

UNDERSTANDING OF STATE CAPACITY  
IN CIVIL WAR ONSET, 1984-1999

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by  
SUNGROK WON  
Dr. Katharine Floros, Thesis Supervisor

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The undersigned, appointed by the Dean of the Graduate School, have examined the thesis entitled

UNDERSTANDING OF STATE CAPACITY IN CIVIL WAR ONSET, 1984-1999

presented by Sungrok Won,

a candidate for the degree of Master of Arts

and hereby certify that, in their opinion, it is worthy of acceptance.

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Professor Katharine Floros

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Professor Doh C. Shin

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Professor Paul Speckman

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## TABLE OF CONTENTS

Acknowledgements.....	ii
List of Figures.....	iv
List of Tables.....	v
Abstract.....	vi
Chapter	
1. Introduction.....	1
2. Literature Review.....	4
3. Theoretical Background and Hypotheses.....	12
4. Research Design.....	16
5. Results.....	24
6. Discussion And Conclusion.....	32
References.....	43

## List of Figures

Figure	Page
1. Number of civil conflicts and wars, 1946-2008 (Fearon 2010) .....	35
2. Percentage of countries with civil conflicts or wars, 1946-2008 (Fearon 2010) .....	36
3. Percent change in odds for SD increase in large-scale civil war onset .....	37
4. Percent change in odds for SD increase in small-scale civil war onset .....	38

## List of Tables

Table	Page
1. Descriptive statistics of variables.....	39
2. Consensus determinant of civil war in previous studies (Dixon 2009).....	40
3. The logistic regression model for large-scale civil war onset, 1984-1999.....	41
4. The logistic regression model for small-scale civil war onset, 1984-1999.....	42

# UNDERSTANDING OF STATE CAPACITY IN CIVIL WAR ONSET, 1984-1999

Sungrok Won

Dr. Katharine Floros, Thesis Supervisor

## ABSTRACT

Scholars have used multiple approaches to investigate civil war. Among various civil war studies, those examining civil war onset are important because onset is the first stage of war. In the early stage of civil war onset research, scholars focused on the motivation for rebellion. However, these studies overlooked the role of the state. Attempting to remedy this lack, this study investigates the role of the state as a main actor in the process of civil war onset, considering it in terms of state capacity with two indicators: bureaucratic quality and government stability. This study tests these indicators by examining the onset of two scales of civil wars: large and small. The results confirm that state capacity influences civil war onset. However, the impact of state capacity depends on the scale of civil wars.

# **Chapter 1**

## ***Introduction***

From the end of the Second World War to the end of the twentieth century, 127 major civil wars broke out; many of these civil wars are continuing even today. This number is quite large compared with the 25 interstate wars that occurred during the same period (Fearon and Laitin 2003). These civil wars resulted in tens of millions of casualties among both civilians and combatants (Lacina and Gleditsch 2005). Civil wars not only resulted in huge casualties but also destroyed state economies through the destruction of assets, commerce, and infrastructure (Collier 1999). Moreover, a long-lasting civil war continues to have a negative influence on a country's economic growth after the war ends (Kang and Meernik 2005).

There have been many civil wars, and scholars have used multiple approaches to investigate the phenomenon. Among various civil war studies, those examining civil war onset are important because it is the first stage of the war; furthermore, onset influences the duration and severity of civil war. Civil war onset studies have focused on why civil wars occur and what factors influence the possibility of onset. In the early stage of civil war onset studies, scholars concentrated on the motivation for rebellion (Collier and Hoeffler 2004; Sambanis 2001). They heavily focused on the greed and grievance of the rebel groups. In this sense, greed and grievance theories explained the civil war onset with theoretical methods and empirical tests. However, these theories overlook the role of the state in the onset of civil war.

Attempting to remedy this lack, this study aims to investigate the role of the state as a main actor in the process of civil war onset, considered in terms of state capacity. This study poses two empirical questions: How does state capacity influence civil war onset? What are the factors of state capacity that have an impact on civil war onset? There are various indicators that can be investigated to determine the relationship between state capacity and civil war onset. This study examines two: bureaucratic quality and government stability. These indicators represent the state's capacity to maintain political and social order.

This study tests bureaucratic quality and government stability by examining the onset of two scales of civil war: large and small. The civil wars are basically categorized according to the number of deaths and other conditions that define a conflict as a civil war. Previous civil war onset studies generally focused on either large- or small-scale civil wars, but this study considers both. By considering two scales of civil war onset, this study attempts to provide a comprehensive description of the role of the state. The results confirm that state capacity influences civil war onset. However, the impact of state capacity depends on the scale of the civil war. The empirical results show specifically that both bureaucratic quality and government stability influence small-scale civil war onset. Findings suggest that state capacity can minimize the possibility of small-scale civil war onset, but it may have little effect in terms of controlling large-scale civil war onset.

Five chapters follow the introduction. Chapter 2 examines the previous literatures, which have focused on the rebel-centric and state-centric aspects of civil war onset. This chapter observes the different views of civil war onset between rebel-centric and state-

centric studies and outlines the flow of the latter. In other words, it will summarize what has been done and present what needs to be done in the study of civil war onset. Chapter 3 introduces the theoretical background for the concept of state capacity and introduces the hypotheses that will be tested in this study. Chapter 4 focuses on the research design and explains the logistic regression analysis, data, and variables used in this study. Chapter 5 presents the empirical results and discusses them. Chapter 6 draws conclusions from the empirical results, discusses implications, and comments on future studies.

## **Chapter 2**

### ***Literature Review***

There is an extensive body of literature investigating civil war onset. These studies have tried to determine why civil wars occur and what factors influence their onset. Just as there are many studies about civil war onset, there are various approaches to the research. These studies can be categorized into two broad classifications. One is rebel-centric studies and the other is state-centric studies. The former have focused on the characteristics of the rebel groups, and the latter have focused on the role of the state as a main actor in civil war onset.

The rebel-centric studies dominated civil war onset research during the 1990s and early 2000s. This portion of the civil war onset literature is represented by greed and grievance studies in which scholars focus on the motivation of rebel groups. According to these studies, the willingness to rebel initiates a civil war with the intent to take power at the center or in a region or to change government policies (Fearon 2007). Grievance theory was prevalent in the discussion of civil war onset during the 1990s. According to the grievance studies, civil wars are initiated due to inequities in solving ethnic, religious, and/or linguistic problems, as well as due to political repression (Besançon 2005; Bhavnani and Miodownik 2009; Brush 1996; Ellingsen 2000; Gurr 1968; Haynes 2007; Hegre and Sambanis 2006; Muller and Seligson 1987; Percival and Homer-Dixon 1998; Posen 1993; Regan and Norton 2005; Sambanis 2001; Tangerang and Lagerlof 2003; Urdal 2005).

Grievance studies posit that problems come from the structure and institution of a society, which leads to the multi-polarization of the state. As a result, there are inequalities and discriminations between the majority group and the minority populations. In this sense, civil wars are a response to those conditions. Regan and Norton (2005), in their studies about protest, rebellion, and civil war, explained that political repression caused civil wars and insisted that grievance-based issues are at the core of the process that leads to civil conflicts. Hegre and Sambanis (2006) pointed out that some studies of the onset of civil wars have some problems with their empirical tests: The results are not robust and replicable. They asserted that these problems resulted from the use of different time periods and varying definitions of civil war, and they stated that ethnicity explains lower-level civil war.

However, grievance studies are contradicted by greed studies. Studies about greed concentrate on financing, natural resources, the cost of war, weak military and government, social cohesion, and mobilization (Collier and Hoeffler 2004; Fearon 1998; Fearon, Kasara, and Laitin 2007; Fearon and Laitin 2003; Miguel, Satyanath, and Sergenti 2004; Ross 2004). Scholars focus on a political opportunity and emphasize the economic aspects, especially about the cost of war and conflicts. According to the greed studies, rebel groups try to pursue economic benefits through the civil war rather than seeking to solve the inequality and the discrimination. They use civil war as a method to satisfy their economic greed.

Using a statistical empirical test, Collier and Hoeffler (2004) contended that greed aspects are more significant than grievances, arguing that rebellion is explained better from the viewpoint of greed. Their premise is that the availability of finance, the

cost of rebellion, and military advantage are the influential opportunity factors, whereas most factors that represent grievance are not significant: inequality, political rights, ethnic polarization, and religious fractionalization. Fearon, Kasara, and Laitin (2007), in their empirical test, also emphasized that grievance factors are not statistically important variables.

Although the greed and grievance studies have developed various theories of civil war onset and have provided empirical results, they all have concentrated heavily on the side of rebellion. Specifically, both greed and grievance are the factors that insurgent groups have in mind when they decide to initiate a civil war. In other words, these studies have focused on the motivation of the rebels (greed and grievance) and the political opportunity structure that influences the rebels' decision to fight against the government. Consequently, the prior literature has overlooked the state. The greed and grievance literature fails to consider the state as an important player in the onset of civil war process.

The state is, however, another main actor in civil war onset, and therefore it is important to observe its role in the onset of civil war. From the view of state-centric studies, the state is considered as a main factor influencing civil war onset. Sobek (2010) explained that strong states are better able to address the needs of their citizens, and they have the option of co-opting dissent by addressing the underlying grievance. He also pointed out that strong states have the ability to deter potential rebels through threats. In short, if states have enough powers and abilities to repress the rebel groups or to accommodate the rebellion, the possibility of civil war onset will be decreased. In this sense, state capacity has been investigated to determine the role of the state in civil war onset.

There have been various approaches to explain the relationship between state capacity and civil war onset (Braithwaite 2010; De Soysa and Fjelde 2009; 2010; Drury and Taydas 2008; Fearon 2010; Fearon and Laitin 2003; Gleditsch and Ruggeri 2010; Hendrix 2010; Peksen and Taydas 2007; Thies 2010). Fearon and Laitin (2003) explained the role of the state in civil war onset from an economic perspective. They measured state capacity in terms of economics and insisted that weak government gives more opportunity for the rebellion groups to recruit soldiers. Furthermore, weak government is less likely to succeed in suppressing a rebel group. In this sense, they argued that the high economic capacity of the state decreases the possibility of civil war onset. However, they limited their focus to the economic aspect of the state and only tested the onset of large-scale civil war.

Peksen and Taydas (2007) asserted that there are limitations in conceptualizing and measuring state capacity. They tried to broaden the understanding of state capacity by including institutional quality. This is important; however, it had not been studied specifically. They explained that corruption, rule of law, and bureaucratic quality have an influence on civil war onset from an institutional perspective. They concluded that high corruption, low respect for the rule of law, and weak bureaucratic quality lead to a greater possibility of civil war onset. However, they considered only large-scale civil war onset in their empirical test.

Drury and Taydas (2008) investigated state capacity along two dimensions: extractive capacity and public spending. They asserted that if government has a high level of extractive capacity from the society and focuses on public welfare spending, these qualities will decrease the possibility of civil war onset. Their empirical test showed that

an increase in both tax revenue and public spending are factors that reduce the likelihood of civil war onset. However, this study also considered just large-scale civil war onset to test the state capacity variable.

Braithwaite (2010) examined state capacity in relation to neighboring countries that are in a civil war situation. He argued that there is a possibility of “war infection” from these neighboring territories. According to the empirical analysis, states with neighbors in ongoing civil wars have more possibilities of experiencing civil wars themselves. However, high state capacity will decrease the possibility of civil wars: State capacity can protect the state from the conflicts of its neighbors. However, this study has some limitations. The explanation of state capacity is both insufficient and ambiguous, and it was tested only with small-scale civil war onset.

Gleditsch and Ruggeri (2010) pointed out that studies on civil war onset have focused on the structure of government or state characteristics that explain whether the state is prone to civil war. They insisted that state capacity influences political opportunity. They assessed state capacity according to irregular changes in political leadership, which can cause state weakness. In this sense, the risk of civil war onset will increase, and they also asserted that democracy decreases the possibility of civil war onset. This study also considered this phenomenon only in terms of small-scale civil war onset, and therefore empirical testing using the onset of other scales of civil war is needed.

De Soysa and Fjelde (2009) suggested three concepts to describe state capacity: coercion, co-optation, and cooperation. They stated that “Coercion is the ability to extract large taxes. Co-optation is the relative size of government spending, or level of public goods provision. Cooperation is the degree of trust of economic agents in state

institutions” (De Soysa and Fjelde 2009, 6). They found that state capacity is not the ability to coerce the people but the ability to provide good institutions as credible commitments. Findings confirm that good governance is much more effective in decreasing the possibility of civil war onset than demonstrating the ability to collect a large amount of taxes from the people.

De Soysa and Fjelde (2010) also accounted for state capacity with capitalism. They argued that a higher level of economic freedom decreases the risk of civil war onset and posited that economic freedom has more influence on civil war onset than democracy or good governance has. They concluded that economic freedom does not decrease state capacity and that globalization, which they explain as the spread of capitalistic economic policies, does not lead to social conflicts and has no influence on civil war onset.

Fearon (2010) investigated the relationship between several indicators of the quality of governance or institutions and civil war onset. Although Fearon did not directly mention that the quality of governance or institutions represents state capacity, both have been investigated and considered as an indicator of state capacity in many civil war onset studies. He tested the World Bank’s Country Policy Institutional Assessment Index, the Worldwide Governance Indicators, and some of the International Country Risk Guide indicators. According to his statistical analysis, Fearon argued that improvement in governance is likely to decrease the risk of civil war onset.

Hendrix (2010) recommended using measures of bureaucratic quality and revenue-generating capacity rather than military strength or institutional coherence when modeling state capacity. He also pointed out two variables based on theoretical discussion and factor analysis: bureaucratic quality and total taxes/GDP. However, this study has a

limitation. Hendrix specifically tried to define and measure the state capacity, but he did not test whether the two variables have an influence on civil war onset.

Many studies have investigated the relationship between state capacity and civil war onset, with most of them indicating that state capacity has an influence on civil war onset. According to Thies (2010), though, civil war onset has an influence on state capacity. Thies (2010) explained state capacity by using primary commodities. He found that state capacity has no influence on civil war onset. However, according to his statistical analysis, civil war onset has an influence on state capacity. He argued that civil war onset decreases the state's capacity. His argument is quite different from other studies that explain the relationship between state capacity and civil war onset. Most studies showed that state capacity reduces the possibility of civil war onset, but he posited that state capacity has no impact on civil war onset and that civil war onset decreases the state capacity.

Based on previous discussions, this study examines two factors of state capacity in the onset of civil war: *bureaucratic quality* and *government stability*. As observed, Hendrix (2010) tried to define and measure state capacity, and he recommended using measures of bureaucratic quality in his study. He asserted that bureaucratic quality alone represents the state capacity, but he did not test whether bureaucratic quality has an influence on civil war onset. Therefore, this study tries to test bureaucratic quality through an empirical test. Government stability is another factor that is examined in this study. Government stability has not been tested often in previous studies. However, it explains government unity, legislative strength, and popular support; therefore, these factors can be inferred to explain state capacity.

As observed above, various approaches have been used to explain and confirm that state capacity has an influence on the onset of civil war. However, most of the civil war onset studies have some limitations in terms of their empirical tests. They only used limited scale of civil war onset data, considering either large-scale or small-scale civil war onset. To address this limitation, this study tests state capacity by using data representing two different civil war onsets: large- and small-scale. If we conduct the empirical tests on both scales of civil war onset, we will get specific results for both. The scale of civil war is basically categorized by number of deaths and other conditions that define a conflict as a civil war.

In sum, some previous studies considered institutional aspects and governance as state capacity. However, most scholars considered only large- or small-scale civil wars. Therefore, we need to test both scales of civil war onset at the same time. If we consider both large and small scales of civil war onset, we can obtain comprehensive results. The first benefit is that we can compare the results that come from each scale of war, which will enable us to explain what factors cause civil war onset according to the scale of war. The second benefit is that we can evaluate whether it is necessary to test the various scales of civil war. If we get the same results from each scale of war, we can explain why previous studies did not consider various scales of war onset at the same time and can suggest that it is useless to test the causes of civil war onset according to the scale of war. In this sense, this study tries to verify how bureaucratic quality and government stability influence civil war onset according to the scale of wars. The next chapter introduces the theoretical background of state capacity and presents the hypothesis tested in this study.

## **Chapter 3**

### ***Theoretical Background and Hypotheses***

As observed in the literature review, the state is a main actor, along with rebel groups, in civil war onset. Many studies have supported this argument with empirical tests. Therefore, it is clear that the state should be considered important in civil war onset studies. In this chapter, it is explained theoretically why and how state capacity is related to civil war onset. Hypotheses tested in this study are also introduced in this chapter.

There are many studies that aimed to show state capacity has an influence on civil war onset. Fearon and Laitin (2003) suggested the main idea of state capacity studies. They maintained that weak government gives more opportunities for the rebel group to recruit soldiers, and weak government will be less likely to succeed in suppressing the rebel group. With this assertion, Fearon and Laitin posit that state weakness is related to civil war onset. If states have enough power to control the challengers, the rebel groups will be unwilling to initiate civil wars. In other words, powerful state capacity can minimize and reduce the possibility of civil war onset.

Bates (2008) investigated the cases of Rwanda, Sudan, Liberia, and Congo. He maintained that the chaos that occurred in the later decades of the twentieth century in Africa was due to the state's failure. Bates asserted that state failure turned governments into predators and led citizens to join rebel groups. In other words, the states lost their capacity to govern, and as a result, political order broke down and civil wars occurred. A state cannot control its own populace without the capacity to maintain political order

throughout the country. Bates explained that state failure leads to a civil war. His study illustrates the relationship between state capacity and civil war onset.

Sobek (2010) also explained that strong states are better able to address the needs of their citizens, and they have the option of co-opting dissent by addressing the underlying grievance. In addition, he pointed out that strong states have the ability to deter potential rebels through threats. In other words, if states have enough powers and abilities to repress the rebel groups or to accommodate the rebellion, the possibility of civil war onset will be decreased.

The aforementioned studies commonly showed the ideas that state capacity has an important role in civil war onset. When a state has a strong capacity to control the political and social order, the state can deter or prevent civil war. However, when a state cannot perform its own role in maintaining the political and social order, the possibility of the problem increases. In this sense, we can infer that strong state capacity can prevent the possibility of civil wars and a loss in state capacity can cause civil wars. In other words, state weakness and failure increase opportunities for the rebel group to rise up against the state.

As previously explained in the literature review, state capacity is hard to describe using just one dimension; it should be explained as a multidimensional concept. However, this study considers the institutional aspect and governance because a strong institution and good governance allow the state to maintain the political and social order. In other words, if state is strong and governs well, it will be supported by the general populace without rebellion, and in that sense, a state can perform according to its role and reduce the possibility of civil war onset. Peksen and Taydas (2007) asserted that Fearon and

Laitin merely focused on the concepts of autonomy and the repressive capacity of the state, which is based on Skocpol's (1985) structural explanation of state.

Peksen and Taydas (2007) also explained the importance of the quality of institutions and governance and maintained that a lack of effective governance structure will create conditions for the initiation of civil war. They argued that "When governments perform well, they are perceived as legitimate and capable by the citizens, and this in turn allows states effectively to buy peace from the society. By contrast, the prevalence of poor governance, in the form of corruption, inefficient administration, and weak courts, decreases citizen's faith and confidence in the political system. It creates a gap between ordinary citizens and state institutions and generates dissatisfaction and grievances with existing political system" (Peksen and Taydas 2007, 7).

De Soysa and Fjelde (2009) asserted that good governance is effective in decreasing the possibility of civil war onset. They explained three concepts of state capacity: coercion, co-optation, and cooperation. State capacity can be explained as providing good governance as credible commitments to the people instead of extracting the taxes from the people.

Fearon (2010) asserted that the good quality of governance and institution explains state capacity. He explained that both aspects have been investigated and considered as indicators of state capacity in many civil war onset studies. He tested various data that examined the quality of governance and institution, including the World Bank's Country Policy Institutional Assessment Index, the Worldwide Governance Indicators, and some of the International Country Risk Guide indicators that examined

political stability. According to his statistical analysis, Fearon (2010) argued that improvement in governance is likely to reduce the possibility of civil war onset.

According to these theoretical backgrounds, we can assert that if state governance and institutions perform well, and ordinary people perceive them as credible, there is less possibility for the occurrence of civil war. In this sense, we might assume that high bureaucratic quality and high government stability decrease the likelihood of civil war onset. Based on these explanations and arguments about the state institution and governance as state capacity, two hypotheses are generated in this study.

**H1: As the bureaucratic quality increases, the possibility of civil war decreases.**

H1a: As the bureaucratic quality increases, the possibility of large-scale civil war decreases.

H1b: As the bureaucratic quality increases, the possibility of small-scale civil war decreases.

**H2: As the government stability increases, the possibility of civil war onset decreases.**

H2a: As the government stability increases, the possibility of large-scale civil war decreases.

H2b: As the government stability increases, the possibility of small-scale civil war decreases.

## **Chapter 4**

### ***Research Design***

This study investigates the role of the state in civil war onset. Bureaucratic quality and government stability are tested to investigate the influence of state capacity on civil war onset. Two scales of civil war onset data sets are considered to test the influence of state capacity on civil war onset. The data for this research is based on Fearon and Laitin (2003), Armed Conflict Data (ACD) (Gleditsch et al. 2002), and International Country Risk Guide (ICRG) data sets.

[Figure 1 about here]

[Figure 2 about here]

The unit of analysis is state-year; 156 states are considered in this study, although in actuality, 126 states are reflected in large- and small-scale civil war onset. The time period of this study is from 1984 to 1999. As shown in Figures 1 and 2, the number of civil wars has increased rapidly; the percentage of countries experiencing civil wars began to increase in the early 1980s and spiked in the 1990s after the end of the Cold War in 1989. Thus, this study focuses on the 1980s and 1990s. ICRG data are available from 1984, Fearon and Laitin's (2003) data set spans the years from 1945 to 1999, and ACD data are available from 1946 to 2008. Therefore, this study tests the role of the state in civil war onset from 1984 to 1999.

Logistic regression is used in this study because the dependent variable, Civil War Onset, is dichotomous. Accordingly, logistic regression is used to test the role of the

state in civil war onset from 1984 to 1999. There are five logistic regression models used in this study. To test the basic relationship between state capacity and civil war onset, the first and second models test the influence of bureaucratic quality and government stability, respectively, on civil war onset. The third and fourth models test bureaucratic quality and government stability, respectively, with control variables. The fifth model tests both bureaucratic quality and government stability with control variables. Each model is tested twice because the dependent variable is characterized two different ways according to the scale of civil war defined by the data set.

Civil War Onset is the dependent variable in this study, but it is treated as two dependent variables: large- and small-scale civil war onset. In that sense, the civil war onset is characterized in accord with the scale of civil war threshold. There are two independent variables: bureaucratic quality and government stability. They are tested to show the influence of state capacity on civil war onset. There are seven control variables that are expected to have an influence on civil war onset. They were tested in previous civil war onset research and were shown to be statistically significant. The controls are Population, Gross Domestic Product (GDP) per capita, %Mountainous, Ethnic Fractionalization, Oil, Polity2, and Polity2 Square. The next paragraph presents the specific explanations of the variables tested in this study.

### **Dependent Variables: Civil War Onset**

The dependent variable in this study is civil war onset. This study considers two civil war onset measures from ACD (Gleditsch et al. 2002). Two of them are coded in same way with 0 and 1, with 0 indicating that civil war did not start in that calendar year

and 1 indicating that civil war broke out in that calendar year. Each civil war onset has a different standard of civil war onset based on the scale of that civil war. The scale is basically categorized by the number of battle deaths in a year.

According to ACD civil war onset data, 225 armed conflicts occurred and 34 were ongoing in all of or part of 2001 (Gleditsch et al. 2002). Gleditsch et al. (2002) suggested three criteria that define a civil war. The first condition is that the “state is defined as an internationally recognized sovereign government controlling a specified territory, or a non-recognized government whose sovereignty is not disputed by another internationally recognized sovereign government previously controlling the same territory” (Gleditsch et al. 2002, 619). The second condition is that at least 25 battle-related deaths occurred per year for small-scale civil war and at least 1,000 battle-related deaths per year for large-scale civil war. The third condition is that at least one of the two parties in armed conflict should be the government of a state.

### **Independent Variable: Bureaucratic Quality and Government Stability**

There are two independent variables in this study. They are bureaucratic quality and government stability. In terms of a specific definition of bureaucratic quality, the term has been explained as follows in the ICRG Codebook:

The institutional strength and quality of the bureaucracy is another shock absorber that tends to minimize revisions of policy when governments change. Therefore, high points are given to countries where the bureaucracy has the strength and expertise to govern without drastic changes in policy or interruptions in government services. In these low-risk countries, the bureaucracy tends to be somewhat autonomous from political pressure and to have an established mechanism for recruitment and training. Countries that lack the cushioning effect of a strong bureaucracy receive low points because a change in government tends to be traumatic in terms of policy formulation and day-to-day administrative functions. (ICRG Codebook, 34)

According to the ICRG, a high-quality bureaucracy is identified by high points and a low-quality bureaucracy is identified by low points. The maximum score for bureaucratic quality is 4 (very high quality and low risk) and the minimum score is 0 (very low quality and high risk). The original data are presented by month, but the data have been reshaped into yearly data to be considered in this study. To obtain the yearly data, the monthly data were summed and divided by months observed in that calendar year.

Government stability is another independent variable in this study. It is explained this way: “An assessment both of the government’s ability to carry out its declared program(s), and its ability to stay in office. The risk rating assigned is the sum of three subcomponents” (ICRG Codebook, 29). Government stability is rated by the sum of government unity, legislative strength, and popular support. A score of 0 is the minimum, indicating very high risk and low government stability; a score of 4 is maximum, indicating very low risk and high government stability. Because each of the three components are scored separately and then added together, the score of government stability can range from 0 to 12 (where 0 indicates the lowest level of government stability and 12 indicates the highest level). The original data are organized by month, but data have been changed into yearly data to be tested in this study. To obtain the yearly data, monthly data were summed and divided by months observed in that calendar year.

### **Control Variables**

There are seven control variables in this study. These variables have been generally tested in previous research and it has been confirmed that they have an

influence on civil war onset. Population is considered to test the demographic influence of the state on civil war onset. Previous studies have indicated that population has a positive effect on civil war onset (Fearon and Laitin 2003; Sambanis 2004), which indicates that population increases the possibility of civil war onset. It is assumed that population decreases the risk of civil war onset in this study. The population data used in this study are from the World Bank (Fearon and Laitin 2003) and are logged for normalization of the data.

Gross Domestic Product (GDP) per capita is tested to study the influence of economic aspect of state on civil war onset. GDP is defined as “The sum of gross values added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products” (World Bank<sup>1</sup>). GDP per capita is the state’s GDP divided by the total number of people in the state. Previous studies have shown that GDP per capita has a negative effect on civil war onset and can reduce the possibility of civil war (Fearon and Laitin 2003). It is also assumed that GDP per capita minimizes the possibility of civil war onset. GDP per capita data used in this study are from Penn World Table (PWT) V 5.6, World Development Indicator (WDI) 2001, and Correlates of War (COW) energy data (Fearon and Laitin 2003) and are logged for normalization. They are lagged 1 year.

The proportion of mountainous areas is considered to test the geographic aspect of the state. The reason the variable %Mountainous is considered with regard to civil war is that a mountainous terrain can be a barrier to the state’s ability to govern. In other words, the state would have difficulty in controlling the rebel group(s), and rebel group(s) could easily hide from government influence (Fearon and Laitin 2003). In short, it has a

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<sup>1</sup> <http://data.worldbank.org/indicator/NY.GDP.MKTP.CD>

positive effect on civil war onset, and a higher proportion of mountainous regions increases the possibility of civil war onset. This study is expected to obtain the same result reported in previous civil war onset studies. The data are coded according to the work of geographer A.J. Gerald, who created a measure for the World Bank's Development Research Group project on civil wars (Fearon and Laitin 2003) and logged the proportion of mountainous areas. The data are logged to achieve normalization.

The Polity2 score is used to show the influence of regime type on civil war onset. This variable can be converted to regime categories. It is recommended that it be divided into three classifications: autocracies (-10 to -6), anocracies (-5 to +5), and the three special values. Of those values, transition periods (-88) and foreign occupation (-66) are coded as missing variables in this study, but Interruptions (-77) is coded as 0 (Fearon and Laitin 2003). Polity2 score is based on the Polity IV Project. It is usually assumed that democracy has a negative effect on civil war onset, which confirms that democracy reduces the possibility of civil war onset (Gleditsch and Ruggeri 2010).

The Polity2 Square score is also considered with the Polity2 score. If the Polity2 score is squared, the scores change into a U-shape. It is assumed that Polity2 Square has a negative effect on civil war onset. This indicates that autocracy and democracy can minimize the possibility of civil war onset. The score can range from 0 to 100. Dixon (2009) explicated that the correlation between regime type and civil war is still in question, but the results of squared regime type are quite consistent. He explained that both extreme democracy and autocracy minimize the possibility of civil war, whereas anocracy increases the possibility of civil war. In this sense, Polity2 Square is expected to have a negative effect in this study.

Ethnic Fractionalization is a commonly used variable to measure the ethnic diversity. It is based on the formula  $F = 1 - \sum_{i=1}^n p_i^2$ . This formula is defined as “the probability that two individuals selected at random from a country will be from different ethnic groups, if the population shares of the ethnic groups in a country are denoted  $p_1, p_2, p_3, \dots, p_n$ ” (Fearon 2002). The higher the score, the more ethnic fractionalizations there are in a state. It is considered that ethnic fractionalization has a positive effect on civil war onset, and research has shown that higher ethnic fractionalization increases the possibility of civil war onset (Hegre and Sambanis 2006).

Oil stands for oil exporters. This variable is investigated to test the influence of the energy resource of a state. The oil data are investigated in terms of whether the export revenue from fuel is larger than one third of export revenue (Fearon and Laitin 2003). If oil export revenue is larger than one third, it is coded 1; if not, it is coded 0. This variable is used to test the influence of the natural resource on civil war onset. Previous studies showed that oil exporters have a greater possibility of civil war onset than non-oil exporters (Fearon and Laitin 2003; Sambanis 2004). It is assumed that Oil has a positive effect on civil war onset, indicating that an oil-exporting state has a greater possibility of experiencing civil war onset.

Table 1 shows the descriptive statistics of all variables considered in this study and Table 2 shows the consensus determinants of civil war in previous qualitative civil war onset studies.

[Table 1 about here]

[Table 2 about here]

Based on the aforementioned dependent, independent, and control variables, this study suggests two equations:

$$(1) \text{ Large-scale civil war onset} = \beta_0 + \beta_1(\text{bureaucratic quality}) + \beta_2(\text{government stability}) + \beta_3(\text{GDP per capita}) + \beta_4(\text{population}) + \beta_5(\% \text{ mountainous}) + \beta_6(\text{ethnic fractionalization}) + \beta_7(\text{polity2}) + \beta_8(\text{polity2 square}) + \beta_9(\text{oil}) + \varepsilon$$

$$(2) \text{ Small-scale civil war onset} = \beta_0 + \beta_1(\text{bureaucratic quality}) + \beta_2(\text{government stability}) + \beta_3(\text{GDP per capita}) + \beta_4(\text{population}) + \beta_5(\% \text{ mountainous}) + \beta_6(\text{ethnic fractionalization}) + \beta_7(\text{polity2}) + \beta_8(\text{polity2 square}) + \beta_9(\text{oil}) + \varepsilon$$

## **Chapter 5**

### ***Results***

After analyzing five logistic regression models for the influence of state capacity on civil war onset from 1984 to 1999 in 126 states, this research achieved the results presented in this chapter. Table 3 shows the results with ACD civil war onset (large-scale civil wars). Table 4 summarizes the results with ACD civil war onset (small-scale civil wars).

Models 1 and 2 test the basic relationship between each state capacity variable (bureaucratic quality and government stability) and civil war onset. Models 3 and 4 include the state capacity variables one at a time to test the individual statistical relationship between each dependent variable and civil war onset with control variables. Model 5 tests both state capacity variables at the same time with control variables.

[Table 3 about here]

As mentioned previously, the dependent variable analyzed in Table 3 is ACD civil war onset (at least 1,000 battle-related deaths). This variable has been analyzed to find the relationship between state capacity and large-scale civil wars. Model 1 shows that there is a statistically significant relationship between bureaucratic quality and civil war onset. The estimation is negative and significant at the .01 level. This indicates that when a state performs with higher bureaucratic quality, the likelihood of civil war onset decreases.

Model 2 reveals a statistically significant relationship between government stability and civil war onset. The sign of the coefficient is negative, and it is significant at the .1 level. This reveals that when a state has higher government stability, the possibility of civil war onset decreases. According to Models 1 and 2, we can infer that both independent variables have an influence on civil war onset.

Model 3 tests bureaucratic quality with control variables. There is also a statistically significant relationship between bureaucratic quality and civil war onset. The sign of the coefficient is negative, and it is significant at the .05 level. It reveals that as bureaucratic quality increases, the likelihood of civil war onset decreases. As for the performance of control variables, Population is significant at the .1 level, and it has a positive effect on civil war onset. This indicates that a higher population increases the possibility of civil war onset. Oil is significant at the .01 level, and it has a positive effect on civil war onset. This reveals that if a state's export revenue from fuel exceeds one third of total export revenue, there is a greater possibility of civil war onset. Polity2 Square is significant at the .05 level, and it has a negative effect. Accordingly, the states in the regime type of autocracy or democracy have less possibility of civil war onset than anocracy.

Model 4 tests government stability with control variables. The result shows that there is no relationship between government stability and civil war onset; government stability has no influence on civil war onset. As for the performance of control variables, Population is significant at the .1 level, and it has a positive effect on civil war onset. It shows that a higher population increases the possibility of civil war onset. Oil is significant at the .01 level, and it has positive effect on civil war onset. This reveals that if

a state's export revenue from fuel is larger than one third of total export revenue, there is a greater possibility of civil war onset. Polity2 Square is significant at the .05 level, and it has a negative effect. This indicates that the states in the regime type of autocracy or democracy have less possibility of civil war onset than anocracy.

[Figure 3 about here]

Model 5 tests both bureaucratic quality and government stability with control variables. There is a big difference in the result compared with the previous models. None of the independent variables are significant, which means that bureaucratic quality and government stability cannot decrease the possibility of civil war onset. As observed in Models 1 and 2, bureaucratic quality and government stability have an influence on civil war onset, but when they are considered concurrently with control variables, they are no longer significant.

Regarding the performance of the control variables, Population, Oil, and Polity2 Square all show the same results in Model 5 that are shown in Models 1 and 2. Population is significant at the .1 level, and it has a positive effect on civil war onset. It shows that a higher population increases the possibility of civil war onset. Oil is significant at the .01 level, and it has positive effect on civil war onset. This reveals that if a state's export revenue from fuel is larger than one third of total export revenue, there is a greater possibility of civil war onset. Polity2 Square is significant at the .05 level, and it has a negative effect. This indicates that the states in the regime type of autocracy or democracy have less possibility of civil war onset than anocracy.

According to these results, presented in Table 3, we can conclude that large-scale civil wars are not influenced by bureaucratic quality and government stability. Both

variables basically have an influence on civil war onset; however, when they are considered with other variables, their effect is nullified. On the other hand, Population, Oil, and Polity2 Square are constantly significant. In this sense, we can conclude that large-scale civil war onset is influenced by Population, Oil, and Polity2 Square rather than bureaucratic quality and government stability. The effects of the significant coefficient on large-scale civil war onset are calculated by increasing each variable from its minimum to its maximum value. These effects are transformed to reflect the percentage change (increase or decrease) in the dependent variable, which is reported in Figure 3.

[Table 4 about here]

The dependent variable analyzed in Table 4 is also ACD civil war onset (at least 25 battle-related deaths). This variable was tested to explain the relationship between state capacity and small-scale civil wars. Model 1 shows that there is a statistically significant relationship between bureaucratic quality and civil war onset. The estimation is negative, and it is significant at the .01 level. This indicates that if a state has higher bureaucratic quality, the likelihood of civil war onset decreases.

Model 2 reveals that there is a statistically significant relationship between government stability and civil war onset. The sign of the coefficient is negative, and it is significant at the .01 level. This indicates that if there is higher government stability in a state, the possibility of civil war onset decreases. According to Models 1 and 2, both independent variables basically have an influence on civil war onset, and state capacity is able to decrease the possibility of civil war onset.

Model 3 tests bureaucratic quality with control variables. There is also a statistically significant relationship between bureaucratic quality and civil war onset. The sign of the coefficient is negative, and it is significant at the .01 level. It reveals that as bureaucratic quality increases, the likelihood of civil war onset decreases. As for the performance of the control variables, Population, Ethnic Fractionalization, and Oil are significant. Population is significant at the .01 level, and it has a positive effect on civil war onset. It indicates that a higher population increases the possibility of civil war onset. Ethnic Fractionalization is significant at the .05 level, and it has a positive effect on civil war onset. It reveals that higher ethnic fractionalization increases the possibility of civil war onset. Oil is significant at the .05 level, and it has positive effect on civil war onset. This reveals that if a state's export revenue from fuel is larger than one third of total export revenue, there is a greater possibility of civil war onset.

Model 4 tests the government stability with control variables. There is also statistically significant relationship between government stability and civil war onset, just as it is in the basic model. The sign of the coefficient is negative, and it is significant at the .05 level. This reveals that as government stability increases, the likelihood of civil war onset decreases. Regarding the performance of control variables, Population is significant at the .01 level, and it has a positive effect on civil war onset. It indicates that higher population increases the possibility of civil war onset. Ethnic Fractionalization is significant at the .1 level, and it has a positive effect on civil war onset. This reveals that higher ethnic fractionalization increases the possibility of civil war onset. Oil is significant at the .01 level, and it has positive effect on civil war onset. This reveals that if

a state's export revenue from fuel is larger than one third of total export revenue, there is a greater possibility of civil war onset.

[Figure 4 about here]

Model 5 tests both bureaucratic quality and government stability with control variables. Both bureaucratic quality and government stability have an influence on civil war onset. Bureaucratic quality shows the constant result that is shown in Models 1 and 3. There is also a significant relationship between government stability and civil war onset. It is significant at the .05 level. The sign of the coefficient is negative, which reveals that as bureaucratic quality increases, the likelihood of civil war onset decreases. Government stability is also significant in Model 5. There is a statistically significant relationship between government stability and civil war onset. It is significant at the .1 level, and the estimation is negative. This indicates that higher government stability is likely to decrease the possibility of civil war onset.

As for the performance of the control variables, Population, Ethnic Fractionalization, and Oil are also constantly significant. Population is significant at the .01 level, and it has a positive effect on civil war onset. It indicates that higher population increases the possibility of civil war onset. Ethnic Fractionalization is significant at the .05 level, and it has a positive effect on civil war onset. This reveals that higher ethnic fractionalization increases the possibility of civil war onset. Oil is significant at the .05 level, and it has positive effect on civil war onset. This reveals that if a state's export revenue from fuel is larger than one third of total export revenue, there is a greater possibility of civil war onset.

According to the results shown in Table 4, we can conclude that small-scale civil wars are influenced by both bureaucratic quality and government stability. As shown in Models 1 and 2, they have basically an influence on civil war onset, and when they are considered with other control variables, they are constantly significant. Population, Ethnic Fractionalization, and Oil also have an influence on small-scale civil wars. The effects of the significant coefficients on small-scale civil war onset are calculated by increasing each variable from its minimum to its maximum value. These effects are transformed to reflect the percentage change (increase or decrease) in the dependent variable, which is reported in Figure 4.

In sum, the results shown in the tables differ according to the scale of civil wars. Bureaucratic quality and government stability have an impact on small-scale civil war onset. However, they have no influence on large-scale civil war onset. In other words, state capacity can decrease the possibility of small-scale civil war onset, but it cannot decrease the likelihood of large-scale civil war onset. It can be also explained that when there are at least 1,000 battle-related deaths in a civil war, the governance and institution of a state has difficulty deterring or repressing the rebel group(s). In this sense, it can be inferred that state capacity presented as bureaucratic quality and government stability has a limitation to decrease the possibility of civil war onset according to the scale of civil wars.

According to the results shown with the control variables, Population and Oil have an impact on civil war of both scales. According to these results, then, Population and Oil are very important indicators when seeking to explain civil war onset. Higher population increases the possibility of civil war onset. Oil reveals that natural resources

influence civil war onset; if a state's export revenue from fuel exceeds one third of total export revenue, there is a greater possibility of civil war onset. This is because Oil brings economic profits, and in that sense, many people try to satisfy their economic greed in acquiring natural resources such as oil. Polity2 Square is significant for large-scale civil wars, which indicates that the regime type of a state has an impact on civil war onset: Autocracy and democracy can decrease the possibility of civil war onset more so than anocracy. If a state can repress or co-opt the people effectively (autocracy) or can get the support from the people (democracy), the risk of civil war onset can be minimized. Ethnic Fractionalization has an influence on small-scale civil war onset: Fractionalization among various kinds of ethnicities influences civil war onset. Discrimination and inequities can occur between major and minor ethnicities, which might cause the latter to have grievances; this situation can lead to conflict with the major group. This indicates that higher ethnic fractionalization is able to decrease the possibility of civil war onset.

## Chapter 6

### *Discussion and Conclusion*

As an empirical study, this study examined whether state capacity has an influence on and is likely to decrease the possibility of civil war onset. This study started with two empirical questions to explain the relationship between state capacity and civil war onset: How does state capacity influence civil war onset? What are the factors of state capacity that have an impact on civil war onset? Through logistic regression models, this study tested both bureaucratic quality and government stability as indicators of state capacity in relation to two scales of civil war onset. Unlike previous civil war onset studies, which generally focused on large- or small-scale civil wars, this study is concerned with both scales of civil war onset at the same time.

From the empirical results, one can infer that state capacity has an impact on small-scale civil war onset. In other words, state capacity has an influence on civil war onset, but it depends on the scale of the civil war. State capacity can minimize the possibility of small-scale civil war onset but may have little effect on reducing the possibility of large-scale civil war onset. This results somewhat contradicts the previous studies. Peksen and Taydas (2008) and Fearon (2010) argued that state capacity, viewed as governance and institution, has an influence on large-scale civil war onset. However, this study found that state capacity does not influence large-scale civil war onset but does influence small-scale civil war onset. In addition to state capacity, bureaucratic quality and government stability, Population, Oil, Polity2 Square, and Ethnic Fractionalization

have an influence on civil war onset. This indicates that civil war onset is influenced by various aspects of state capacity. Among various control variables, Population and Oil are significant for civil war of any scale. Population and Oil have been reported to be very significant in most of previous studies, a result this study supports.

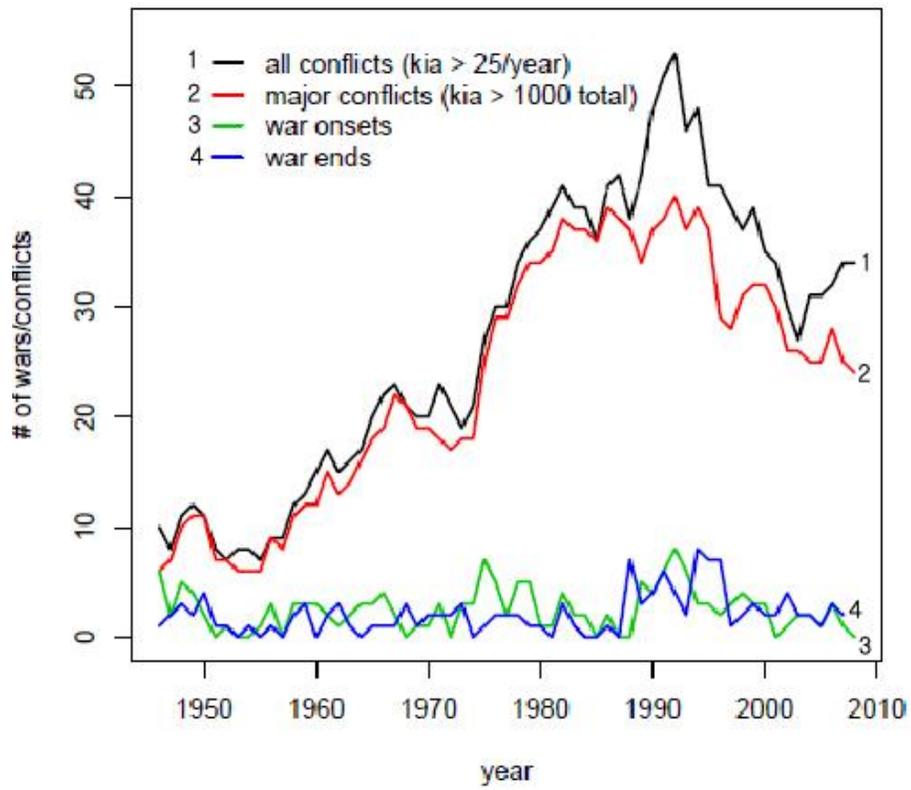
Although this study obtained empirical results that state capacity has an influence on small-scale civil war onset, the research does have some limitations. The first limitation is the time frame. This study covered a short time period. Most of the civil war studies have considered wars since 1946, just after the end of World War II, but this study excluded civil wars from 1946 through 1983. This is because bureaucratic quality and government stability have been observed as variables only since 1984. However, if we considered the time period before 1984, we might obtain different results. In other words, the credibility of the empirical test would be increased if more civil war cases were considered in the study.

The second limitation pertains to using the proper indicators to explain the state capacity. State capacity is hard to define along one dimension because it is multi-dimensional. In this sense, various aspects of state capacity have been tested to find their relationship to civil war onset. Bureaucratic quality and government stability were tested in this study, and both of them have been reported to have an influence on civil war onset. However, this is a limited explanation in view of the governance aspect of state capacity. Therefore, various aspects of state capacity indicators need to be tested in future studies. In doing so, we can firmly estimate what elements of state capacity have an influence on civil war onset, and it will be helpful in explaining state capacity in civil war onset studies.

Although this study has the aforementioned limitations, it did contribute to the literature explaining how state capacity influences civil war onset and also presented the factors of state capacity that have an impact. This study also tested civil war onset in a different way than previous civil war onset research. This is the unique point of this study. Testing two scales of civil war onset enables us to explain the causes of civil wars more specifically and distinctively.

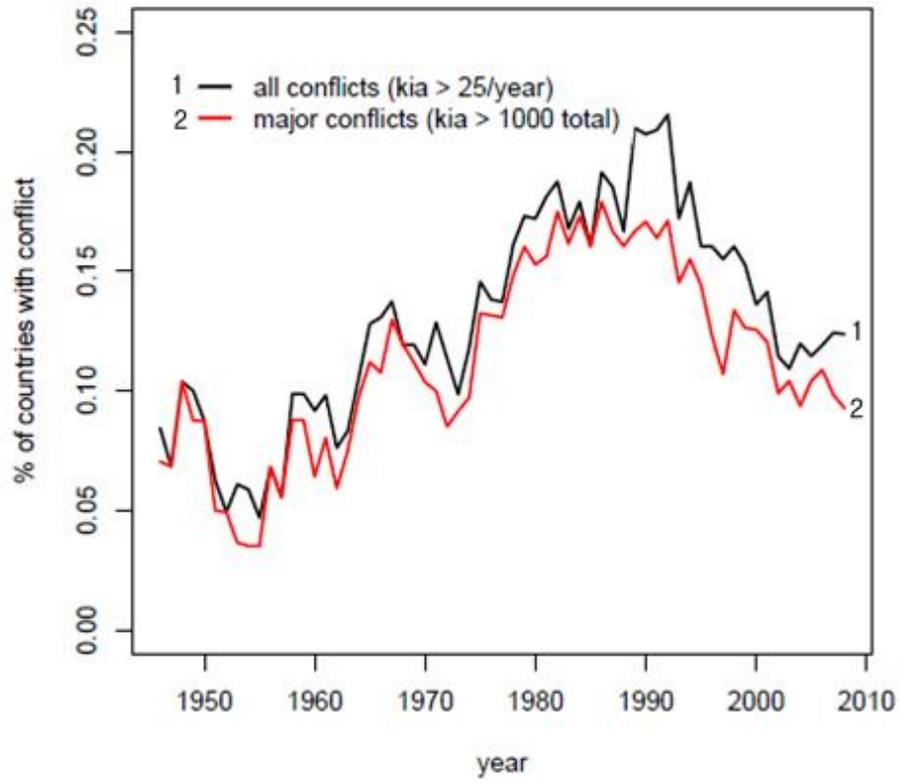
It is obvious that the role of the state should be considered as important because the state is a main actor in civil war. Early civil war onset studies overlooked the role of the state; this was the deficiency of the greed and grievance studies. In this sense, future studies should consider both the state and rebel groups because they are both main actors of the civil war, and the two sides have an influence on each other. War cannot occur in one direction. It is the interaction between two actors.

Figure 1. Number of civil conflicts and wars, 1946-2008 (Fearon 2010).



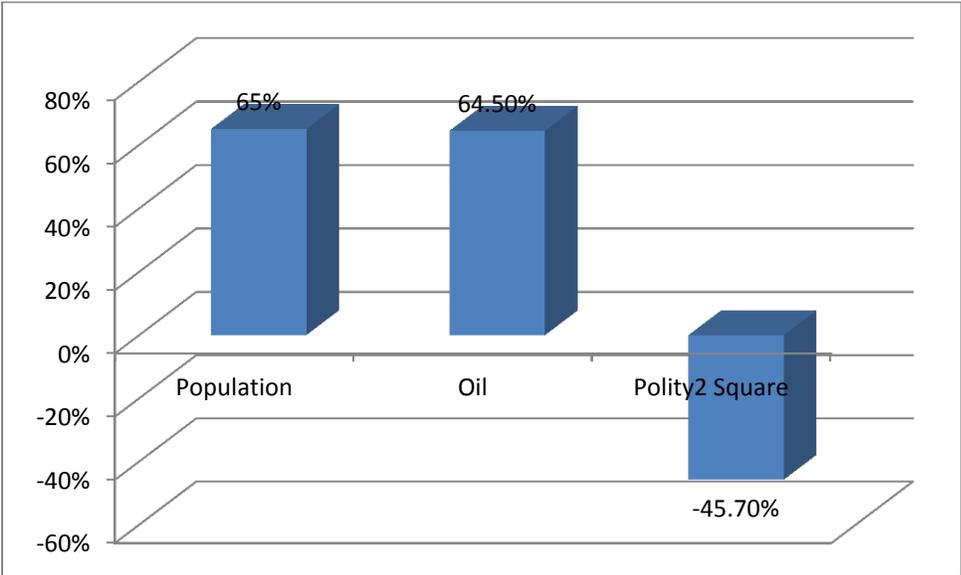
Note: KIA = killed in action.

Figure 2. Percentage of countries with civil conflicts or wars, 1946-2008 (Fearon 2010).



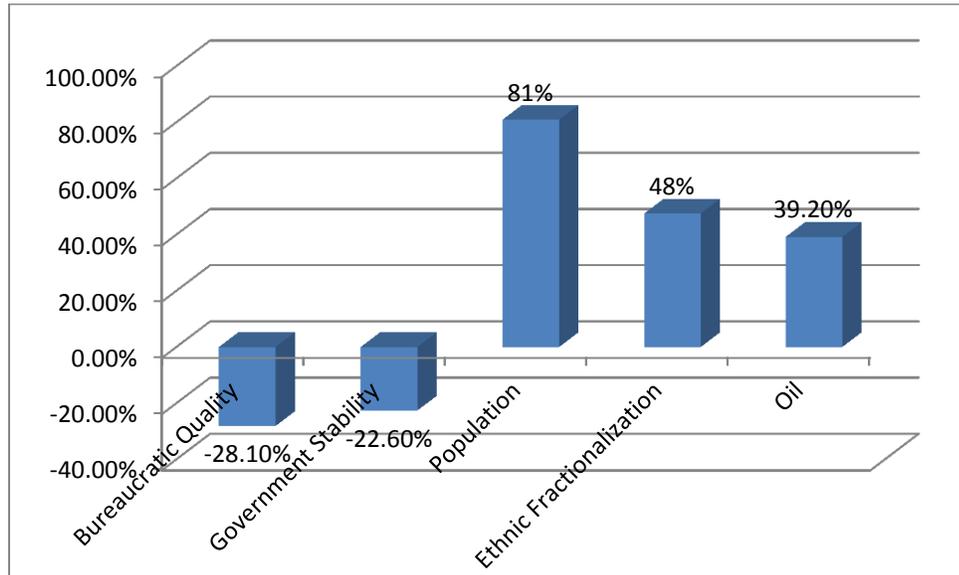
Note: KIA = killed in action.

Figure 3. Percent change in odds for SD increase in large-scale civil war onset.



Note: SD = standard deviation.

Figure 4. Percent change in odds for SD increase in small-scale civil war onset.



Note: SD = standard deviation.

Table 1. Descriptive statistics of variables

<b>Variable</b>	<b>Obs.</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Range</b>
<b>ACD onset (Large-scale wars)</b>	2316	.012	.107	0 or 1
<b>ACD onset (Small-scale wars)</b>	2316	.040	.196	0 or 1
<b>Bureaucratic Quality</b>	1838	2.088	1.231	0 to 4
<b>Government Stability</b>	1838	6.741	2.227	.67 to 12
<b>Population(a)</b>	2162	9.913	1.458	5.914 to 14.029
<b>GDP per capita (a)(b)</b>	2184	7.880	1.073	5.279 to 9.976
<b>%Mountainous(a)</b>	2316	2.081	1.440	0 to 4.557
<b>Ethnic Fractionalization</b>	2316	.484	.262	.004 to 1
<b>Oil</b>	2316	.149	.357	0 or 1
<b>Polity2</b>	2293	1.184	7.361	-10 to 10
<b>Polity2 Square</b>	2293	55.561	32.153	0 to 100

(a) Logged.

(b) Lagged 1 year.

Table 2. Consensus determinant of civil war in previous studies (Dixon 2009)

<b>Category</b>	<b>Variable</b>	<b>Direction</b>	<b>Confidence</b>
<b>Demographics</b>	Population	Positive	High
	Social (ethnic and religious) fractionalization	Negative	Medium*
	Ethnic heterogeneity	Positive	Medium*
<b>Geography</b>	Mountains	Positive*	Medium
<b>Resources</b>	Oil exporters	Positive	High
<b>Economy</b>	Growth	Negative	High
<b>Regime</b>	Democracy	Curvilinear (inverted U)	High*

Note: According to Dixon, \* indicates that “A result called into question when only explanatory variables are considered. Where only the consensus is marked, this indicates that a consensus remains but its strength is altered. Where the direction of the relationship marked, this indicates the existence of a consensus is called into question” (Dixon 2009, 720).

Table 3. The logistic regression model for large-scale civil war onset, 1984-1999

(ACD onset: large-scale wars): at least 1,000 battle-related deaths

	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Bureaucratic Quality</b>	-.630*** (.164)		-.504** (.227)		-.376 (.236)
<b>Government Stability</b>		-.242* (.125)		-.206 (.132)	-.181 (.169)
<b>Population(a)</b>			.312* (.186)	.310* (.167)	.344* (.181)
<b>GDP per capita (a)(b)</b>			-.173 (.340)	-.345 (.328)	-.142 (.341)
<b>%Mountainous (a)</b>			-.059 (.168)	-.039 (.171)	-.066 (.169)
<b>Ethnic Fractionalization</b>			.930 (1.057)	.684 (1.065)	.964 (1.065)
<b>Oil</b>			1.240*** (.460)	1.417*** (.435)	1.336*** (.443)
<b>Polity2</b>			.020 (.040)	.007 (.041)	.018 (.039)
<b>Polity2 Square</b>			-.017** (.008)	-.019** (.008)	-0.019** (.008)
<b>Constant</b>	-3.704*** (.301)	-3.80* (.705)	-5.512* (3.045)	-3.502 (2.796)	-5.175* (2.895)
<b>N</b>	1838	1838	1648	1648	1648
<b>Log likelihood</b>	-87.563842	-89.553805	-74.761743	-74.568914	-73.808948

\*p < .1, \*\*p < .05, \*\*\*p < .01.

(a) Logged.

(b) Lagged 1 year.

Table 4. The logistic regression model for small-scale civil war onset, 1984-1999

(ACD onset: small-scale wars): at least 25 battle-relate deaths

	Model 1	Model 2	Model 3	Model 4	Model 5
<b>Bureaucratic Quality</b>	-.437*** (.126)		-.347*** (.129)		-.266** (.121)
<b>Government Stability</b>		-.195*** (.065)		-.154** (.074)	-.122* (.073)
<b>Population(a)</b>			.398*** (.107)	.369*** (.100)	.407*** (.102)
<b>GDP per capita (a)(b)</b>			-.227 (.246)	-.375 (.237)	-.194 (.243)
<b>%Mountainous (a)</b>			.043 (.141)	.070 (.143)	.047 (.141)
<b>Ethnic Fractionalization</b>			1.410** (.693)	1.146* (.681)	1.422** (.669)
<b>Oil</b>			.852** (.411)	1.001*** (.380)	.888** (.405)
<b>Polity 2</b>			.028 (.027)	.019 (.027)	.026 (.026)
<b>Polity2 Square</b>			-.007 (.005)	-.008 (.005)	-.008 (.005)
<b>Constant</b>	-2.448*** (.254)	-2.006*** (.382)	-5.410 (2.183)	-3.545 (2.192)	-5.127** (2.132)
<b>N</b>	1838	1838	1648	1648	1648
<b>Log likelihood</b>	-288.18823	-291.17221	-247.07555	-246.79892	-245.27582

\*p < .1, \*\*p < .05, \*\*\*p < .01.

(a) Logged.

(b) Lagged 1 year.

## References

- Bates, Robert H. 2008. *When Things Fell Apart: State Failure in Late-Century Africa*. New York: Cambridge University Press.
- Besançon, Marie L. 2005. "Relative Resources: Inequality in Ethnic Wars, Revolutions, and Genocides." *Journal of Peace Research* 42(4): 393-415.
- Bhavnani, Ravi, and Dan Miodownik. 2009. "Ethnic Polarization, Ethnic Salience, and Civil War." *Journal of Conflict Resolution* 53(1): 30-49.
- Braithwaite, Alex. 2010. "Resisting Infection: How State Capacity Conditions Conflict Contagion." *Journal of Peace Research* 47(3): 311-19.
- Brush, Stephen. 1996. "Dynamics of Theory Change in the Social Sciences: Relative Deprivation and Collective Violence." *Journal of Conflict Resolution* 40(4): 523-45.
- Collier, Paul, and Anke Hoeffler. 2001. "Greed and Grievance in Civil War." *World Bank Policy Research Working Paper No. 2355*. Washington DC: World Bank.
- Collier, Paul, and Anke Hoeffler. 2004. "On Economic Causes of Civil Wars." *Oxford Economic Papers* 50(4): 563-73.
- Collier, Paul, and Anke Hoeffler. 2004. "Greed and Grievance in Civil War." *Oxford Economic Papers* 56(4): 563-95.
- De Soysa, Indra, and Hanne Fjelde. 2009. "Coercion, Co-optation, or Cooperation?: State Capacity and the Risk of Civil War, 1961-2004." *Conflict Management and Peace Science* 26(1): 5-25.
- De Soysa, Indra, and Hanne Fjelde. 2010. "Is the Hidden Hand an Iron Fist? Capitalism and Civil Peace, 1970-2005." *Journal of Peace Research* 47(3): 287-98.

- Drury, Cooper, and Zeynep Taydas. 2008. "Why Do Civil Wars Occur? A Quantitative Examination of the Role of State Capacity." Presented at the the International Studies Association 49th Annual Convention, San Francisco.
- Ellingsen, Tanja. 2000. "Colorful Community or Ethnic Witches' Brew? Multiethnicity and Domestic Conflict during and after the Cold War." *Journal of Conflict Resolution* 44(2): 228-49.
- Fearon, James D. 1998. "Commitment Problems and the Spread of Ethnic Conflict." In *The International Spread of Ethnic Conflict: Fear, Diffusion and Escalation*, eds. David Lake and Donald Rothchild. Princeton, NJ: Princeton University Press, 107-26.
- Fearon, James D. 2002. "Ethnic Structure and Cultural Diversity around the World." Presented at the Annual Meeting of the American Political Science Association, Boston.
- Fearon, James D. 2007. "Iraq's Civil War." *Foreign Affairs*, (March/April).
- Fearon, James D. 2010. "Governance and Civil War Onset." In *World Development Report 2011*. Washington DC: World Bank.
- Fearon, James D., Kimuli Kasara, and David Laitin. 2007. "Ethnic Minority Rule and Civil War Onset." *American Political Science Review* 101(1): 187-93.
- Fearon, James D., and David Laitin. 2003. "Ethnicity, Insurgency, and Civil War." *American Political Science Review* 97(1): 75-90.
- Gleditsch, Nils Petter, Peter Wallensteen, Mikael Eriksson, Margareta Sollenberg, and Håvard Strand. 2002. "Armed Conflict 1946–2001: A New Dataset." *Journal of Peace Research* 39(5): 615–37.
- Gleditsch, Kristian, and Andrea Ruggeri. 2010. "Political Opportunity Structures, Democracy, and Civil War." *Journal of Peace Research* 47(3): 299-310.

- Gurr, Ted Robert. 1968. "Psychological Factors in Civil Violence." *World Politics* 20(2): 245-78.
- Haynes, Jeffrey. 2007. "Religion, Ethnicity and Civil War in Africa: The Case of Uganda and Sudan." *The Round Table* 96(390): 305-17.
- Hegre, Håvard, and Nicholas Sambanis. 2006. "Sensitivity Analysis of Empirical Results on Civil War Onset." *Journal of Conflict Resolution* 50(4): 508-35.
- Hendrix, Cullen. 2010. "Measuring State Capacity: Theoretical and Empirical Implications for the Study of Civil Conflict." *Journal of Peace Research* 47(3): 273-85.
- Kang, Seonjou, and James Meernik. 2005. "Civil War Destruction and the Prospects for Economic Growth." *Journal of Politics* 67: 88-109.
- Lacina, Bethany, and Nils Petter Gleditsch. 2005. "Monitoring Trends in Global Combat: A New Dataset of Battle Death." *European Journal of Population* 21(2-3): 146-66.
- Miguel, Edward, Shanker Satyanath, and Ernest Sergenti. 2004. "Economic Shocks and Civil Conflict: An Instrumental Variables Approach." *Journal of Political Economy* 112(4): 725-53.
- Muller, Edward, and Mitchell Seligson. 1987. "Inequality and Insurgency." *American Political Science Review* 81(2): 425-52.
- Peksen, Dursun, and Zeynep Taydas. 2007. "Why Do Civil Wars Occur? The Role of State, and Quality of Governance." Presented at the International Studies Association 48th Annual Convention, Chicago.
- Percival, Val, and Thomas Homer-Dixon. 1998. "Environmental Scarcity and Violent Conflict: The Case of South Africa." *Journal of Peace Research* 35(3): 279-98.

- Posen, Barry. 1993. "The Security Dilemma and Ethnic Conflict." In *Ethnic Conflict and International Security*, ed. Michael E. Brown. Princeton, NJ: Princeton University Press, 103-24.
- PRS Group, 2009-04-20, "International Country Risk Guide Researchers Dataset." <http://hdl.handle.net/1902.29/10522> PRS Group [Distributor] V1 [Version].
- Regan, Patrick M., and Daniel Norton. 2005. "Greed, Grievance, and Mobilization in Civil Wars." *Journal of Conflict Resolution* 49(3): 319-36.
- Ross, Michael L. 2004. "How Do Natural Resources Influence Civil War? Evidence from Thirteen Cases." *International Organization* 58(1): 35-67.
- Sambanis, Nicholas. 2001. "Do Ethnic and Nonethnic Civil Wars Have the Same Causes? A Theoretical and Empirical Inquiry (Part 1)." *Journal of Conflict Resolution* 45(3): 259-82.
- Sambanis, Nicholas. 2004. "What Is Civil War?: Conceptual and Empirical Complexities of an Operational Definition." *Journal of Conflict Resolution* 48(6): 814-58.
- Skocpol, Theda. 1985. "Bringing State Back in: Strategies of Analysis in Current Research." In *Bringing the State Back In*, eds. Peter Evans, Dietrich Rueschemeyer, and Theda Skocpol. New York: Cambridge University Press.
- Sobek, David. 2010. "Masters of Their Domains: The Role of State Capacity in Civil Wars." *Journal of Peace Research* 47(3): 267-71.
- Tangeras, Thomas, and Nils-Petter Lagerlof. 2003. "Ethnic Diversity and Civil War." *The Research Institute of Industrial Economics* 589:1-33.
- Thies, Cameron. 2010. "Of Rulers, Rebels, and Revenue: State Capacity, Civil War Onset, and Primary Commodities." *Journal of Peace Research* 47(3): 321-32.
- Urdal, Henrik. 2005. "People vs. Malthus: Population Pressure, Environmental Degradation, and Armed Conflict Revisited." *Journal of Peace Research* 42(4): 417-34.