy	0.000467 (0.000781)	0.00107 (0.00219)	0.000852 (0.000937)	-0.000781 (0.000543)	0.000548 (0.00119)
Police per 1000 sq kms, quinquennial average	-0.000688 (0.000741)	-0.00238 (0.00241)	-0.000987 (0.000881)	-0.000171 (0.000146)	-0.000370 (0.000652)
dummy for anocracy	0.105 (0.310)	0.422 (0.342)	0.360 (0.294)	0.538** (0.263)	0.319 (0.334)
Extractive capacity, quinquennial average	0.0926 (0.244)	0.0592 (0.211)	0.0241 (0.206)	-0.0239 (0.204)	-0.0669 (0.259)
Bureaucratic quality, quinquennial maximum	0.655*** (0.248)	0.669*** (0.224)	0.546** (0.218)	0.296 (0.205)	0.331 (0.265)
military personnel per 1000 sq kms, quinquennial average	-2.19e-05 (0.000130)	-5.47e-05 (0.000192)	-9.27e-05 (0.000105)	8.80e-05 (9.11e-05)	-0.000814* (0.000474)
Constant	-1.897*** (0.306)	-1.434*** (0.307)	-1.608*** (0.252)	-1.133*** (0.266)	-1.430*** (0.285)
Observations	433	366	368	433	433
Number of ccode	123	120	120	123	123

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

**Table B-20 Regression outcomes using police per capita conditional on levels of previous internal violence**

VARIABLES	(1) COW	(2) Sambanis	(3) Fearon and Laitin	(4) PRIO	(5) Toft
Interaction of police per capita and lag of MAR	-0.00753 (0.0341)	0.0204 (0.0642)	0.0736 (0.0539)	0.0160 (0.0359)	0.0310 (0.0373)
Police per 1000 inhabitants, quinquennial average	-0.0134 (0.0576)	-0.295 (0.204)	-0.318* (0.164)	-0.162 (0.116)	-0.182 (0.173)
Lag of MAR score	0.226*** (0.0751)	0.0965 (0.0987)	-0.0292 (0.0893)	0.130* (0.0772)	0.0231 (0.0764)
Extractive capacity, quinquennial average	0.169 (0.379)	0.539** (0.271)	0.455 (0.315)	-0.164 (0.280)	0.281 (0.359)
Bureaucratic quality, quinquennial maximum	0.651** (0.315)	0.761*** (0.224)	0.672*** (0.239)	0.240 (0.231)	0.430 (0.272)
military personnel per 1000 inhabitants, quinquennial average	-0.00183 (0.0192)	-0.0208 (0.0225)	-0.0392 (0.0249)	-0.00117 (0.0219)	-0.0578* (0.0344)
Constant	-2.506*** (0.454)	-1.584*** (0.491)	-1.408*** (0.438)	-0.781* (0.409)	-1.411** (0.568)
Observations	304	255	259	304	304
Number of ccode	93	85	86	93	93

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

**Table B-21 Regression outcomes using police per area, conditional on levels of previous internal violence**

VARIABLES	(1) COW	(2) Sambanis	(3) Fearon and Laitin	(4) PRIO	(5) Toft
Interaction of police per area and lag of MAR	0.000597** (0.000291)	0.000444 (0.000378)	0.000327* (0.000197)	0.000327 (0.000201)	0.000407* (0.000227)
Police per 1000 sq kms, quinquennial average	-0.00441* (0.00226)	-0.00392 (0.00264)	-0.00169 (0.00128)	-0.00236*** (0.000787)	-0.00142 (0.00197)
Lag of MAR score	0.170*** (0.0567)	0.115* (0.0607)	0.0469 (0.0522)	0.124** (0.0534)	0.0377 (0.0562)
Extractive capacity, quinquennial average	0.130 (0.397)	0.320 (0.257)	0.335 (0.282)	-0.283 (0.282)	0.141 (0.339)
Bureaucratic quality, quinquennial maximum	0.602* (0.313)	0.710*** (0.212)	0.620*** (0.221)	0.228 (0.217)	0.382 (0.249)
military personnel per 1000 sq kms, quinquennial average	0.000187 (0.000234)	3.85e-05 (0.000272)	-8.04e-05 (0.000156)	0.000205 (0.000130)	-0.000754 (0.000648)
Constant	-2.163*** (0.399)	-1.629*** (0.296)	-1.773*** (0.326)	-0.792*** (0.303)	-1.522*** (0.365)
Observations	304	255	259	304	304
Number of ccode	93	85	86	93	93

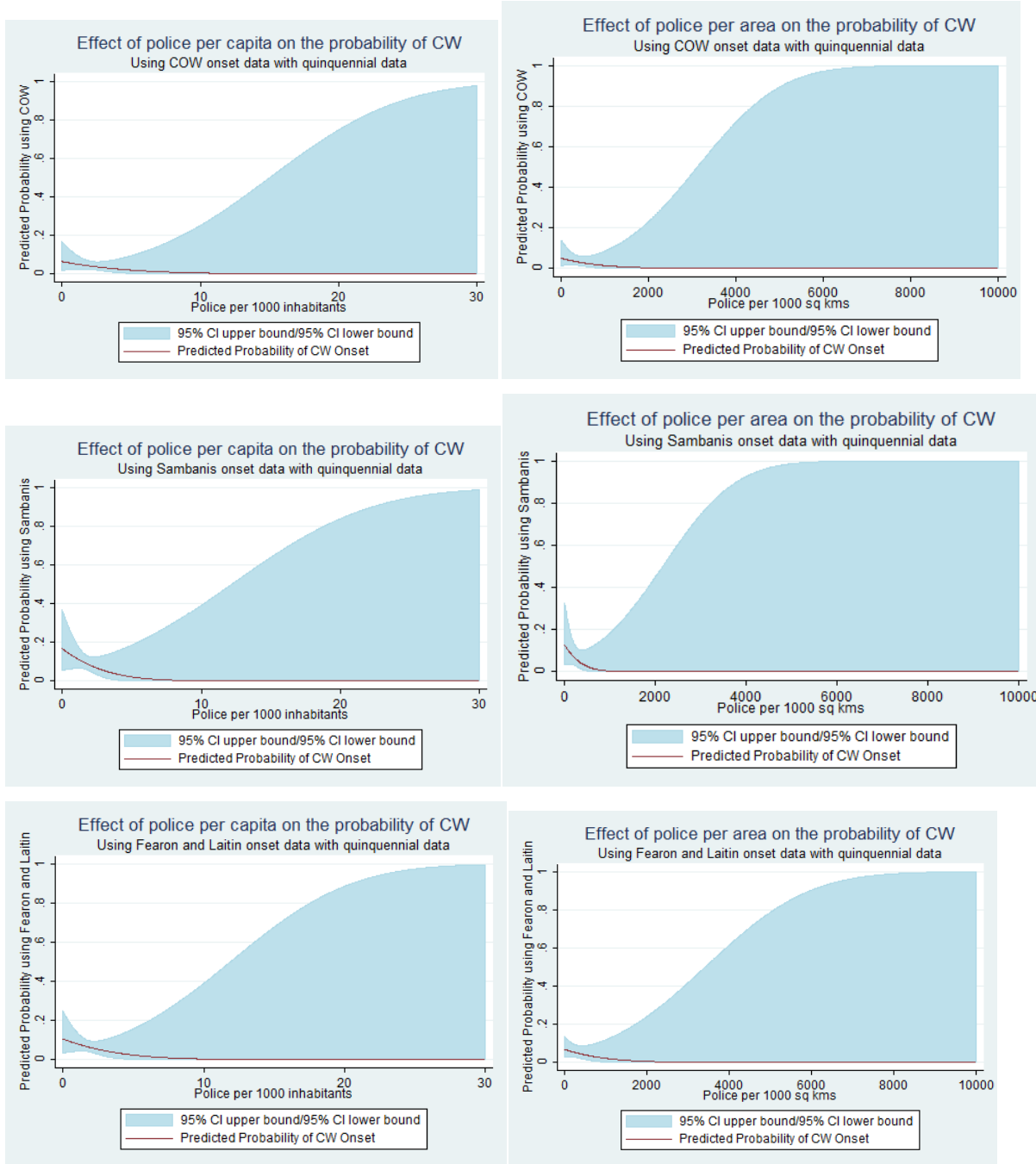
Standard errors in parentheses

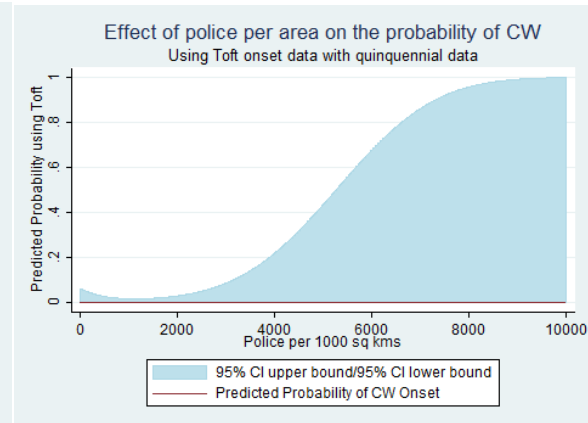
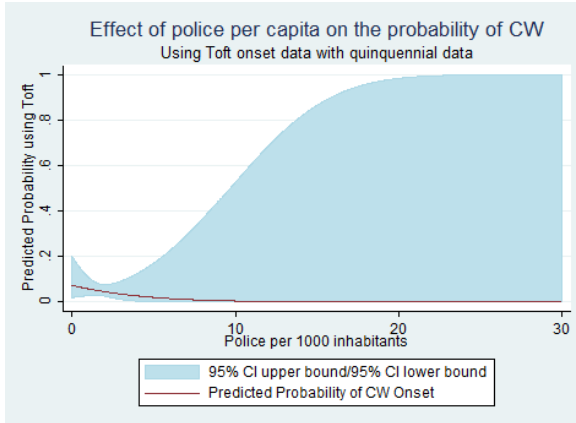
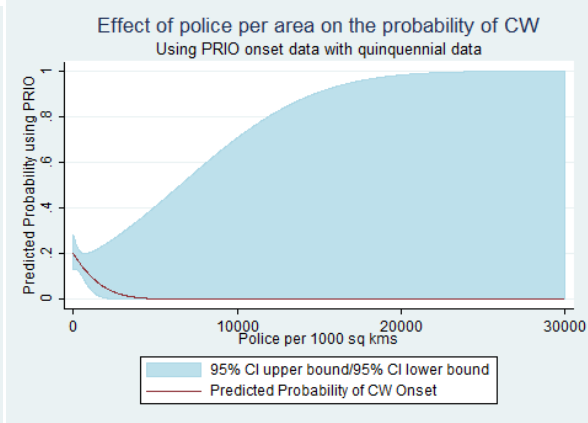
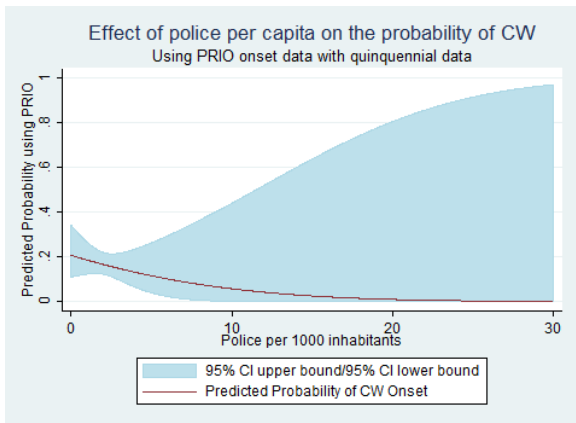
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## Outcome Graphs for Police Capacity Models

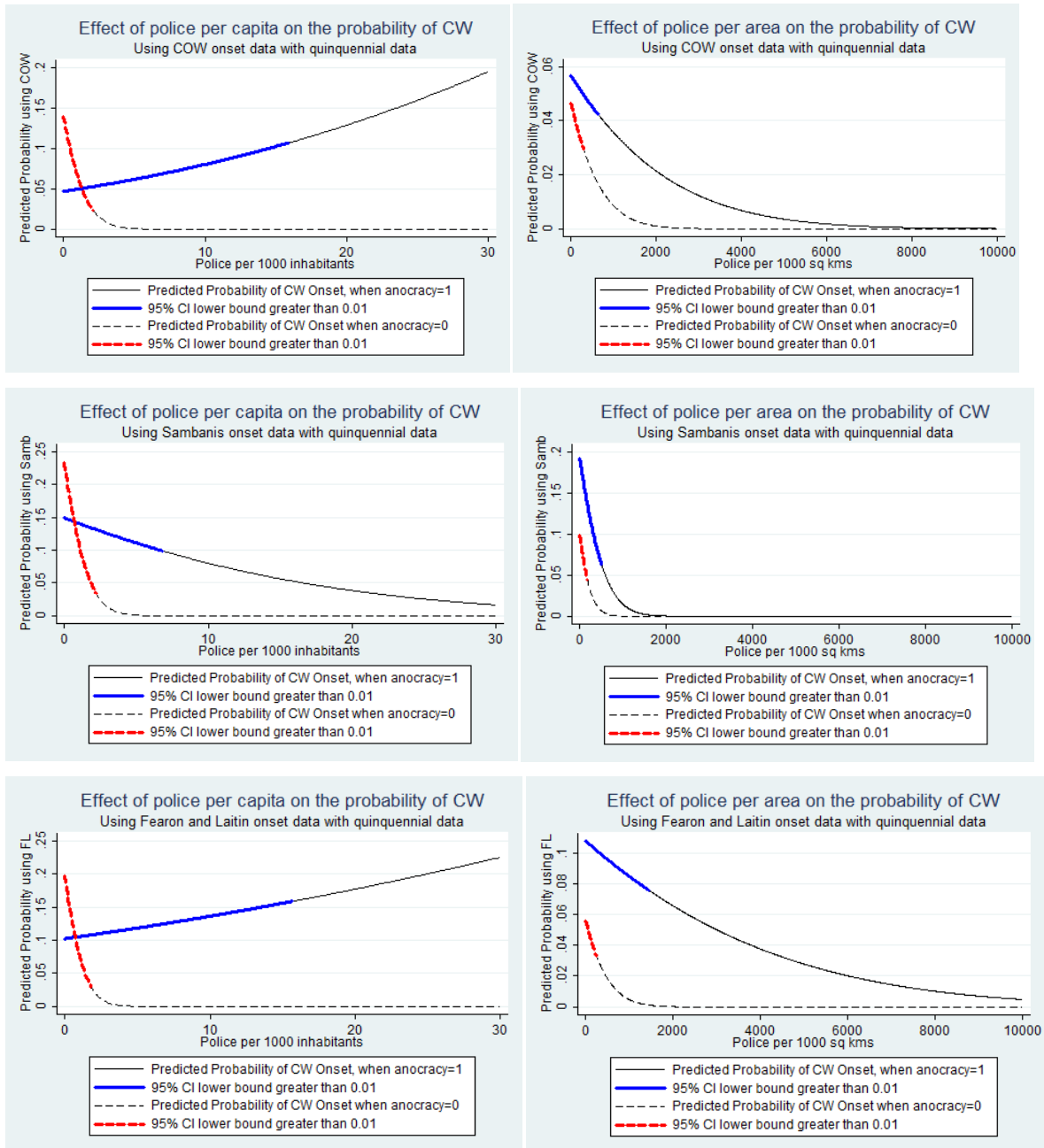
The section provides the graphs that result from tests of the various indicators of police capacity, using the different civil war onset databases.

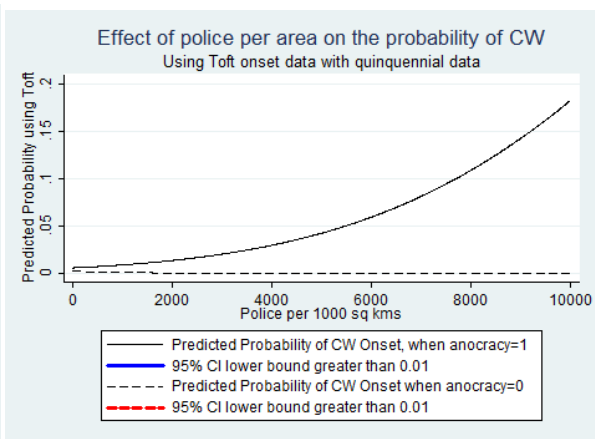
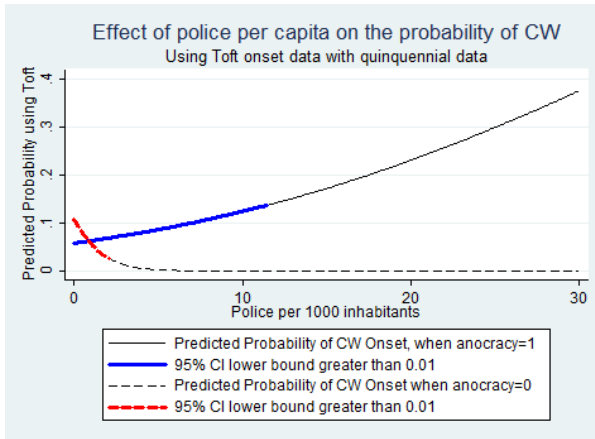
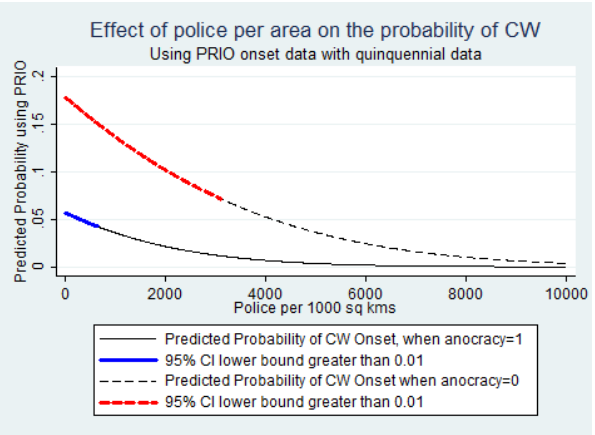
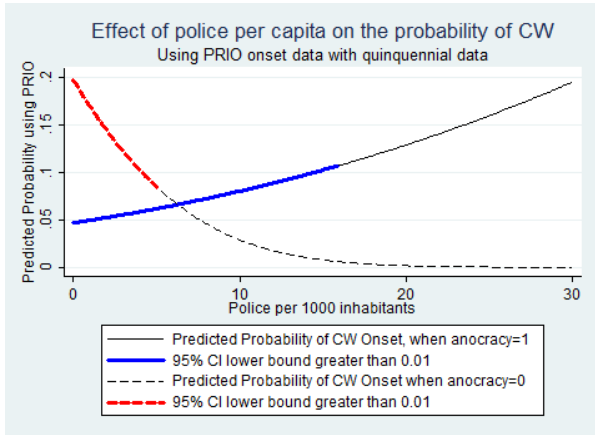
**Figure B-2 Effect of Simple Measures of Police Capacity on Civil War Onset**



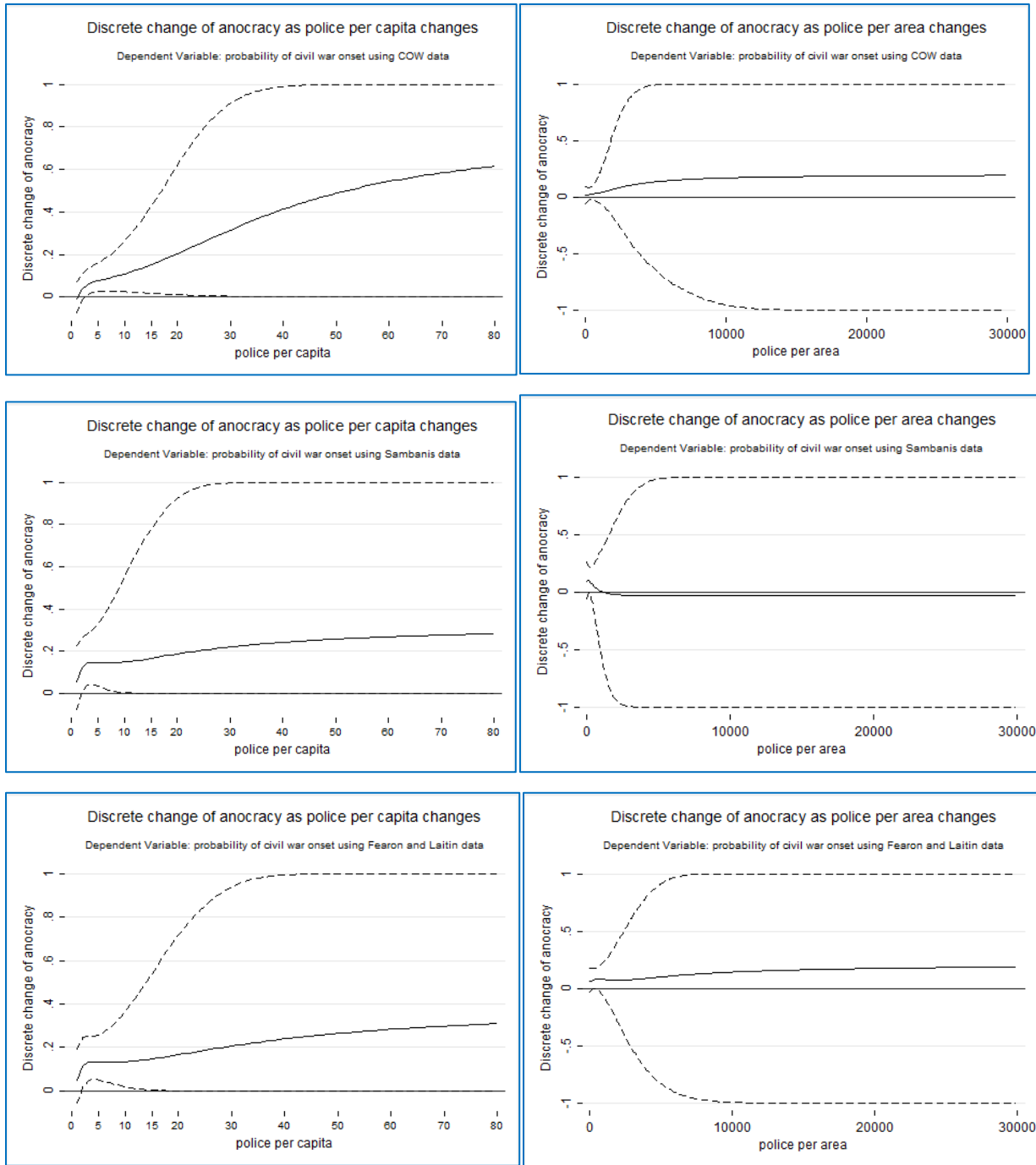


**Figure B-3 Predicted probabilities of police capacity, interacted with the square of Polity**

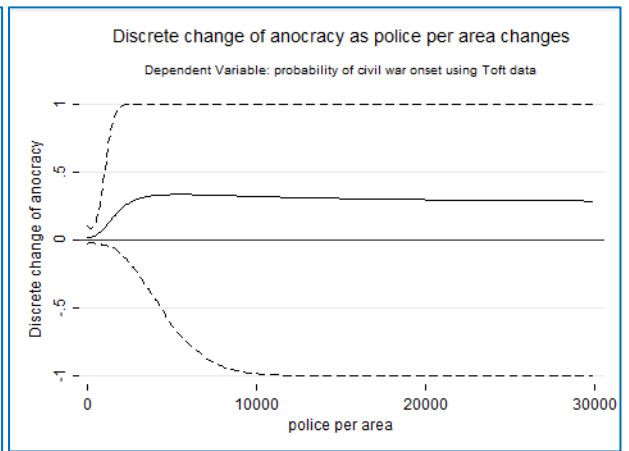
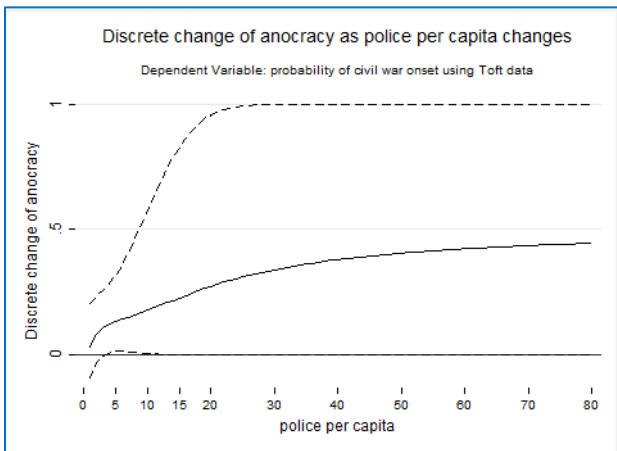
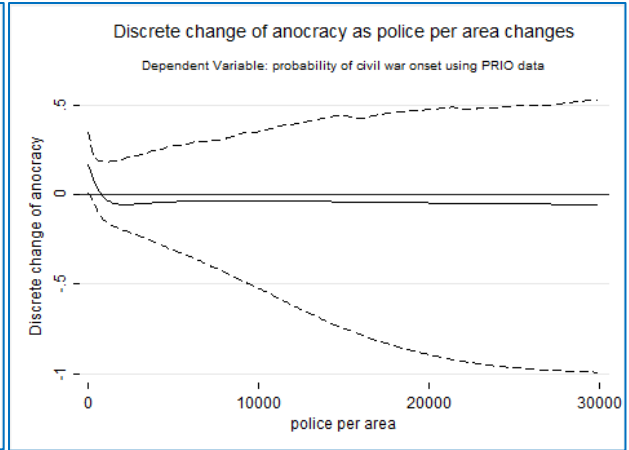
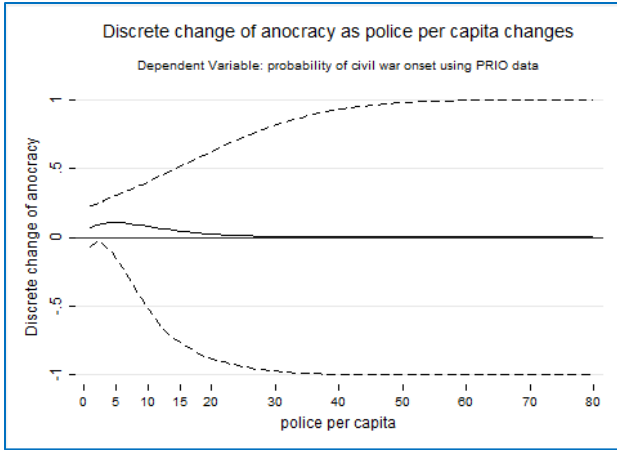




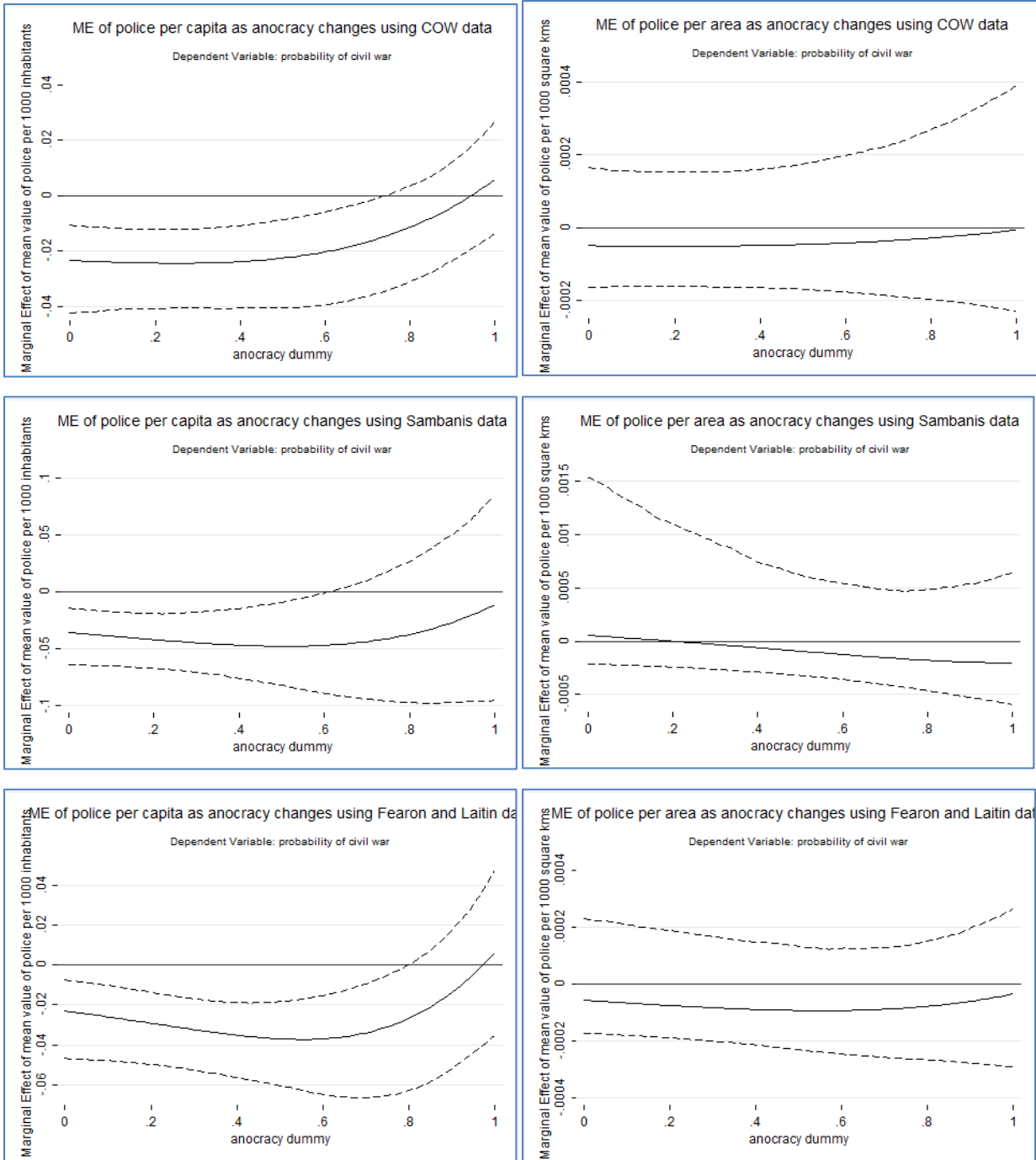
**Figure B-4 Discrete change of anocracy as police capacity changes**

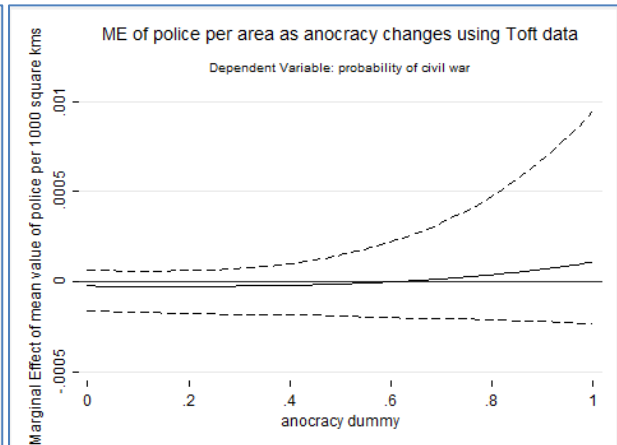
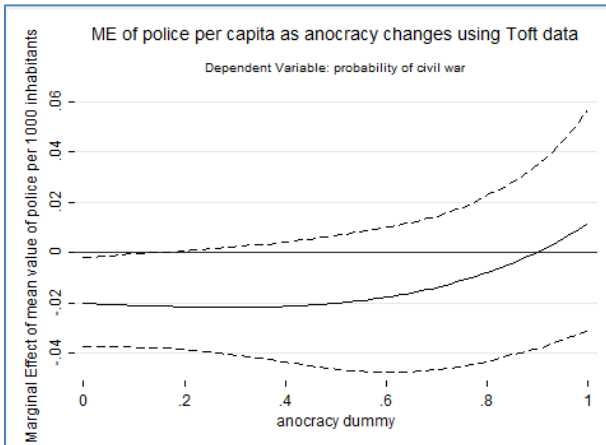
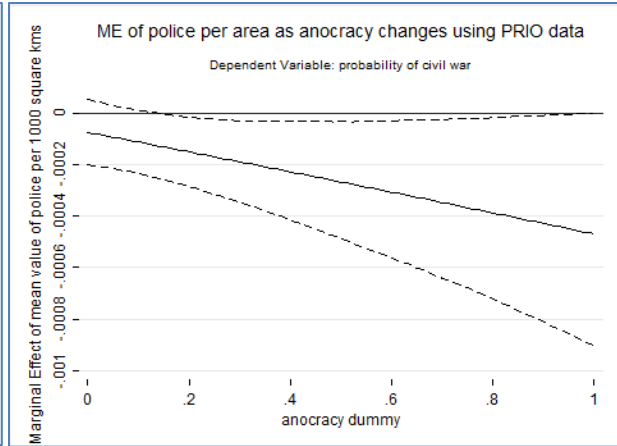
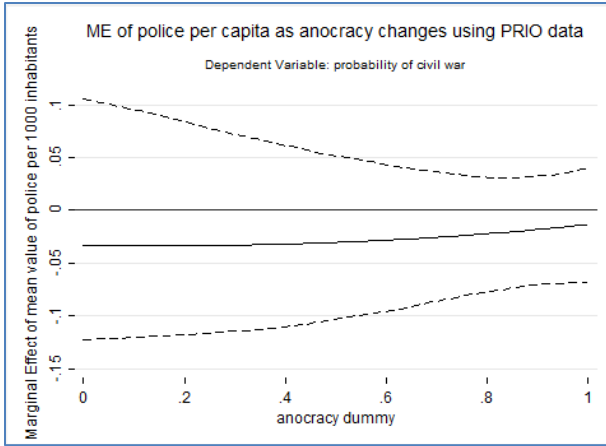




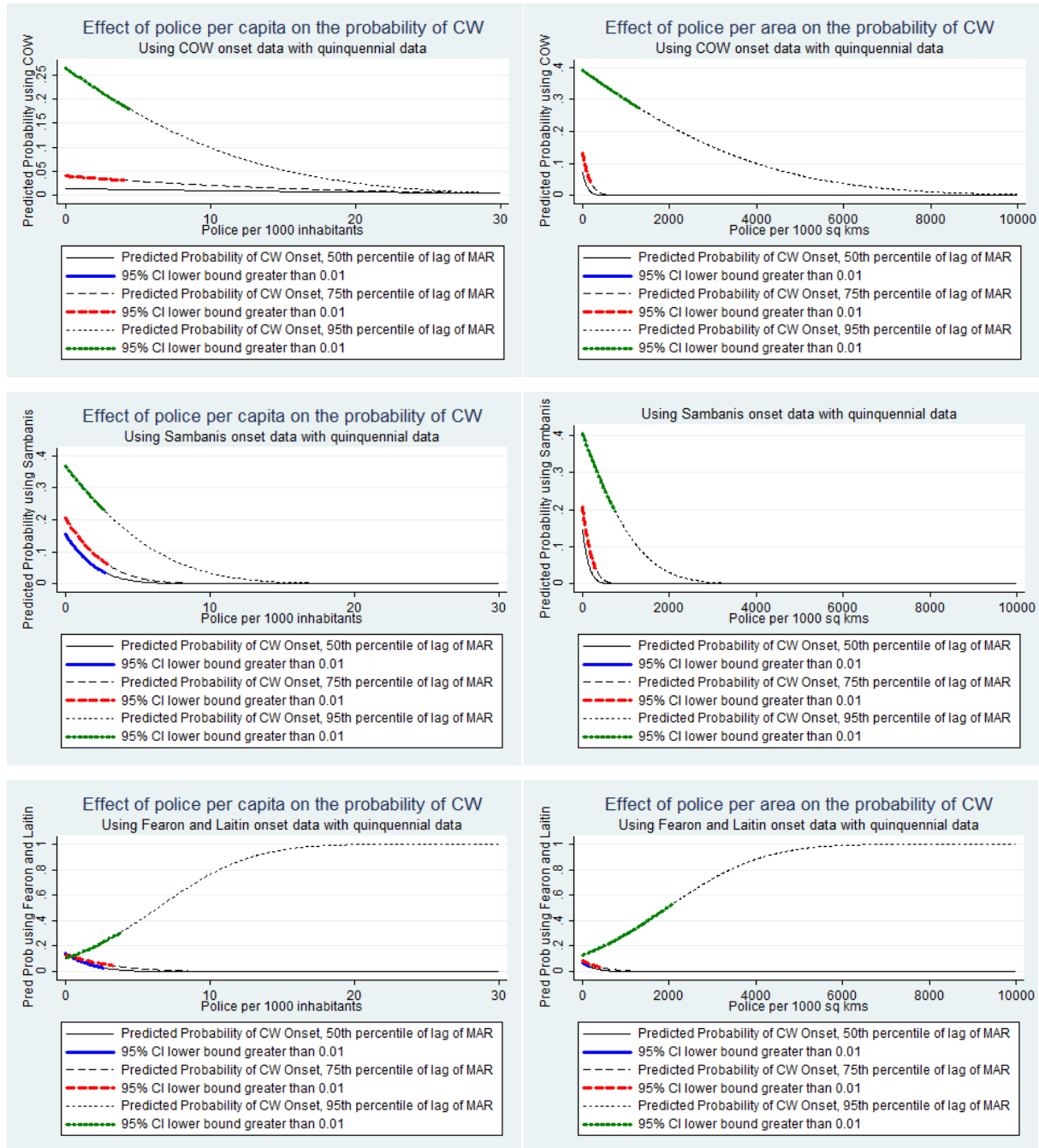


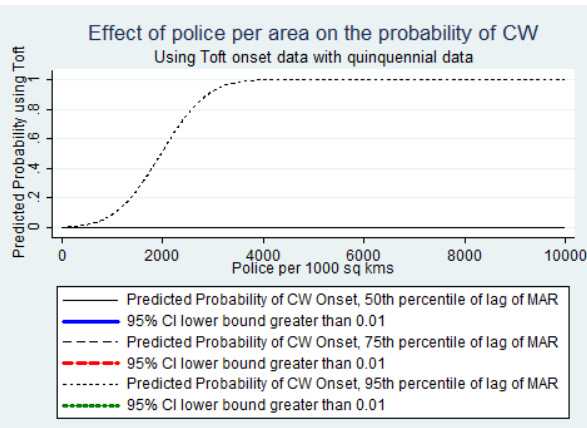
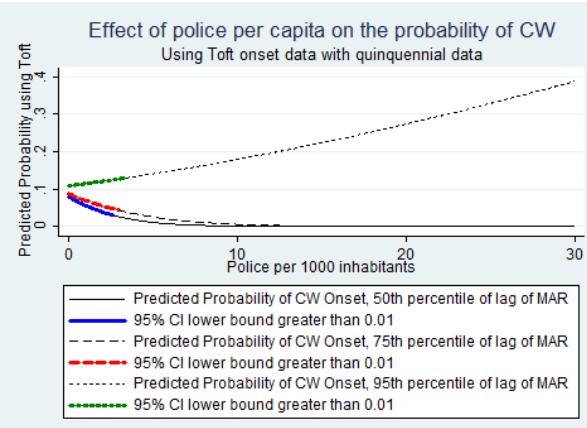
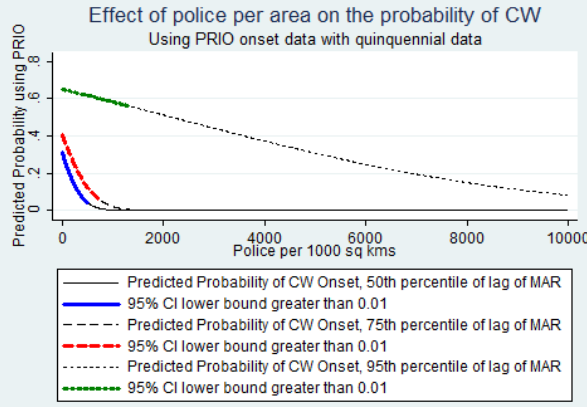
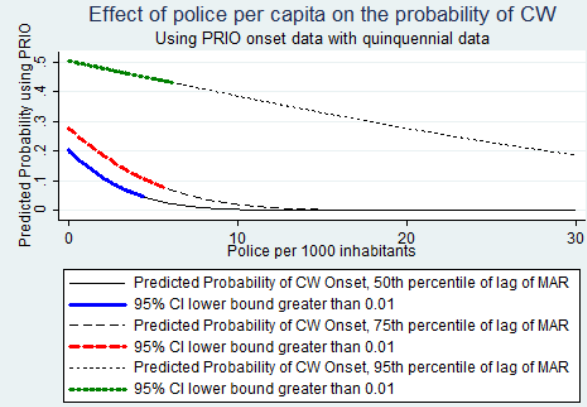
**Figure B-5 Marginal effects of police capacity, as anocracy varies**



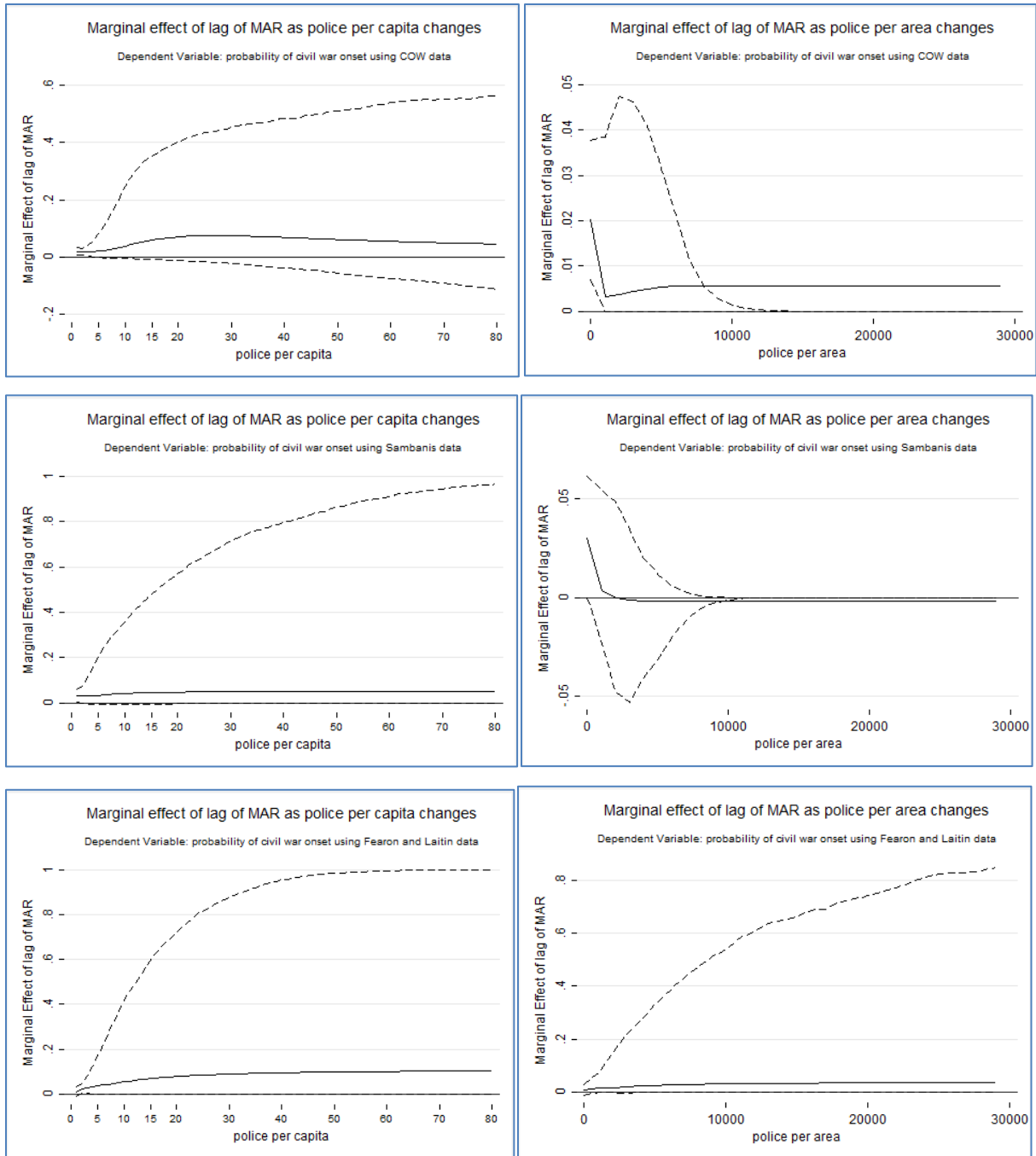


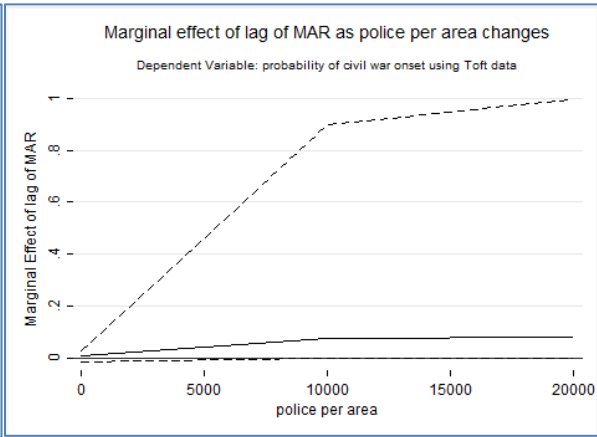
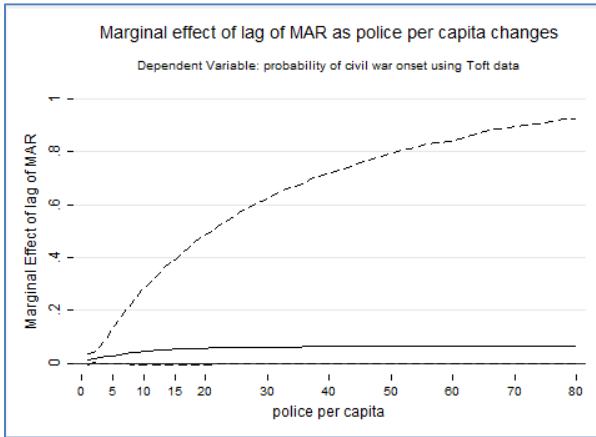
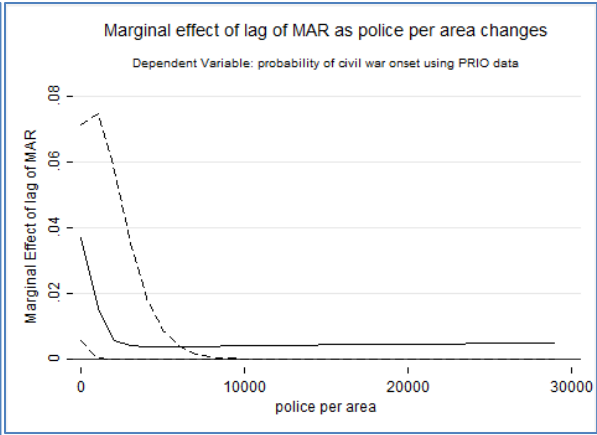
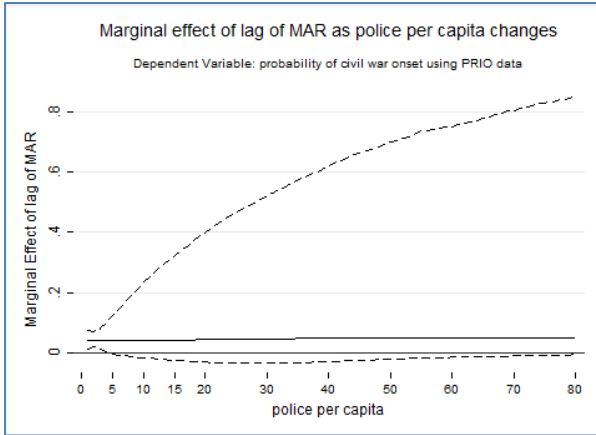
**Figure B-6 Predicted probabilities of police capacity, interacted with the lagged MAR score**



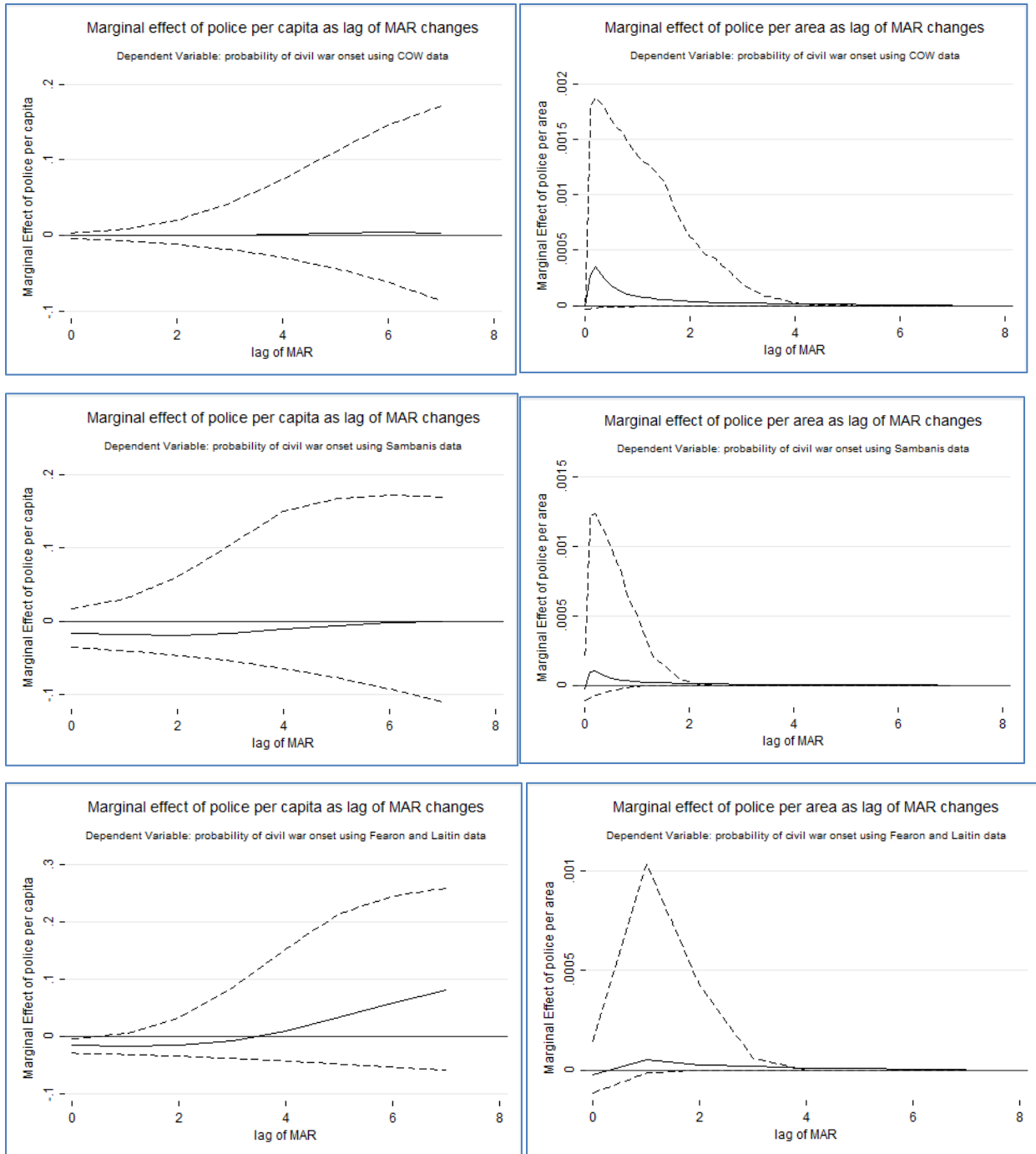


**Figure B-7 Marginal effects of the lagged MAR score, as police capacity varies**

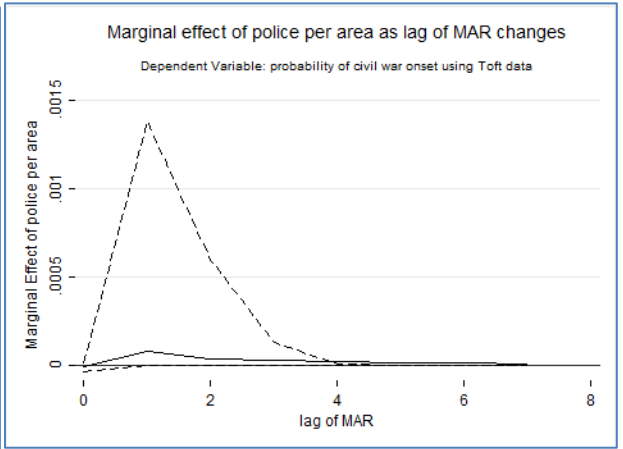
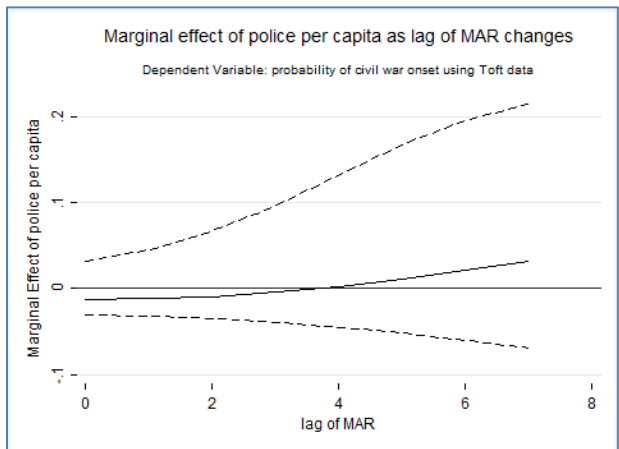
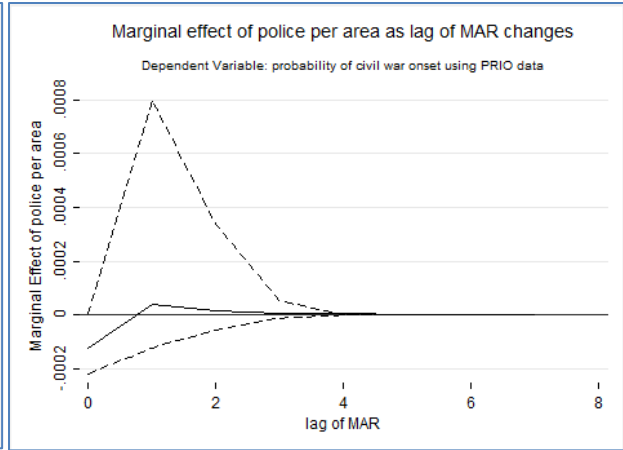
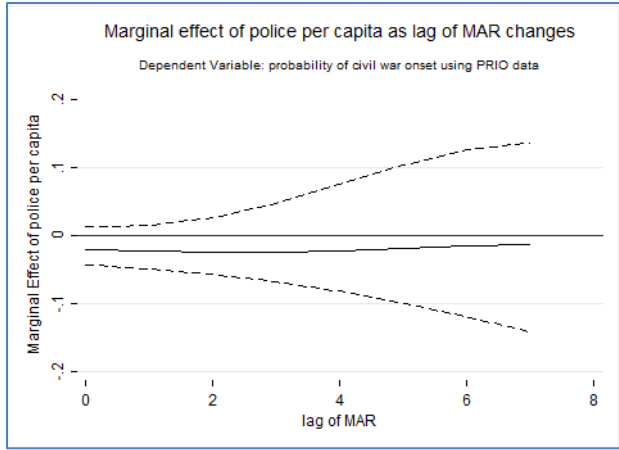




**Figure B-8 Marginal effects of police capacity as the lagged MAR score varies**







## Appendix C - Supporting Information for Chapter 3

### Description of CIRI and PTS Datasets

#### *CIRI*

The CIRI dataset provides country-year scores for a number of indicators of human rights abuses for an average of 200 countries for the years 1981-2010, for a total of 4072 observations. The measure that most closely aligns with my definition of repression is the “Physical Integrity Index,” which is an aggregate measure of its associated elements that include “Disappearance,” “Extrajudicial Killings,” “Political Imprisonment,” and “Torture.” The Physical Integrity Index ranges from “0” for no government respect for human rights to “8” for full government respect for human rights. With the exception of “Political Imprisonment,” each of these elements is an activity in which police forces are capable of engaging, and all of the elements plausibly constitute examples of “gross discrimination.” Imprisonment is more of a judicial rather than police activity (Reiner 2000:3), so its inclusion as an indicator of police acts of repression runs the risk of being spurious. Nevertheless, I still employ the Physical Integrity Index as my indicator of repression because any measurement error that results from inclusion of the “Political Imprisonment” indicator is more than offset by the benefits of avoiding the complexity of individually employing all of the three more valid sub-elements as explanatory variables.

#### *PTS*

Like the CIRI, the PTS dataset measures state sponsored violations of physical integrity rights. Where the datasets differ is that the PTS does not disaggregate violations into sub-categories. Additionally, the PTS measures standards based rankings of government abuses, whereas the CIRI assesses the frequency and type of government abuses (Wood and Gibney 2010: 376). The PTS has a larger time domain than the CIRI, ranging from 1976-2010 for 187 countries. The PTS offers two scores, depending on whether the source of data was Amnesty International or the United States Department of State, as well as a combined score. In contrast to the CIRI, the PTS employs a higher score for increasing human rights violations, with “5” being the worst score and “0” being the best. The PTS contains 4600 observations for Amnesty International data, 5600 observations from the State Department data, and 5600 observations

from the combined dataset. The average number of country observations per year is 146, including both Amnesty International and U.S. State Department data. Among the three PTS datasets, I chose to employ the combined scores because it generates no loss of data and reduces the impact of systemic error from each of the sources.

### **Effect of Inclusion of Repression Variables on Sample Sizes of Onset Databases**

One drawback of my choice of indicators of police repression is that their relatively small time domain greatly reduces the sample sizes of the civil war onset databases. The table below depicts the reductive effects the various measures of repression impart on the sample sizes of the civil war onset databases. The second column depicts the original size of the onset databases. The remaining columns to the right depict the resulting sample sizes of onsets after dropping those observations that do not correspond to a matching repression measure. Each column heading depicts the name of the repression datasets along with its temporal domain.

**Table C-1 Effect on Sample Sizes of Onset Databases**

Dataset	Original sample size (temporal domain)	CIRI (1981-2010)	PTS (1976-2010)	ITT (1995-2005)	IDEA (1990-2004)
COW	113 (1940-2007)	57	68	22	36
Sambanis	119 (1945-1999)	48	75	14	46
Fearon and Laitin	114 (1945-1999)	39	58	8	30
PRIO	331 (1946-2009)	178	217	75	122
Toft	134 (1940-2008)	30	46	10	24

The larger number of observations remaining for the PRIO database is not surprising since it began with a larger number of unconstrained observations and it covers a temporal domain that matches up well with the repression measures. What is most interesting is the effect on the Toft database. In its original form, this database is the largest of those that use 1000

deaths as a threshold, as well as the database that contains the most recent data. In spite of these characteristics, the Toft database matches up the least well to the repression measures. This outcome is especially puzzling since Toft builds upon the other databases to construct her own. One explanation may rest on the fact that many of the observations of civil war onsets in the Toft database correspond to states with missing data in repression datasets. My only conclusion is that whatever coding rules that Toft employed to determine an observation of civil war onset tends to privilege those states that tend to be absent in repression datasets.

## Correlation Matrix for Candidates for Control Variables

**Table C-2 Correlations among candidates for control variables for the effect of repression on civil war onset**

	CIRI	PTS	ITT total repression	ITT police repression	ITT repression by others	ITT ratio	IDEA total repression	IDEA police repression	IDEA repression by others	IDEA ratio	Polity IV score	Square of Polity IV	Threat	GDP per capita	ln of gdp per cap
CIRI	1														
PTS	-0.85	1													
ITT total repression	-0.36	0.3	1												
ITT police repression	-0.2	0.16	0.83	1											
ITT repression by others	-0.4	0.34	0.93	0.57	1										
ITT ratio	0.12	-	0.04	0.29	-0.14	1									

	CIRI	PTS	ITT total repression	ITT police repression	ITT repression by others	ITT ratio	IDEA total repression	IDEA police repression	IDEA repression by others	IDEA ratio	Polity IV score	Square of Polity IV	Threat	GDP per capita	In of gdp per cap
IDEA total repression	-0.18	0.21	0.38	0.22	0.42	-0.05	1								
IDEA police repression	-0.12	0.15	0.41	0.33	0.39	-0.01	0.8	1							
IDEA repression by others	-0.17	0.2	0.29	0.11	0.35	-0.07	0.92	0.51	1						
IDEA ratio	0.11	-0.09	0.17	0.28	0.07	0.09	0.13	0.49	-0.13	1					
Polity IV score	0.39	-0.36	-0.1	0.07	-0.2	0.19	0.01	0.12	-0.07	0.23	1				
Square of Polity IV	0.44	-0.45	-0.05	0	-0.07	0.09	0.13	0.13	0.1	0.11	0.21	1			
Threat	-0.36	0.4	0.05	-0.02	0.08	-0.05	0.05	0.03	0.05	-0.07	-0.03	-0.07	1		
GDP per capita	0.5	-0.47	-0.05	0	-0.07	0.06	0.12	0.13	0.1	0.11	0.32	0.47	-0.13	1	
In of gdp per cap	0.47	-0.47	0	0.08	-0.06	0.13	0.12	0.14	0.07	0.16	0.45	0.46	-0.16	0.85	1

## Description of Variable contained in repression models.

This section provides a full description of the variables contain in the models relating repression and civil war. I first list the models, and then provide a description of the variables.

**Model 2a.** 
$$\text{Onset}_{it} = \beta_0 + \beta_1 (\text{police repression})_{it} + \beta_2 (\text{peace\_years})_{it} \\ + \beta_3 (\text{lag of threat})_{it} + \beta_4 (\text{square of Polity IV})_{it} \\ + \beta_4 (\text{Polity IV})_{it}$$

The next set of models also includes measures of police repression from the ITT and IDEA databases, but this time using a ratio of police acts of repression to overall government acts of repression

**Model 2b.** 
$$\text{Onset}_{it} = \beta_0 + \beta_1 (\text{proportion of police acts of repression})_{it} \\ + \beta_2 (\text{police repression})_{it} + \beta_3 \left( \frac{1}{(\text{repression by others})_{it}} \right) \\ + \beta_3 \text{peace\_years}_{it} + \beta_4 (\text{lag of threat})_{it} + \beta_5 (\text{square of Polity IV})_{it} \\ + \beta_6 (\text{Polity IV})_{it}$$

**Table C-3 Repression model variable descriptions**

Variable labels	Variable concepts	Measure	Source
Police repression	Police repression	Number of acts of police torture per country-year	ITT
		Number of acts of police repression per country-year	IDEA
Repression by all other	Repression by all other government agents	Number of acts of torture by all other government agents per country-year	ITT
		Number of acts of repression by all other government agents per country-year	IDEA
peace years	lingering grievances	$e^{-\left(\frac{\text{years since last civilwar}}{8}\right)}$	onset dataset dependent
lag of threat	previous internal violence	PITF Revolutionary War Magnitude Scale	PITF
square of Polity IV	anocracy	Polity IV score squared	Polity IV
Polity IV	democratization	Polity IV score	Polity IV



## **Regression Outcomes for Repression Models**

The following tables are regression outcomes from testing the various repression indicators on the probability of civil war onset. Each chart depicts the effect of one repression indicator on several civil war onset databases.

**Table C-4 Regression with CIRI**

VARIABLES	(1) COW	(2) Sambanis	(3) Fearon and Laitin	(4) PRIO	(5) Toft
CIRI	-0.275*** (0.0358)	-0.253*** (0.0421)	-0.221*** (0.0401)	-0.310*** (0.0352)	-0.254*** (0.0462)
Decay function of peace years, using COW	0.687*** (0.230)				
Decay function of peace years, using Sambanis		0.629 (0.433)			
Decay function of peace years, using Fearon and Laitin			0.379 (0.539)		
Decay function of peace years, using PRIO				1.294*** (0.222)	
Decay function of peace years, using Toft					0.635 (0.473)
lag of Threat	0.150* (0.0887)	0.161 (0.199)	0.118 (0.179)	0.154* (0.0914)	-0.143 (0.119)
Square of Polity IV	-0.00536** (0.00240)	-0.00942*** (0.00258)	-0.0120*** (0.00279)	-0.00154 (0.00200)	-0.00567** (0.00254)
Polity IV score	0.000987 (0.0117)	0.0122 (0.0131)	0.0137 (0.0146)	0.0245** (0.0104)	-0.00538 (0.0133)
Constant	-1.153*** (0.172)	-0.664*** (0.231)	-0.633*** (0.232)	-0.679*** (0.161)	-1.364*** (0.184)
Observations	3,521	2,053	2,087	3,453	3,574
Number of ccode	163	148	147	160	162

Standard errors in parentheses

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

**Table C-5 Regression with PTS**

VARIABLES	(1) COW	(2) Sambanis	(3) Fearon and Laitin	(4) PRIO	(5) Toft
PTS	0.655*** (0.0872)	0.747*** (0.106)	0.659*** (0.101)	0.607*** (0.0684)	0.577*** (0.0875)
Decay function of peace years, using COW	0.504** (0.254)				
Decay function of peace years, using Sambanis		0.386 (0.390)			
Decay function of peace years, using Fearon and Laitin			0.414 (0.400)		
Decay function of peace years, using PRIO				0.998*** (0.202)	
Decay function of peace years, using Toft					0.860** (0.376)
lag of Threat	0.0973 (0.0822)	0.145 (0.117)	-0.0319 (0.135)	0.157* (0.0831)	-0.219** (0.0877)
Square of Polity IV	-0.00542** (0.00246)	-0.00668*** (0.00242)	-0.00977*** (0.00291)	-0.00111 (0.00184)	-0.00253 (0.00213)
Polity IV score	0.00452 (0.0124)	0.0226* (0.0121)	0.0175 (0.0146)	0.0123 (0.00886)	-0.00375 (0.0109)
Constant	-4.149*** (0.293)	-3.937*** (0.323)	-3.517*** (0.313)	-3.550*** (0.248)	-4.137*** (0.294)
Observations	4,233	2,678	2,628	4,096	4,251
Number of ccode	165	155	151	163	166

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

**Table C-6 Regression with ITT total**

VARIABLES	(1) COW	(2) Sambanis	(3) Fearon and Laitin	(4) PRIO	(5) Toft
ITT total repression	0.0133*** (0.00316)	0.00269 (0.00660)	0.00612 (0.00717)	0.0119*** (0.00334)	0.00650** (0.00291)
Decay function of peace years, using COW	1.304** (0.552)				
Decay function of peace years, using Sambanis		2.297*** (0.577)			
Decay function of peace years, using Fearon and Laitin			0.758 (1.186)		
Decay function of peace years, using PRIO				1.898*** (0.295)	
Decay function of peace years, using Toft					0.850* (0.485)
lag of Threat	0.325** (0.150)	-0.336 (0.275)	0.715** (0.287)	0.248* (0.132)	0.0634 (0.140)
Square of Polity IV	-0.00808* (0.00491)	-0.0231*** (0.00597)	-0.0159* (0.00964)	-0.00267 (0.00249)	-0.0104* (0.00597)
Polity IV score	-0.0179 (0.0237)	0.0272 (0.0365)	0.0522 (0.0652)	-0.00395 (0.0116)	-0.0176 (0.0285)
Constant	-2.431*** (0.214)	-2.021*** (0.258)	-2.364*** (0.391)	-2.275*** (0.200)	-2.442*** (0.192)
Observations	1,462	578	572	1,345	1,474
Number of ccode	143	127	121	138	144

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

**Table C-7 Regression with IDEA total**

VARIABLES	(1) COW	(2) Sambanis	(3) Fearon and Laitin	(4) PRIO	(5) Toft
ITT total repression	0.0133*** (0.00316)	0.00269 (0.00660)	0.00612 (0.00717)	0.0119*** (0.00334)	0.00650** (0.00291)
Decay function of peace years, using COW	1.304** (0.552)				
Decay function of peace years, using Sambanis		2.297*** (0.577)			
Decay function of peace years, using Fearon and Laitin			0.758 (1.186)		
Decay function of peace years, using PRIO				1.898*** (0.295)	
Decay function of peace years, using Toft					0.850* (0.485)
lag of Threat	0.325** (0.150)	-0.336 (0.275)	0.715** (0.287)	0.248* (0.132)	0.0634 (0.140)
Square of Polity IV	-0.00808* (0.00491)	-0.0231*** (0.00597)	-0.0159* (0.00964)	-0.00267 (0.00249)	-0.0104* (0.00597)
Polity IV score	-0.0179 (0.0237)	0.0272 (0.0365)	0.0522 (0.0652)	-0.00395 (0.0116)	-0.0176 (0.0285)
Constant	-2.431*** (0.214)	-2.021*** (0.258)	-2.364*** (0.391)	-2.275*** (0.200)	-2.442*** (0.192)
Observations	1,462	578	572	1,345	1,474
Number of ccode	143	127	121	138	144

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

**Table C-8 Regression with ITT police**

VARIABLES	(1) COW	(2) Sambanis	(3) Fearon and Laitin	(4) PRIO	(5) Toft
ITT police repression	0.0322*** (0.00792)	0.00639 (0.0219)	0.0245 (0.0178)	0.0184** (0.00858)	0.00903** (0.00353)
Decay function of peace years, using COW	1.535*** (0.511)				
Decay function of peace years, using Sambanis		2.323*** (0.583)			
Decay function of peace years, using Fearon and Laitin			0.765 (1.226)		
Decay function of peace years, using PRIO				1.998*** (0.307)	
Decay function of peace years, using Toft					0.936* (0.559)
lag of Threat	0.354** (0.137)	-0.333 (0.280)	0.736** (0.290)	0.242* (0.128)	0.0577 (0.153)
Square of Polity IV	-0.00651 (0.00417)	-0.0229*** (0.00610)	-0.0155 (0.00950)	-0.00141 (0.00260)	-0.00928* (0.00490)
Polity IV score	-0.0304 (0.0224)	0.0252 (0.0361)	0.0461 (0.0647)	-0.0137 (0.0111)	-0.0225 (0.0267)
Constant	-2.468*** (0.218)	-2.032*** (0.252)	-2.456*** (0.464)	-2.247*** (0.201)	-2.404*** (0.189)
Observations	1,462	578	572	1,345	1,474
Number of ccode	143	127	121	138	144

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

**Table C-9 Regression with IDEA police**

VARIABLES	(1) COW	(2) Sambanis	(3) Fearon and Laitin	(4) PRIO	(5) Toft
IDEA police repression	0.0267** (0.0121)	0.0269 (0.0171)	0.0448* (0.0257)	0.0283** (0.0116)	0.0290* (0.0170)
Decay function of peace years, using COW	0.983*** (0.332)				
Decay function of peace years, using Sambanis		0.956** (0.449)			
Decay function of peace years, using Fearon and Laitin			-0.648 (0.874)		
Decay function of peace years, using PRIO				1.117*** (0.315)	
Decay function of peace years, using Toft					1.508*** (0.493)
lag of Threat	0.246** (0.105)	0.182 (0.158)	0.249 (0.220)	0.176 (0.119)	-0.0491 (0.107)
Square of Polity IV	-0.00848*** (0.00284)	-0.0118*** (0.00268)	-0.0135*** (0.00288)	-0.00436** (0.00213)	-0.00849*** (0.00303)
Polity IV score	-0.0169 (0.0157)	-0.0396** (0.0158)	-0.0400** (0.0175)	-0.0177 (0.0108)	-0.0373** (0.0170)
Constant	-2.026*** (0.161)	-1.626*** (0.171)	-1.566*** (0.177)	-1.650*** (0.157)	-2.288*** (0.167)
Observations	2,108	1,195	1,170	1,923	2,079
Number of ccode	159	146	142	154	160

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

**Table C-10 Regression with ITT ratio and constituent terms**

VARIABLES	(1) COW	(2) Sambanis	(3) Fearon and Laitin	(4) PRIO	(5) Toft
ITT ratio	-0.0244 (0.0791)	0.163*** (0.0490)	0.230*** (0.0785)	-0.00257 (0.0570)	-0.0339 (0.0891)
ITT police repression	0.0170* (0.00915)	-0.0107 (0.0244)	0.0391 (0.0241)	0.00320 (0.0111)	0.00706 (0.00485)
inverse of ITT repression by others	-2.932** (1.455)	-3.585*** (1.123)	-7.119*** (2.664)	-1.192* (0.686)	-0.0634 (0.871)
Decay function of peace years, using COW	1.595*** (0.568)				
Decay function of peace years, using Sambanis		2.556*** (0.707)			
Decay function of peace years, using Fearon and Laitin			3.033* (1.676)		
Decay function of peace years, using PRIO				2.026*** (0.334)	
Decay function of peace years, using Toft					0.923** (0.451)
lag of Threat	0.301* (0.166)	-0.364 (0.292)	1.599*** (0.300)	0.302* (0.158)	0.0347 (0.137)
Square of Polity IV	-0.00593 (0.00495)	-0.0271** (0.0118)	-0.0138 (0.0140)	-0.00107 (0.00270)	-0.00911* (0.00471)
Polity IV score	-0.00709 (0.0249)	0.0279 (0.0496)	0.106 (0.116)	0.00616 (0.0122)	-0.0109 (0.0289)
Constant	-1.845*** (0.342)	-1.495*** (0.285)	-3.443*** (0.876)	-1.842*** (0.260)	-2.258*** (0.296)
Observations	1,011	393	388	912	1,022
Number of ccode	134	113	107	130	135

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



**Table C-11 Regression with IDEA ratio and constituent terms**

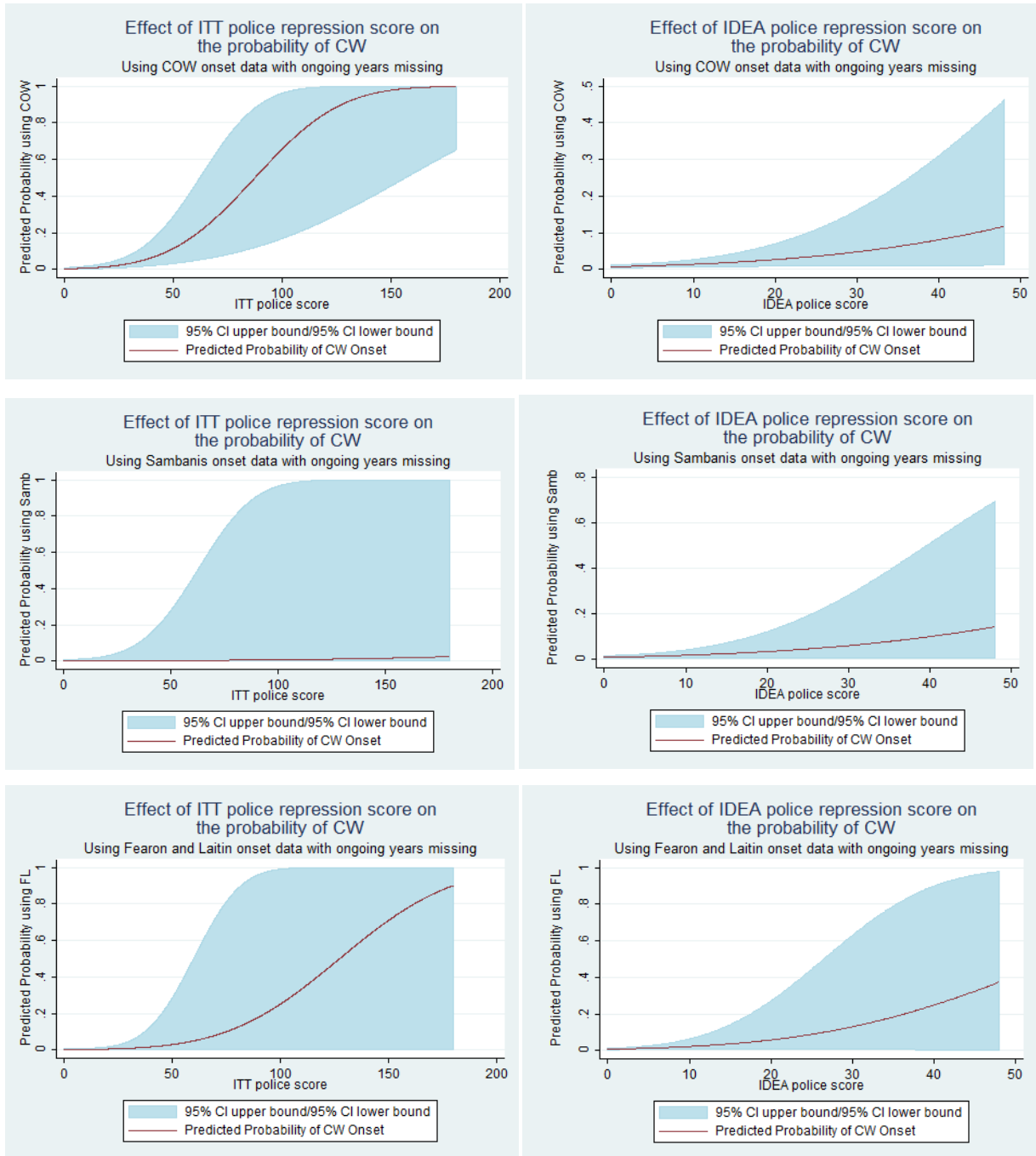
VARIABLES	(1) COW	(2) Sambanis	(3) Fearon and Laitin	(4) PRIO	(5) Toft
IDEA ratio	0.0321 (0.0339)	-0.136 (0.0978)	-0.184 (0.125)	-0.00982 (0.0321)	-0.0734 (0.113)
IDEA police repression	-0.00595 (0.0232)	0.0230 (0.0202)	0.0707** (0.0292)	0.00222 (0.0141)	0.0128 (0.0231)
inverse of IDEA repression by others	-0.581** (0.250)	-0.595* (0.321)	-0.188 (0.429)	-0.471** (0.229)	-0.734 (0.537)
Decay function of peace years, using COW	0.992*** (0.360)				
Decay function of peace years, using Sambanis		-0.101 (0.568)			
Decay function of peace years, using Fearon and Laitin			0.0293 (0.683)		
Decay function of peace years, using PRIO				1.197*** (0.378)	
Decay function of peace years, using Toft					1.223** (0.557)
lag of Threat	0.284** (0.136)	0.231 (0.145)	0.0887 (0.248)	0.233 (0.143)	0.0525 (0.0998)
Square of Polity IV	-0.00714** (0.00285)	-0.00898*** (0.00308)	-0.00997** (0.00391)	-0.00481* (0.00258)	-0.00713* (0.00390)
Polity IV score	-0.0118 (0.0189)	-0.0411* (0.0246)	-0.0576** (0.0247)	-0.00490 (0.0135)	-0.0276 (0.0213)
Constant	-1.545*** (0.272)	-1.038*** (0.316)	-1.454*** (0.385)	-1.070*** (0.226)	-1.824*** (0.344)
Observations	916	472	468	774	906
Number of ccode	144	120	118	138	144

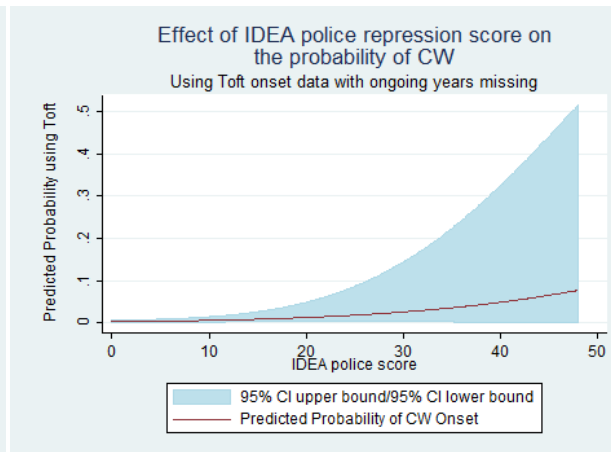
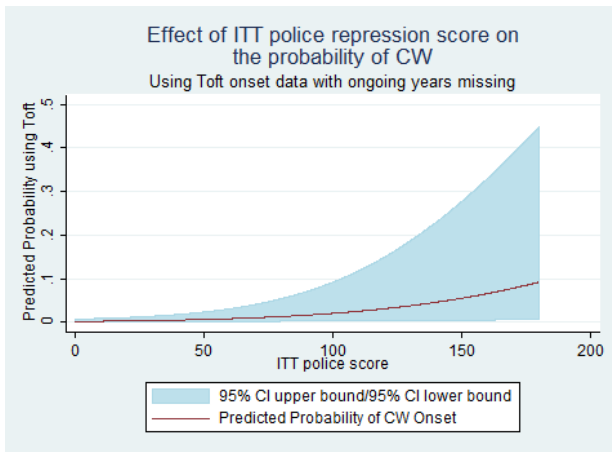
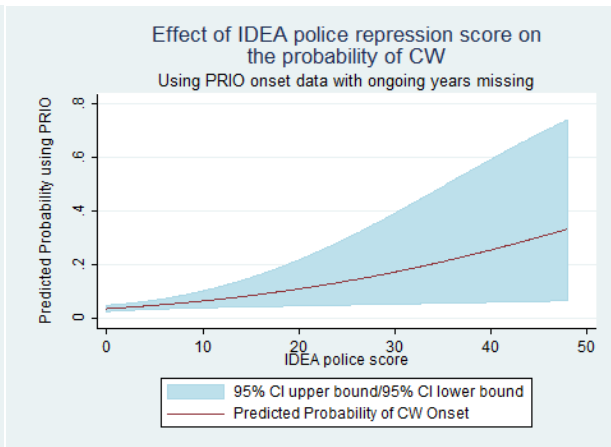
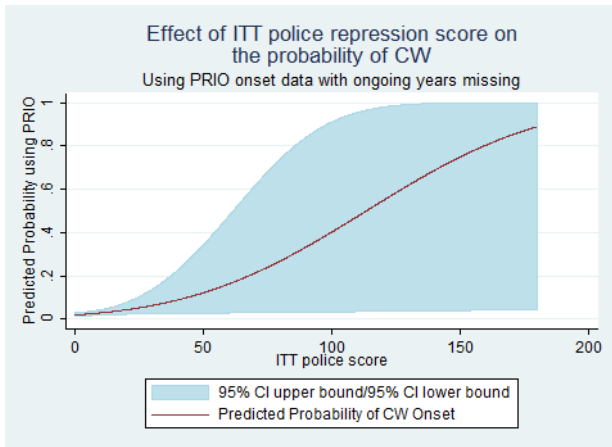
Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

## **Outcome Graphs for Repression Models**

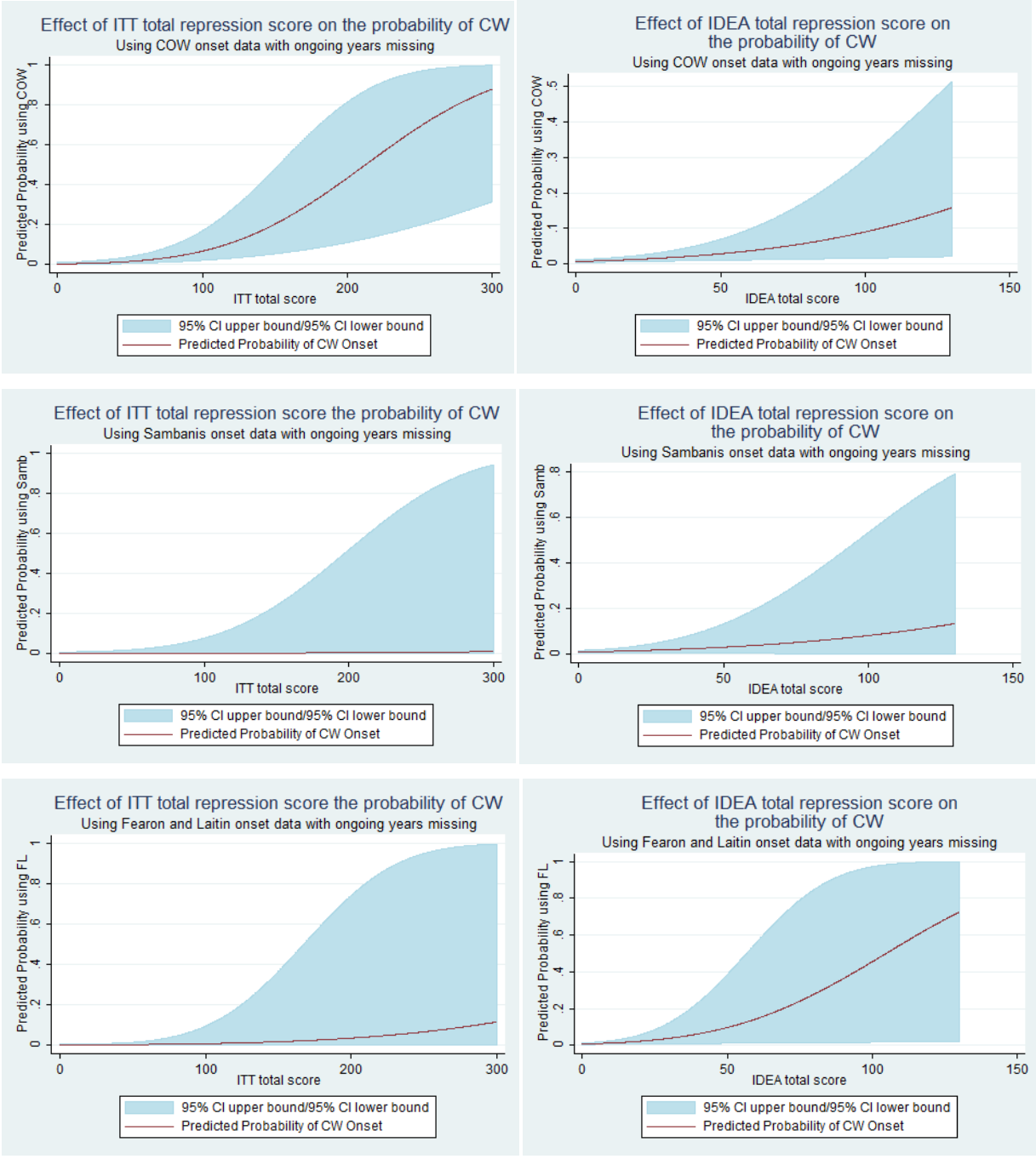
The following graphs depict the outcomes of testing the various combinations of repression indicators and civil war onset databases.

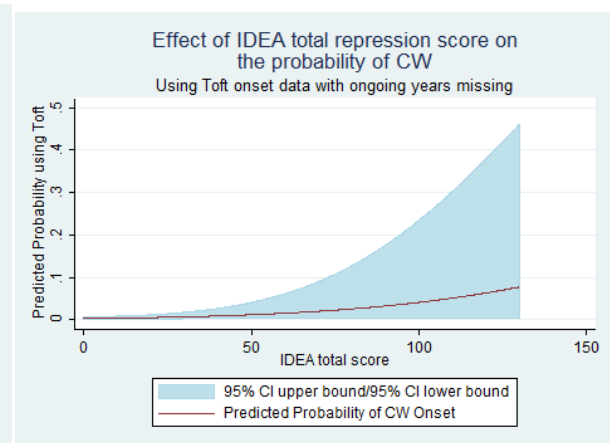
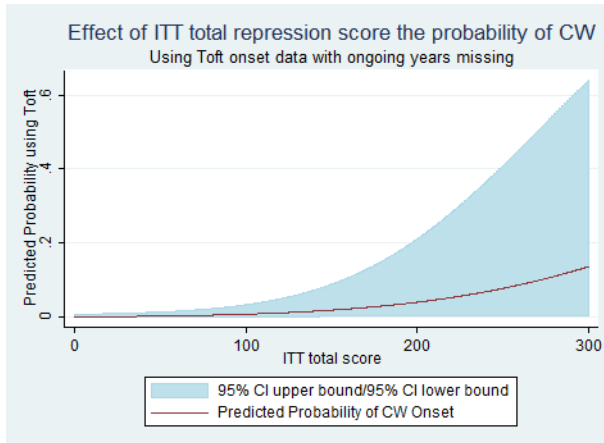
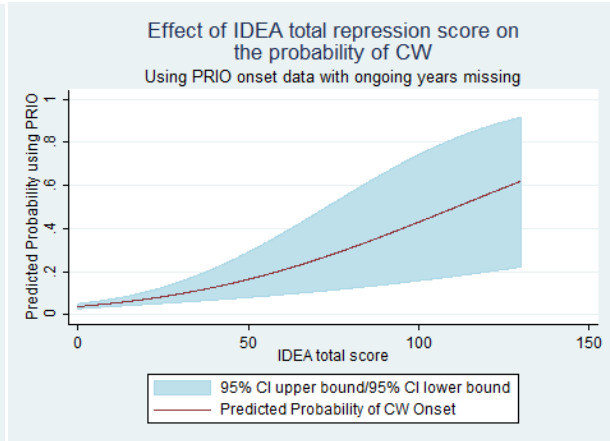
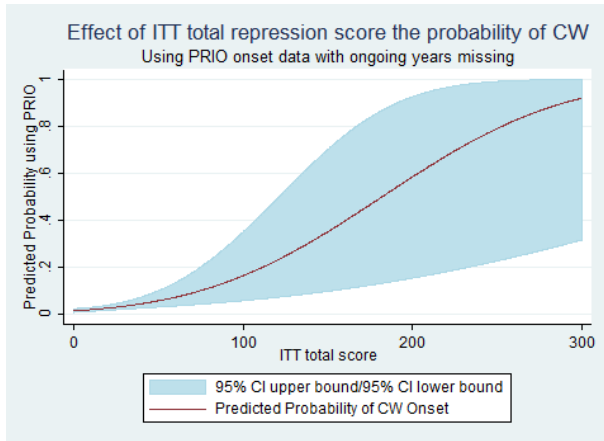
**Figure C-1 Effects of police repression on civil war onset**



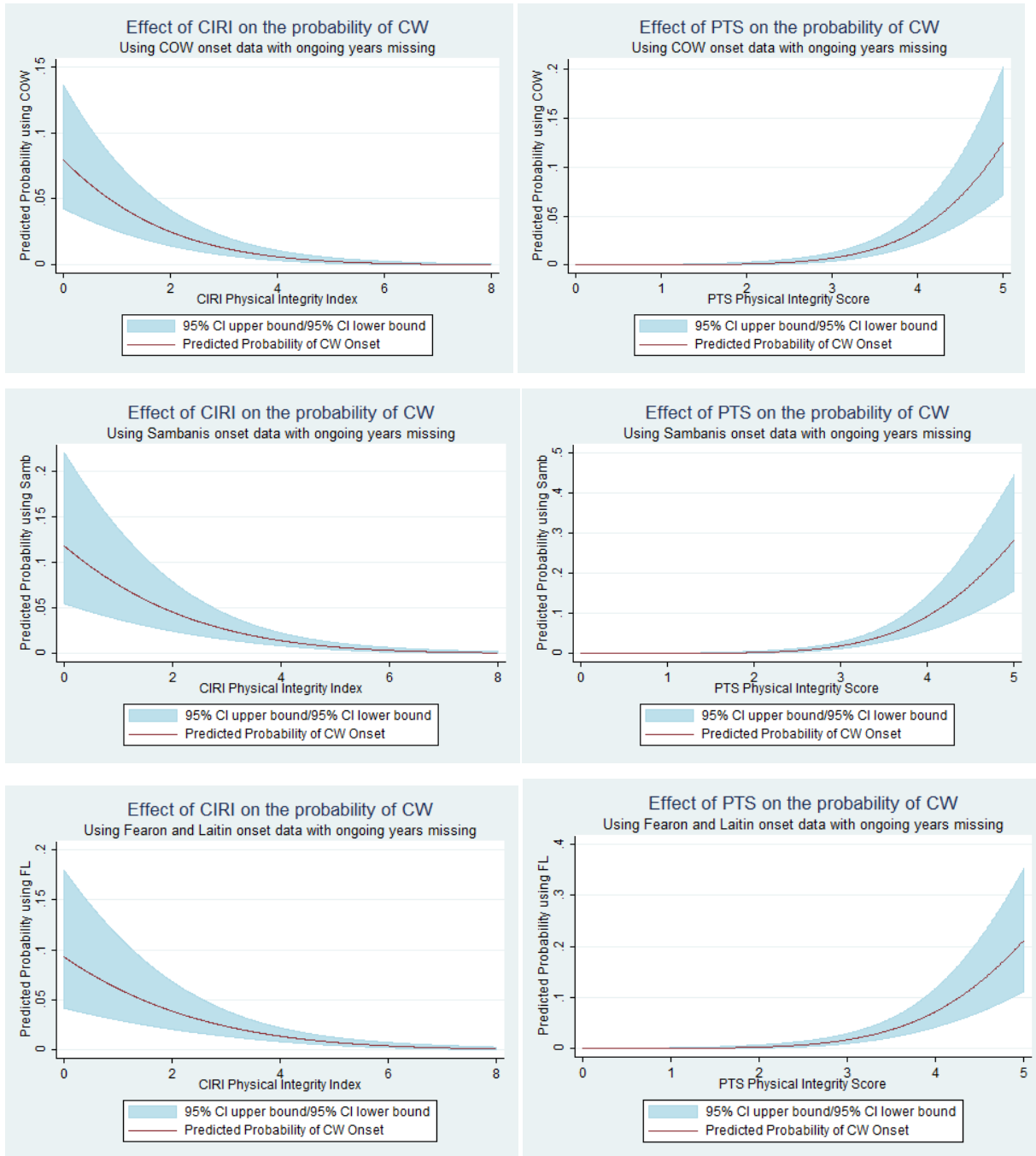


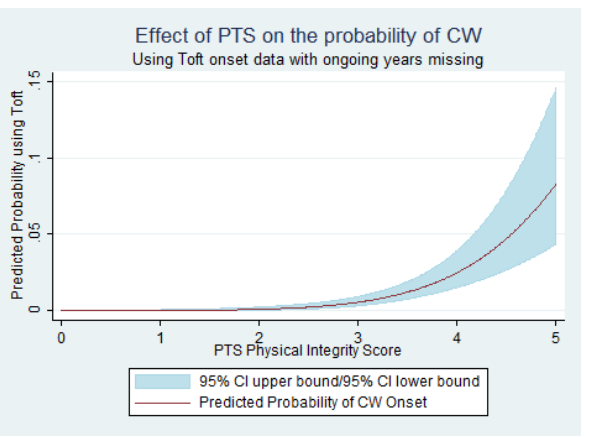
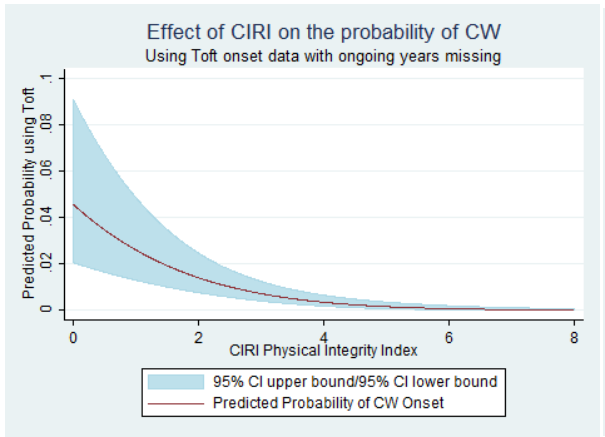
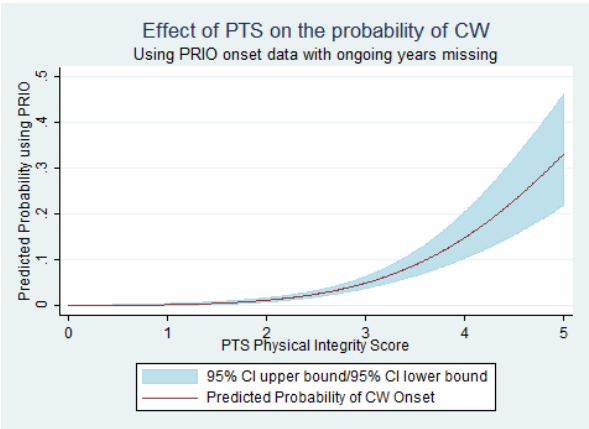
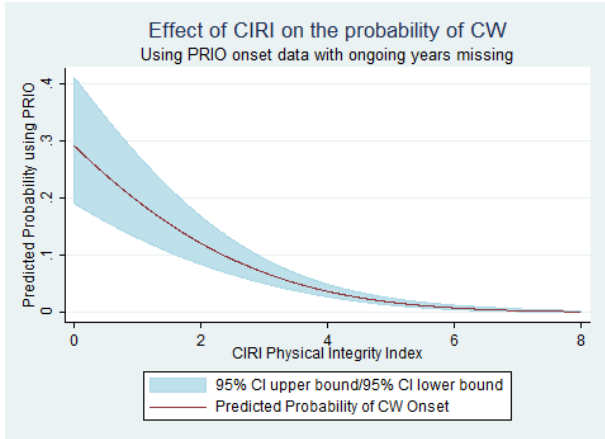
**Figure C-2 Effects of total government repression on civil war onset, using ITT and IDEA data**





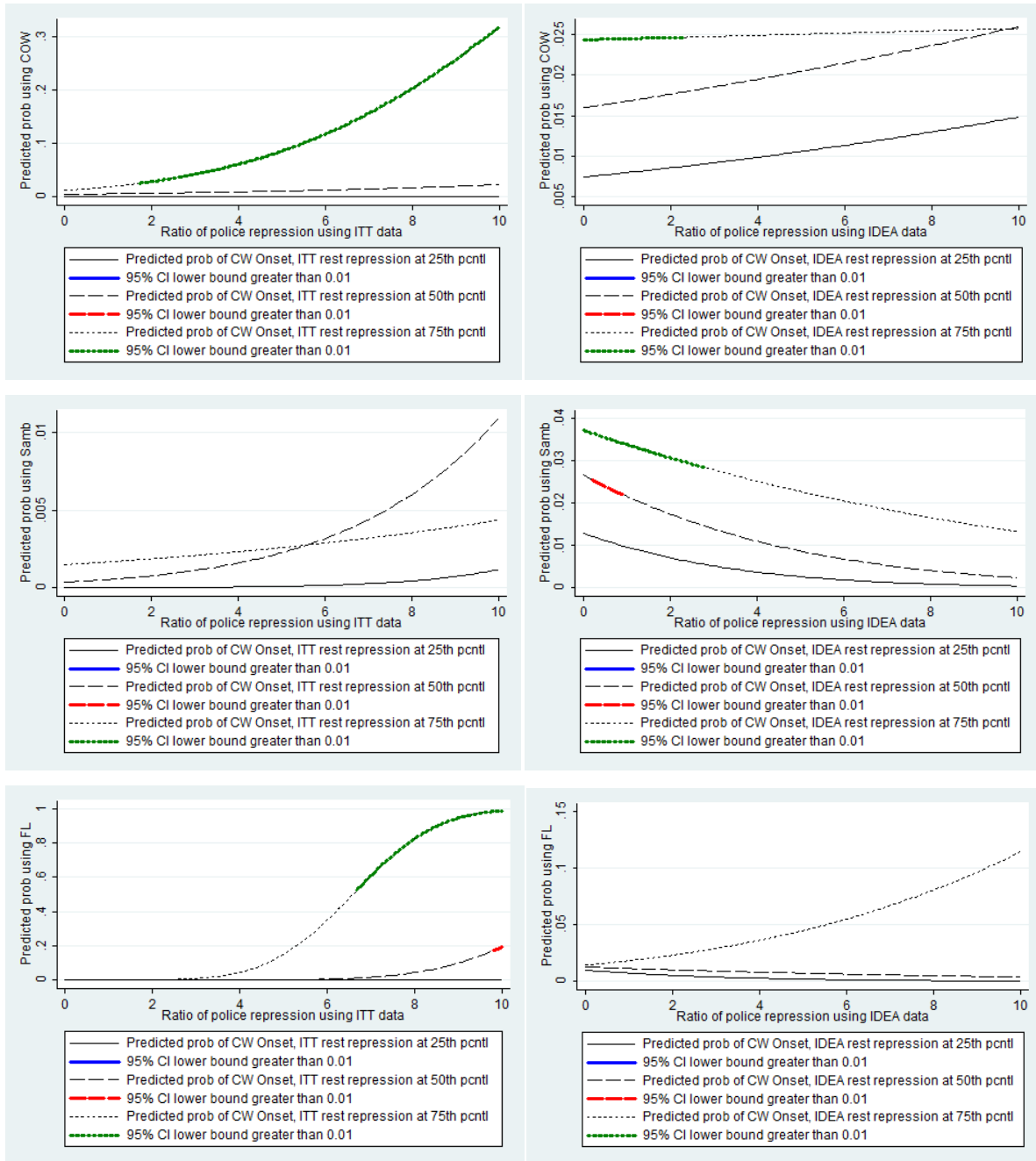
**Figure C-3 Effects of total government repression on civil war onset, using CIRI and PTS data**

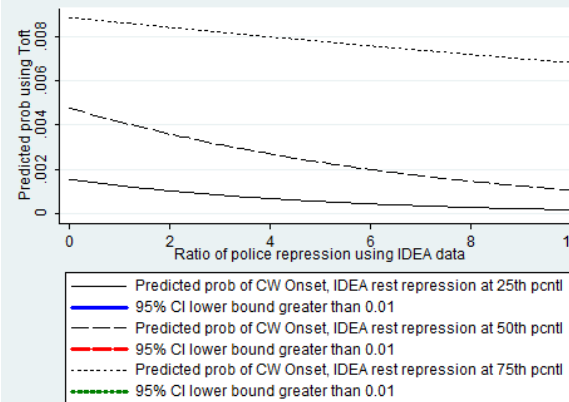
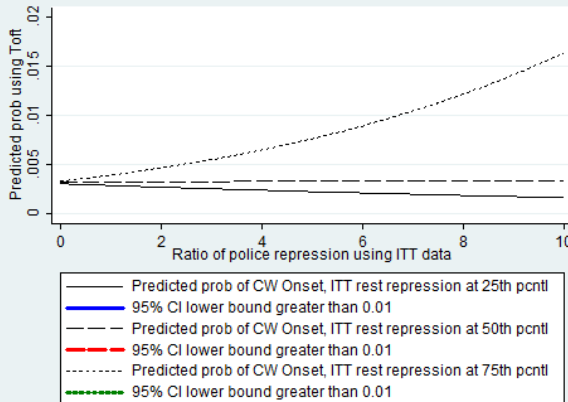
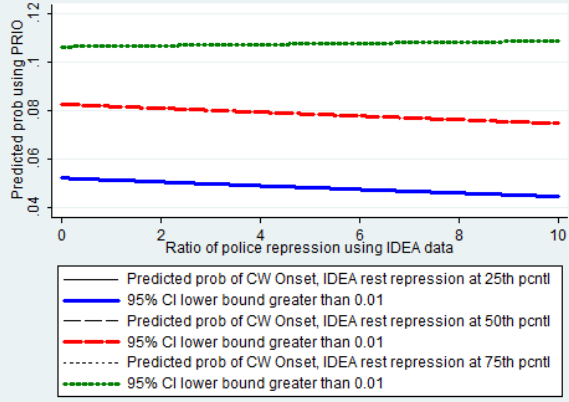
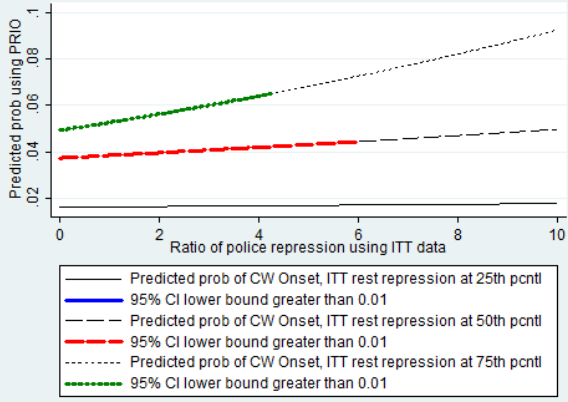






**Figure C-4 Effects of repression ratios on civil war onset**





## Appendix D - Supporting Information for Chapter 4

### Description of variables contained in organization models

In this section I provide a description of the models and variables reflecting my hypotheses relating police mode of organization and civil war onset. I first list the models, then describe the variables.

This model depicts step 1 of H3a: the effects of centralization on repression

$$\text{Model 3a.1} \quad \text{repression}_{it} = \beta_0 + \beta_1 (\text{centralization})_{it} + \beta_2 (\text{regime type})_{it}$$

These models depict a simultaneous test of steps 1 and 2: the effect of centralization on repression and civil war onset.

$$\begin{aligned} \text{Model 3a2.} \quad \text{repression}_{it} &= \beta_0 + \beta_1 (\text{centralization})_{it} \\ &\quad + \beta_2 (\text{regime type})_{it} \\ \\ \text{onset}_{it} &= \beta_0 + \beta_1 (\text{centralization})_{it} + \beta_2 \text{peace\_years}_{it} \\ &\quad + \beta_3 (\text{lag of threat})_{it} + \beta_4 (\text{square of Polity IV})_{it} \\ &\quad + \beta_4 (\text{Polity IV})_{it} \end{aligned}$$

These models depict H3b: the effect of centralization, interacted with police capacity, on civil war onset.

$$\begin{aligned} \text{Model 3b.1} \quad \text{onset}_{it} &= \beta_0 + \beta_1 (\text{centralization}_{it})(\text{police per capita}_{it}) \\ &\quad + \beta_2 (\text{centralization})_{it} + \beta_3 (\text{police per capita})_{it} \\ &\quad + \beta_5 (\text{extractive capacity})_{it} + \beta_6 (\text{bureaucratic quality})_{it} \\ &\quad + \beta_7 (\text{military per capita})_{it} \end{aligned}$$

$$\begin{aligned} \text{Model 3b.1} \quad \text{onset}_{it} &= \beta_0 + \beta_1 (\text{centralization}_{it})(\text{police per area}_{it}) \\ &\quad + \beta_2 (\text{centralization})_{it} + \beta_3 (\text{police per area})_{it} \\ &\quad + \beta_5 (\text{extractive capacity})_{it} + \beta_6 (\text{bureaucratic quality})_{it} \\ &\quad + \beta_7 (\text{military per area})_{it} \end{aligned}$$

**Table D-1 Description of Variables Contained in the 3a Models**

Variable label	Variable concept	Measure	Source
Onset	Civil war onset	Dummy for onset during that time period	Various. See Annex A
Centralization	Highly centralized police organization	Dummy for highly centralized	Various
Regime type	Democratization	Polity IV score	Polity IV
peace years	lingering grievances	$e^{-\left(\frac{\text{years since last civilwar}}{8}\right)}$	onset dataset dependent
lag of threat	previous internal violence	PITF Revolutionary War Magnitude Scale	PITF
square of Polity IV	anocracy	Polity IV score squared	Polity IV
Polity IV	democratization	Polity IV score	Polity IV

**Table D-2 Description of Variables Contained in 3b Models**

Variable label	Variable concept	Measure	Source
Onset	Civil war onset	Dummy for onset during that time period	Various. See Annex A
Centralization	Highly centralized police organization	Dummy for highly centralized	Various
Police per capita	Police capacity	Police per 1000 inhabitants	Various
Police per area	Police capacity	Police per 1000 sq kms	Various
Extractive capacity	state capacity	RPC	RPC
Bureaucratic quality	Regime instability	$2^{(\text{durable}/0.5)}$	Polity IV
Military per capita	Military capacity	Military per 1000 inhabitant	COW
Military per area	Military capacity	Military per 1000 sq kms	COW
anocracy	Anocracy	Dummy for Polity IV score <6 and >-6	Polity IV
Past civil strife	Rebel learning of police capacity	Lagged MAR score	MAR

**Table D-3 Effects on Civil War Onset Sample Size when matched with Police Organization**

**Data**

Database	Beginning number of onsets using quinquennial data	With matching org data		
		Total	highly centralized police	decentralized police
COW	98	19	14	5
Doyle and Sambanis	125	34	27	7
Fearon and Laitin	97	27	18	9
PRIO	249	59	42	17
Toft	93	23	17	6

## Tests of Bias Effect from ITT and IDEA

Since many of the high police repression scores occurred in the United States, I attempt to determine the extent of any media bias the IDEA dataset by comparing the mean values of the various measures of repression in the United States to the overall mean of the sample.

**Table D-4 Comparison of Mean Scores of Repression**

	CIRI	PTS	ITT Police	IDEA Police
US	7.3	1.13	29.5	14.9
Overall sample	4.9	2.4	5.75	2.3

A comparison of means suggests that bias resulting from media access has a strong effect on the contradictory findings. As depicted in Table D-4, the CIRI and PTS measures indicate that the United States has a lower average level of repression than the rest of the world. In contrast, the ITT and IDEA police repression measures I created indicate that the United States has far greater levels of police repression than the world averages. Since it is theoretically possible that the United States could have higher police repression levels, but lower overall levels, I compute the means of the ITT and IDEA *total* repression measures, and the United States still has higher scores than the rest of the world.<sup>134</sup>

---

<sup>134</sup> The US had a mean ITT total score of 80 and the world 13. The US had an IDEA total score of 56 and the world 4.

## **Regression Outcomes for tests of Police Organization**

The following tables depict the regression outcomes for the various tests of the effects of police organization on the probability of civil war onset. I omit a table depicting the effects of police organization on repression since I already present it in Chapter 4. See Table 4-4 for results.

### ***Outcomes for Grievance Hypothesis (simultaneous models)***

These tables depict the outcomes from conducting a cmp regression on the joint effects of police organization on repression and civil war onset.

**Table D-5 Simultaneous regression using COW onset data and IDEA repression data**

EQUATION	VARIABLES	(1) Simultaneous model	(2) Step 2	(3) Step 1
Onset COW	Centralized	-0.117 (0.122)	-0.110 (0.122)	
	Decay function of peace years, using COW	1.069*** (0.226)	1.062*** (0.227)	
	lag of Threat	0.319*** (0.0607)	0.328*** (0.0606)	
	Square of Polity IV	-0.00508*** (0.00149)	-0.00489*** (0.00150)	
	Polity IV score	-0.0100 (0.00792)	-0.0101 (0.00787)	
	Constant	-2.103*** (0.133)	-2.118*** (0.134)	
	IDEA police repression	Centralized	-1.802*** (0.324)	
Polity IV score		0.0488*** (0.0178)		0.0484*** (0.0179)
Constant		3.490*** (0.308)		3.495*** (0.308)
Insig_2	Constant	1.417*** (0.0655)		
atanhrho_12	Constant	0.124* (0.0698)		
Insig_1	Constant			1.417*** (0.0656)
	Observations	5,497	5,423	1,296

Robust standard errors in parentheses

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



**Table D-6 Simultaneous regression using COW onset data and ITT repression data**

EQUATION	VARIABLES	(1) Simultaneous model	(2) Step 2	(3) Step 1
Onset COW	Centralized	-0.0991 (0.123)	-0.110 (0.122)	
	Decay function of peace years, using COW	1.079*** (0.225)	1.062*** (0.227)	
	lag of Threat	0.325*** (0.0603)	0.328*** (0.0606)	
	Square of Polity IV	-0.00494*** (0.00150)	-0.00489*** (0.00150)	
	Polity IV score	-0.00953 (0.00793)	-0.0101 (0.00787)	
	Constant	-2.112*** (0.133)	-2.118*** (0.134)	
	ITT police repression	Centralized	-1.979 (1.230)	
Polity IV score		0.129* (0.0726)		0.117* (0.0684)
Constant		6.993*** (1.045)		7.053*** (1.013)
Insig_2	Constant	2.581*** (0.198)		
atanhrho_12	Constant	0.435*** (0.135)		
Insig_1	Constant			2.581*** (0.199)
	Observations	5,458	5,423	614

Robust standard errors in parentheses

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

**Table D-7 Simultaneous regression using Fearon and Latin onset data and IDEA repression data**

EQUATION	VARIABLES	(1) Simultaneous model	(2) Step 2	(3) Step 1
Onset Fearon and Laitin	Centralized	-0.115 (0.112)	-0.115 (0.112)	
	Decay function of peace years, using Fearon and Laitin	0.906*** (0.266)	0.889*** (0.269)	
	lag of Threat	0.184** (0.0936)	0.210** (0.0949)	
	Square of Polity IV	-0.00598*** (0.00143)	-0.00584*** (0.00144)	
	Polity IV score	-0.00384 (0.00715)	-0.00424 (0.00712)	
	Constant	-1.835*** (0.128)	-1.848*** (0.127)	
IDEA police repression	Centralized	-1.802*** (0.323)		-1.807*** (0.324)
	Polity IV score	0.0503*** (0.0177)		0.0484*** (0.0179)
	Constant	3.480*** (0.306)		3.495*** (0.308)
Insig_2	Constant	1.416*** (0.0655)		
atanhrho_12	Constant	0.154* (0.0810)		
Insig_1	Constant			1.417*** (0.0656)
	Observations	5,010	4,745	1,296

Robust standard errors in parentheses

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

**Table D-8 Simultaneous regression using Fearon and Laitin onset data and ITT repression data**

EQUATION	VARIABLES	(1) Simultaneous model	(2) Step 2	(3) Step 1
Onset Fearon and Laitin	Centralized	-0.0944 (0.113)	-0.115 (0.112)	
	Decay function of peace years, using Fearon and Laitin	0.874*** (0.266)	0.889*** (0.269)	
	lag of Threat	0.217** (0.0943)	0.210** (0.0949)	
	Square of Polity IV	-0.00576*** (0.00143)	-0.00584*** (0.00144)	
	Polity IV score	-0.00316 (0.00715)	-0.00424 (0.00712)	
	Constant	-1.853*** (0.127)	-1.848*** (0.127)	
	ITT police repression	Centralized	-2.110* (1.190)	
Polity IV score		0.113* (0.0675)		0.117* (0.0684)
Constant		7.219*** (1.008)		7.053*** (1.013)
Insig_2	Constant	2.583*** (0.199)		
atanrho_12	Constant	0.457** (0.180)		
Insig_1	Constant			2.581*** (0.199)
	Observations	4,860	4,745	614

Robust standard errors in parentheses

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

**Table D-9 Simultaneous regression using PRIO onset data and IDEA repression data**

EQUATION	VARIABLES	(1) Simultaneous model	(2) Step 2	(3) Step 1	
Onset PRIO	Centralized	-0.0504 (0.0839)	-0.0567 (0.0832)		
	Decay function of peace years, using PRIO	1.453*** (0.118)	1.482*** (0.120)		
	lag of Threat	0.178*** (0.0661)	0.179*** (0.0671)		
	Square of Polity IV	-0.00508*** (0.00116)	-0.00489*** (0.00116)		
	Polity IV score	-0.00119 (0.00517)	-0.00114 (0.00515)		
	Constant	-1.748*** (0.105)	-1.759*** (0.105)		
	IDEA police repression	Centralized	-1.785*** (0.323)		-1.807*** (0.324)
		Polity IV score	0.0499*** (0.0179)		0.0484*** (0.0179)
	Constant	3.462*** (0.306)		3.495*** (0.308)	
Insig_2	Constant	1.416*** (0.0656)			
atanhrho_12	Constant	0.146*** (0.0441)			
Insig_1	Constant			1.417*** (0.0656)	
	Observations	4,990	4,805	1,296	

Robust standard errors in parentheses

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

**Table D-10 Simultaneous regression using PRIO onset data and ITT repression data**

EQUATION	VARIABLES	(1) Simultaneous model	(2) Step 2	(3) Step 1
Onset PRIO	Centralized	-0.0342 (0.0849)	-0.0567 (0.0832)	
	Decay function of peace years, using PRIO	1.447*** (0.119)	1.482*** (0.120)	
	lag of Threat	0.180*** (0.0664)	0.179*** (0.0671)	
	Square of Polity IV	-0.00485*** (0.00116)	-0.00489*** (0.00116)	
	Polity IV score	-0.000622 (0.00519)	-0.00114 (0.00515)	
	Constant	-1.764*** (0.106)	-1.759*** (0.105)	
	ITT police repression	Centralized	-1.931 (1.237)	
Polity IV score		0.120* (0.0703)		0.117* (0.0684)
Constant		7.008*** (1.046)		7.053*** (1.013)
Insig_2	Constant	2.583*** (0.199)		
atanhrho_12	Constant	0.418*** (0.146)		
Insig_1	Constant			2.581*** (0.199)
	Observations	4,890	4,805	614

Robust standard errors in parentheses

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

**Table D-11 Simultaneous regression using Sambanis onset data and IDEA repression data**

EQUATION	VARIABLES	(1) Simultaneous model	(2) Step 2	(3) Step 1
Onset Sambanis	Centralized	-0.105 (0.111)	-0.103 (0.111)	
	Decay function of peace years, using Sambanis	0.861*** (0.250)	0.840*** (0.253)	
	lag of Threat	0.322*** (0.0966)	0.334*** (0.0996)	
	Square of Polity IV	-0.00634*** (0.00150)	-0.00629*** (0.00149)	
	Polity IV score	-0.00882 (0.00723)	-0.00918 (0.00717)	
	Constant	-1.814*** (0.128)	-1.819*** (0.128)	
	IDEA police repression	Centralized	-1.797*** (0.325)	
	Polity IV score	0.0495*** (0.0178)		0.0484*** (0.0179)
	Constant	3.479*** (0.308)		3.495*** (0.308)
Insig_2	Constant	1.417*** (0.0655)		
atanhrho_12	Constant	0.0791 (0.0668)		
Insig_1	Constant			1.417*** (0.0656)
	Observations	4,983	4,738	1,296

Robust standard errors in parentheses

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

**Table D-12 Simultaneous regression using Sambanis onset data and ITT repression data**

EQUATION	VARIABLES	(1) Simultaneous model	(2) Step 2	(3) Step 1
onsetSambanis	Centralized	-0.0992 (0.111)	-0.103 (0.111)	
	Decay function of peace years, using Sambanis	0.840*** (0.252)	0.840*** (0.253)	
	lag of Threat	0.334*** (0.0992)	0.334*** (0.0996)	
	Square of Polity IV	-0.00626*** (0.00149)	-0.00629*** (0.00149)	
	Polity IV score	-0.00876 (0.00725)	-0.00918 (0.00717)	
	Constant	-1.819*** (0.128)	-1.819*** (0.128)	
	ITT police repression	Centralized	-1.990 (1.218)	
Polity IV score		0.117* (0.0685)		0.117* (0.0684)
Constant		7.082*** (1.016)		7.053*** (1.013)
Insig_2	Constant	2.582*** (0.199)		
atanhrho_12	Constant	0.246 (0.209)		
Insig_1	Constant			2.581*** (0.199)
	Observations	4,853	4,738	614

Robust standard errors in parentheses

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

**Table D-13 Simultaneous regression using Toft onset data and IDEA repression data**

EQUATION	VARIABLES	(1) Simultaneous model	(2) Step 2	(3) Step 1	
Onset Toft	Centralized	-0.0377 (0.118)	-0.0326 (0.118)		
	Decay function of peace years, using Toft	1.350*** (0.218)	1.338*** (0.220)		
	lag of Threat	0.0806 (0.0921)	0.104 (0.0981)		
	Square of Polity IV	-0.00335** (0.00158)	-0.00324** (0.00157)		
	Polity IV score	-0.0122* (0.00733)	-0.0124* (0.00730)		
	Constant	-2.182*** (0.137)	-2.191*** (0.136)		
	IDEA police repression	Centralized	-1.809*** (0.324)		-1.807*** (0.324)
		Polity IV score	0.0487*** (0.0178)		0.0484*** (0.0179)
	Constant	3.500*** (0.308)		3.495*** (0.308)	
Insig_2	Constant	1.417*** (0.0656)			
atanhrho_12	Constant	0.118 (0.0783)			
Insig_1	Constant			1.417*** (0.0656)	
	Observations	5,294	5,184	1,296	

Robust standard errors in parentheses

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



**Table D-14 Simultaneous regression using Toft onset data and ITT repression data**

EQUATION	VARIABLES	(1) Simultaneous model	(2) Step 2	(3) Step 1
Onset Toft	Centralized	-0.0331 (0.118)	-0.0326 (0.118)	
	Decay function of peace years, using Toft	1.336*** (0.221)	1.338*** (0.220)	
	lag of Threat	0.105 (0.0982)	0.104 (0.0981)	
	Square of Polity IV	-0.00324** (0.00157)	-0.00324** (0.00157)	
	Polity IV score	-0.0124* (0.00731)	-0.0124* (0.00730)	
	Constant	-2.191*** (0.136)	-2.191*** (0.136)	
	ITT police repression	Centralized	-1.987 (1.218)	
Polity IV score		0.117* (0.0684)		0.117* (0.0684)
Constant		7.064*** (1.013)		7.053*** (1.013)
Constant		2.581*** (0.199)		
atanhrho_12	Constant	0.0372 (0.0418)		
Insig_1	Constant			2.581*** (0.199)
	Observations	5,225	5,184	614

Robust standard errors in parentheses

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

### *Outcomes for Greed Hypotheses*

The tables depict the outcomes of the greed hypotheses. The first table contains regression outcomes for a police per capita measure of police capacity, and the second table contains outcomes for a police per area measure of police capacity. The columns represent the various civil war onset databases that serve as indicators of the dependent variable.

**Table D-15 Regression outcome for centralization, conditional on police per capita and area**

VARIABLES	(1) COW	(2) Sambanis	(3) Fearon and Laitin	(4) PRIO	(5) Toft
Police per 1000 sq kms, quinquennial average	0.000148 (0.00117)	0.000374 (0.00127)	0.000153 (0.000757)	-0.00111 (0.000986)	0.00109 (0.00131)
Centralized, quinquennial mode	0.125 (0.398)	0.374 (0.359)	-0.259 (0.302)	-0.327 (0.294)	0.0207 (0.343)
interaction of centralization and police per area	-0.00123 (0.00105)	-0.00198 (0.00136)	-0.000395 (0.000820)	0.000522 (0.000985)	-0.00118 (0.00133)
Extractive capacity, quinquennial average	-0.0545 (0.355)	-0.0596 (0.237)	-0.0571 (0.264)	0.00359 (0.233)	-0.254 (0.359)
Bureaucratic quality, quinquennial maximum	0.763*** (0.237)	0.829*** (0.206)	0.781*** (0.223)	0.381* (0.196)	0.532** (0.239)
military personnel per 1000 sq kms, quinquennial average	1.36e-05 (0.000150)	-7.85e-05 (0.000201)	-0.000126 (9.50e-05)	4.27e-05 (0.000123)	-0.00112*** (0.000346)
Constant	-1.847*** (0.549)	-1.666*** (0.406)	-1.427*** (0.346)	-0.723** (0.355)	-1.223*** (0.444)
Observations	337	336	337	337	337
Number of ccode	110	109	110	110	110

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

VARIABLES	(1) COW	(2) Sambanis	(3) Fearon and Laitin	(4) PRIO	(5) Toft
Police per 1000 inhabitants, quinquennial average	-0.195** (0.0909)	-0.301** (0.140)	-0.344*** (0.123)	-0.311*** (0.0731)	-0.183 (0.134)
Centralized, quinquennial mode	-0.0771 (0.352)	0.0809 (0.328)	-0.334 (0.268)	-0.221 (0.272)	-0.0519 (0.297)
Interaction of police per capita and anocracy dummy	0.185** (0.0914)	0.290** (0.122)	0.372*** (0.126)	0.270*** (0.0728)	0.245* (0.134)
Extractive capacity, quinquennial average	-0.00528 (0.321)	-0.0218 (0.244)	0.0456 (0.268)	0.121 (0.226)	-0.207 (0.343)
Bureaucratic quality, quinquennial maximum	0.581** (0.257)	0.578** (0.231)	0.523** (0.255)	0.231 (0.206)	0.373 (0.285)
military personnel per 1000 inhabitants, quinquennial average	-0.00566 (0.0218)	-0.0421 (0.0275)	-0.0492* (0.0287)	-0.00202 (0.0230)	-0.0925*** (0.0334)
Constant	-1.538*** (0.521)	-1.048** (0.437)	-0.912** (0.368)	-0.552 (0.401)	-0.876* (0.451)
Observations	335	334	335	335	335
Number of ccode	110	109	110	110	110

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

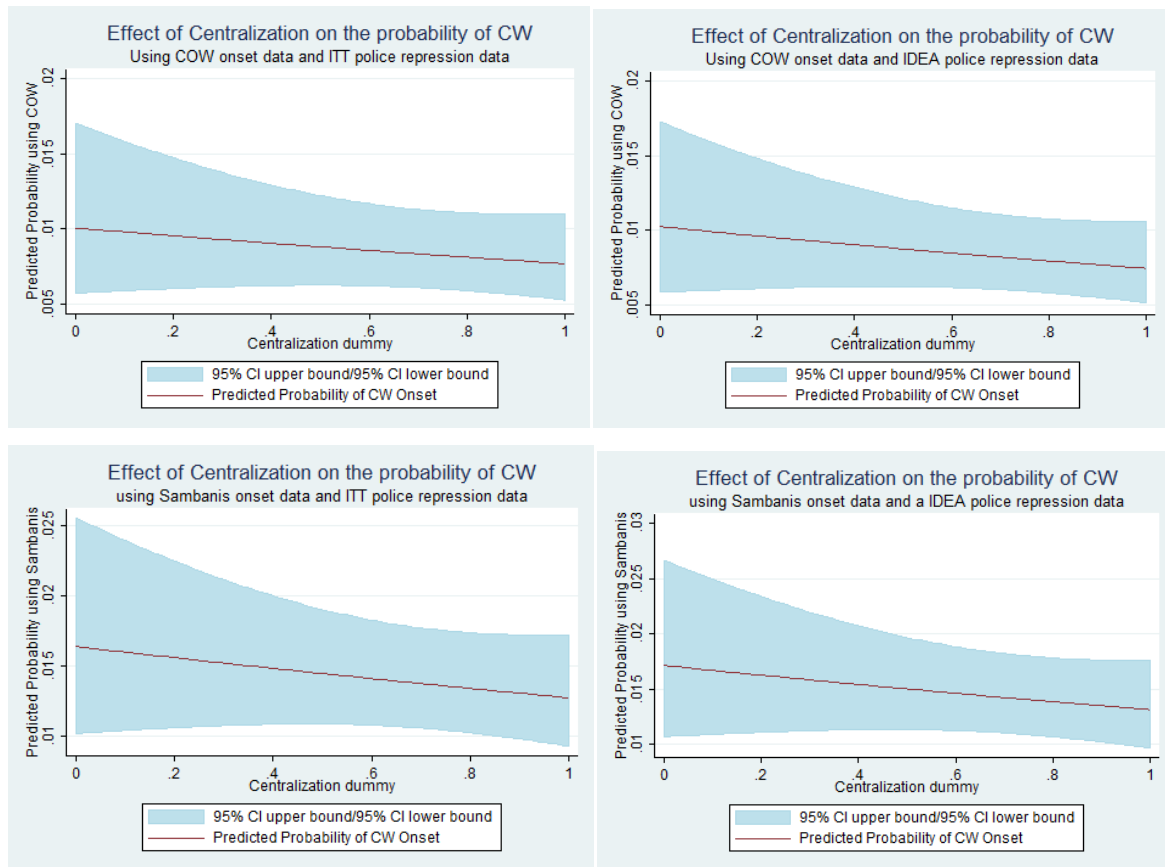
## Outcomes Graphs for Organization Models

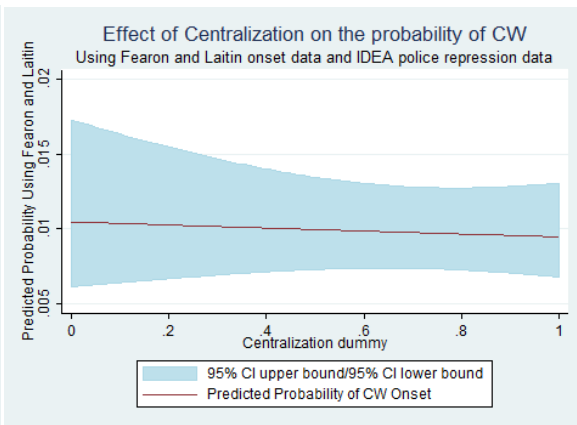
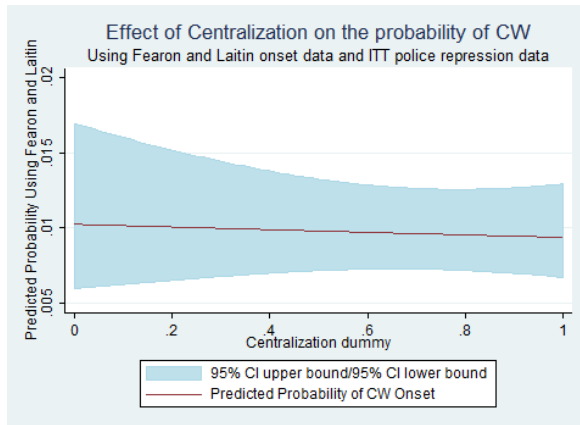
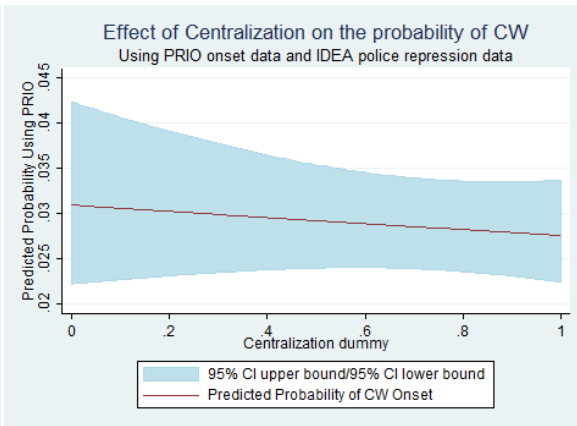
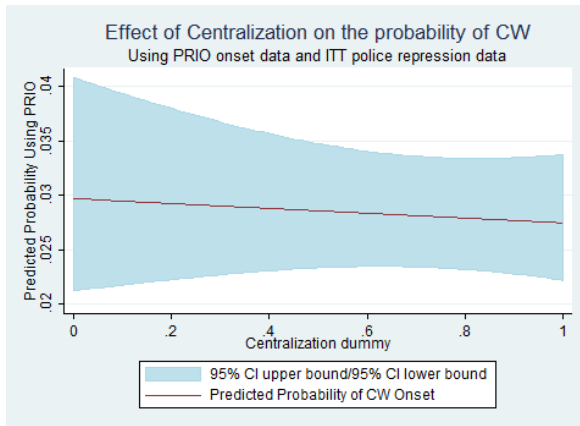
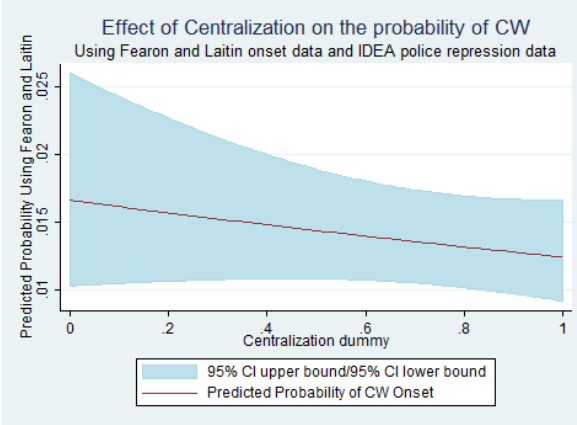
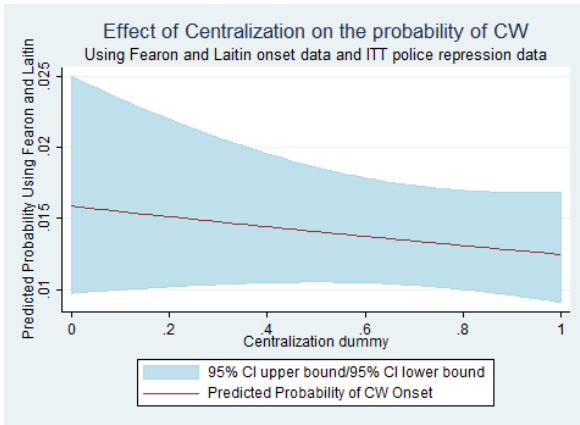
The following graphs depict the effects of changes in police organizational centralization on the probability of civil war onset. I present first the graphs for the grievance models, then the graphs for the greed models.

### *Graphs for Grievance Models*

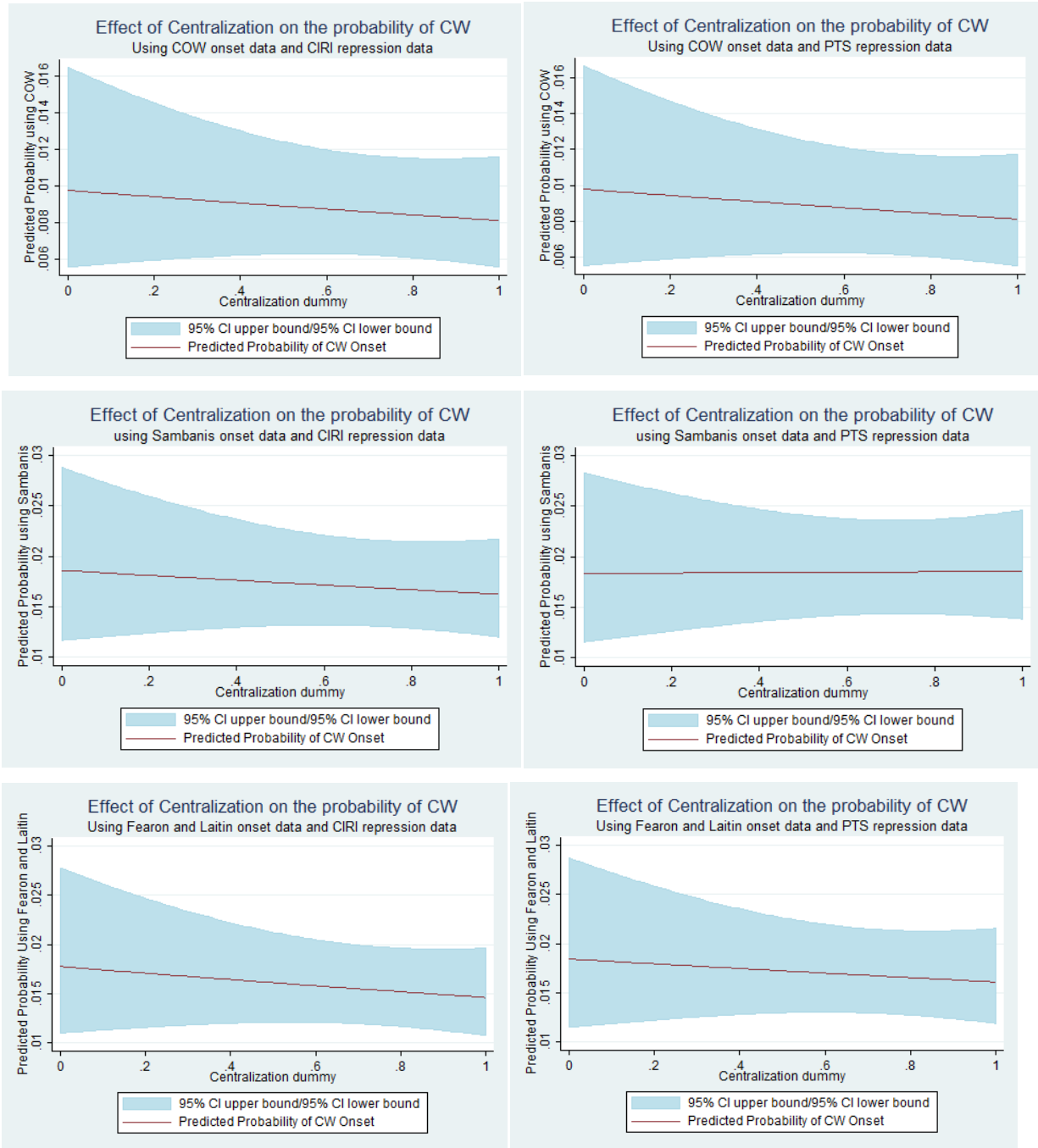
The graphs depict the outcomes from testing the simultaneous models of the effect of centralization on the probability of civil war onset, with repression as an intermediate process.

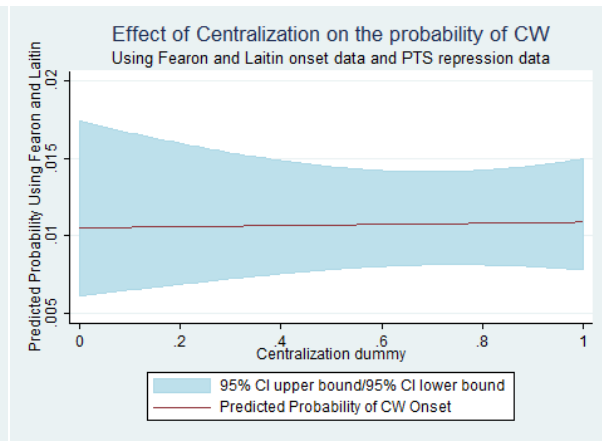
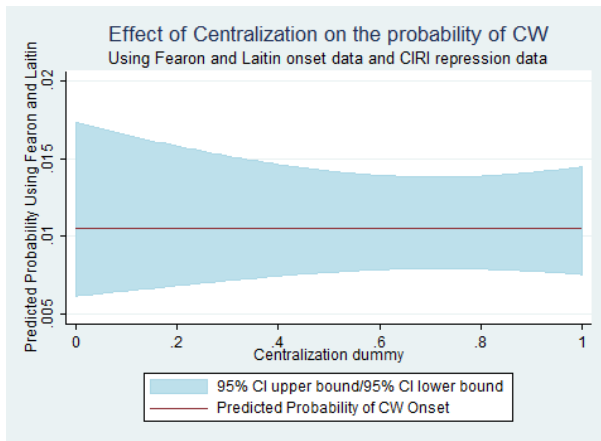
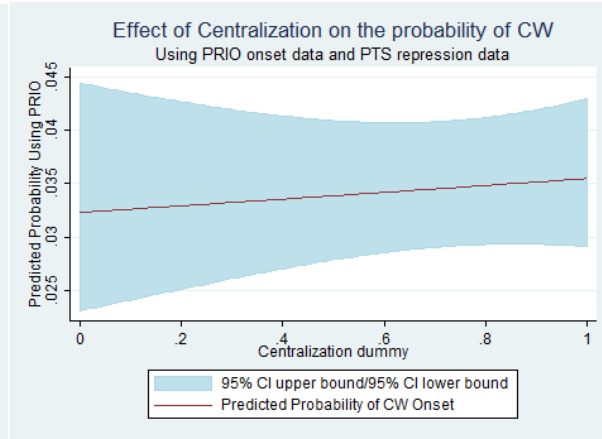
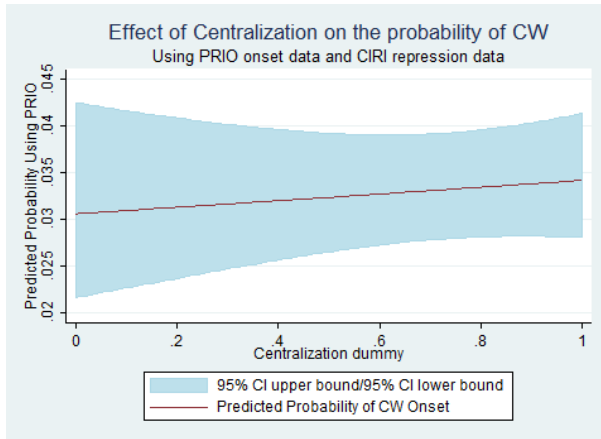
**Figure D-1 Effect of centralization using police repression**





**Figure D-2 Effect of centralization using overall government repression, measured by CIRI and PTS**



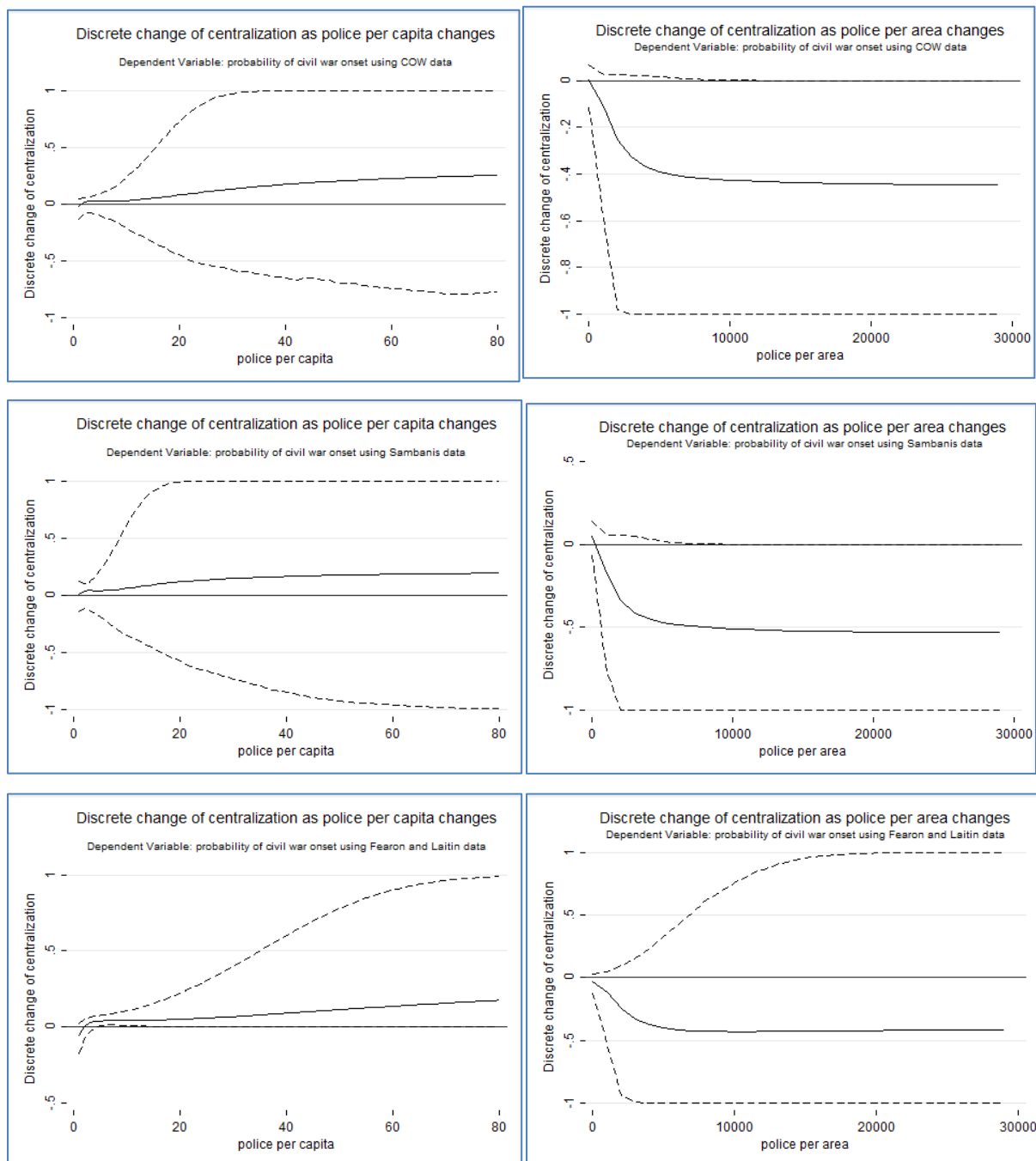


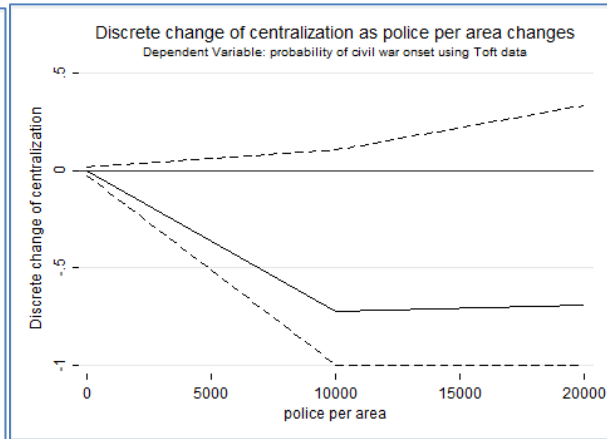
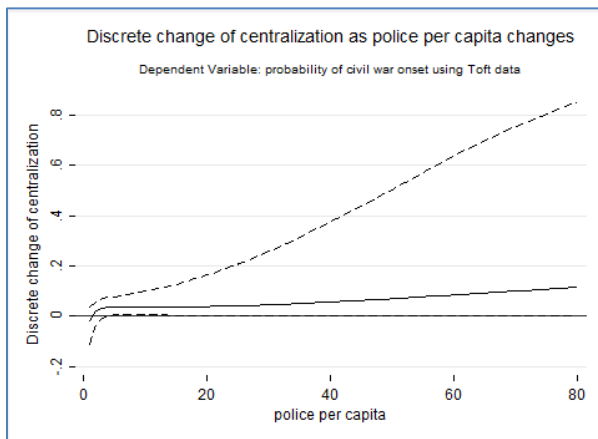
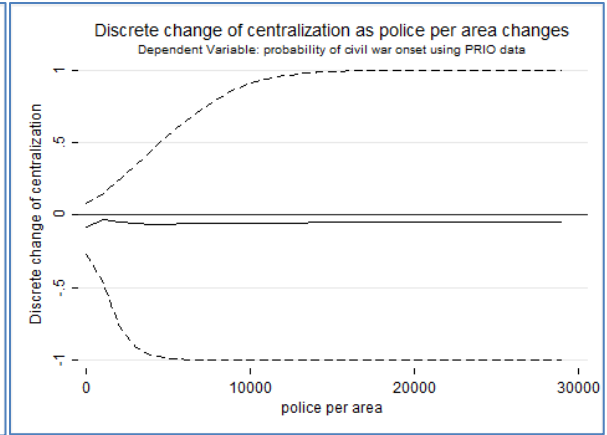
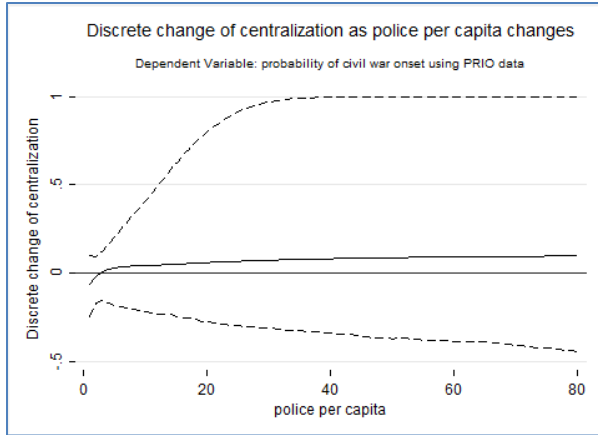


## *Graphs for Greed Models*

These graphs depict the effect of centralization, interacted with measures of police capacity.

**Figure D-3 Discrete change of centralization as police capacity varies**





**Figure D-4 Marginal effects of police per capita in the presence of centralization**

