Sons-of-the-Soil Dynamics or System Failure? An Empirical Analysis of Sons-of-the-Soil-Wars, 1945-2009

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Content

List of Tables

List of Figures

1 Introduction

The literature on the causes of war is massive, and these ideas, mixed with myriad others, can be found in various guises. The main theoretical task facing students of war is not to add to the already long list of argument and conjectures but instead to take apart and reassemble these diverse arguments into a coherent theory fit for guiding empirical research.

Fearon (1995:382)

Civil wars are heterogeneous when it comes to onset, duration and termination, although some intrastate conflicts seem to display a particular pattern (Hegre 2004:249; Fearon 2004:283; Fearon and Laitin 2011:199). In "Why Do Some Civil Wars Last So Much Longer Than Others?" Fearon (2004:275) categorizes all intrastate conflicts into different groups where he finds that five of these categories last dramatically longer or shorter than other civil wars: Coup/Revolution; Anti-colonial wars; Eastern European conflicts; conflicts where contraband is a factor, and civil wars he calls 'Sons of the Soil' (hereafter SOS) (Fearon 2004). The three former categories tend to be brief intrastate conflicts, while SOS wars and conflicts where contraband is a factor seem to last dramatically longer than other civil wars (Fearon 2004). Further, Fearon (2004) focuses on SOS wars and argues that the onset, duration and termination of these conflicts can be predicted because they display a fairly common sequence of actions and reactions (Fearon 2004; Fearon and Laitin 2011:199) [1].

Fearon (2004) claims to have identified the distinctive features of some of the longest lasting civil wars from 1945 to 1999, and defines them as low-intensity conflicts between a peripheral minority ethnic group and a state-supported majority ethnic group over natural resources or a peripheral territory belonging to or perceived to be the traditional homeland of the ethnic minority group. Thus, SOS wars are separated into two general categories as the belligerents are either fighting over territory or natural resources. In the former version of SOS wars the state has enduring political or economic interests in expansion in the periphery and pursue them through measures of state development projects as they encourage the ethnic

[1] The SOS theory refers to Weiner`s (1978) initial definition of Sons of the Soil. The SOS explanation and the SOS dynamic is used interchangeably and is largely based on the SOS theory as it refers to cases where the ethnic minority group fight the ethnic majority group for the rights to territory and/or natural resources/scarce resources and includes the commitment problem which may hinder the SOS war to end in any other way than military victory (Fearon 2004). Further, SOS wars refer to all SOS wars proposed in Fearon (2004) and Fearon and Laitin (2011).The definition of the explanation of SOS, the difference between the SOS theory and the SOS explanation, and the nature of SOS wars will be discussed thoroughly in Chapter 3: Sons of the Soil.

majority group to migrate into the minority ethnic group`s traditional homeland which the minority ethnic group resists (Fearon 2004:283).

For SOS wars over natural resources the in-migration is less important as the state is interested in monopoly of exploitation of fuel or mineral resources in the ethnic minority group`s traditional homeland and pursues them through measures of force which the minority resists (Fearon 2004: 283). The explanation of SOS wars was recently updated, as it defines SOS wars as low-intensity conflicts between a minority ethnic group and a majority ethnic group caused by competition due to in-migration over territory or scarce resources in the traditional homeland of the minority ethnic group (Fearon and Laitin 2011). Consequently, the definition of the explanation of SOS differs slightly from 2004 to 2011, as the latter excludes the few SOS wars which were over monopoly of natural resource exploitation. Although, it still includes civil wars in which the belligerents fight over the right to scarce resources, and highlights the in-migration issue to a larger extent than the initial explanation.

Despite a differentiation by SOS over territory or scarce resources, the sequence and actions in the onset of SOS wars are fairly common as the violence often begins with attacks between young men from each side, or in pogroms or riots following on rumors of abuse (rapes, thefts, insults) or protests by indigenous people against the migrants (Fearon and Laitin 2011:199) [2]. The forces of the state intervene most often supporting the migrants, and discriminate in retribution and repression against members of the ethnic minority group (Fearon and Laitin 2011:199). Thus, the onset of a SOS war is due to a disagreement between an ethnic minority group and an ethnic majority group over the rights to a territory and/or the resources in the traditional homeland of the ethnic minority group. Although, Fearon (2004; Fearon and Laitin 2011) differentiates between SOS wars over territory and SOS wars over resources the course of events, duration and possible mode for termination remain the same. SOS wars are low-intensity, but seem to be difficult to end. Fearon`s (2004:283) analysis reveals that the estimated median and mean for non-SOS wars are 5.8 and 8.5 years, compared to 23.2 and 33.7 years for SOS wars. According to Fearon`s (2004; Fearon and Laitin 2011) rationalist narrative for why SOS wars last so much longer than other civil wars, there is a commitment

[2] Collective violence can be defined as (1) violence perpetrated by a group on another group, which is riots or pogroms, (2) violence by a group on an individual, meaning lynching, (3) violence by an individual on a group, defined as a terrorist act, (4) or violence by the state on a group, or by a group on agencies of the state, as in civil wars (Varshney 2007:279). Riots, pogroms and civil wars are the most widespread forms of collective violence. Pogroms and civil wars are similar in the sense that the state abandons the principle of neutrality. However, in pogroms the majority attacks an unarmed minority, while the both combating sides are assumed to be armed in civil wars. Riots and pogroms may precede civil wars, but does not necessarily lead to civil conflict.

problem which may hinder these wars from being ended in any other way than in a military victory. Consequently, the duration of SOS wars is dramatically longer than other civil wars because they are more difficult to terminate.

As the explanation of SOS is placed in a rationalist framework, Fearon (2004) introduces a game theoretic model which illustrates how the fluctuations in state strength prevents the government from giving credible promises of access or ownership to the ethnic minority group, as they assume that the state will renege on it`s promises once it has regained its strength (Fearon 2004:291) [3]. As the state`s strength may be weakened during the civil war, it is expected to agree on terms which the state would normally not accept, and once it regains strength the state will renege on the deal as it has enduring interest in the territory or natural resources and/or because the state is most often recruited from the majority ethnic group and therefore supports it (Fearon 2004:283). Thus, the argument for why the belligerents in SOS wars cannot reach a peace agreement is well-founded in a rationalist narrative, which means that the SOS explanation may be viewed in the light of the bargaining model of war. According to Fearon (2004:291):

> "In the model`s equilibrium, both government and rebels may fight on, year after year, with but a slim hope that luck and effort will put them in a position to impose terms militarily, and despite the presence of bargains that both sides would prefer to the situation of constant war. The problem is that bargains are unenforceable due to fluctuations in the government`s capabilities".

Thus, as the state cannot give credible promises to the minority ethnic group the commitment problem may hinder the civil war from being settled in any other way than military victory, and the conflict lasts longer because neither side can disarm the other, which leads to a military stalemate (Fearon 2004:276). Therefore, Fearon (2004:290) argues that the commitment problem prevents these wars from ending except by a military defeat. As these civil wars continue until the ethnic minority group or the ethnic state-supported majority

[3] Rational choice is one of the major approaches to civil war studies, and a methodological approach which explains both individual and collective outcomes, in terms of individual goal-seeking under constraints. The rational choice theories of civil war in political science tend to focus on political oppression, collapsing institutions, system transition, or informational problems as causes of war (Sambanis 2002a:223). However, it is argued that rational choice fails to appreciate own limitations and the value of alternative approaches (Snidal 2007:73). One of the main objections to rational choice is that it seems to have developed fetishism over mathematical techniques, which leads to complicated models with little substance. Although, there may be some truth to this criticism, advocates of the approach argue that the formalization is not the sine qua non of rational choice, but merely a tool (Snidal 2007:73). However, rational choice seems deficient in explaining who the key actors are, in explaining their interests, the origin of the institutions and how they change.

group wins militarily, they last on average longer than the typical civil war (Fearon 2004:277).

The SOS explanation is one of the most sophisticated explanations within civil war literature because it accounts for a specific course of events and it contains several distinctive features and arguments related to ethnic war, in-migration and scarce resources. An overwhelming number of SOS wars take place in Asia, which indicates that those ethnic groups seem more unable to reach a credible agreement and a peaceful outcome compared to the rest of the world (Fearon 2004:283; Fearon and Laitin 2011:199). In order to make these general patterns less abstract, the civil war in Sri Lanka against the Liberation Tigers of Tamil Eelam (LTTE) is suggested as the most likely case of SOS wars as it illustrates the SOS dynamic (Fearon 2004: 283; Fearon and Laitin 2011:199)[4]. Initially, Fearon (2004) found 21 SOS wars of 128 intrastate conflicts from 1945 to 1999, but as the dataset and the definition of the SOS explanation were recently revised it now includes 32 SOS wars from a total of 139 intrastate conflicts from 1945-2008 (Fearon and Laitin 2011:199) [5]. Thus, the SOS explanation includes a proposition for these wars` onset, duration and termination and is supported by highly statistically significant results (Fearon 2004; Fearon and Laitin 2011). According to Fearon and Laitin (2011:200):

> "We find that SoS wars account for one of the strongest empirical regularities that has emerged from cross-national statistical studies of civil war onset, namely, that civil wars are more likely in countries with larger populations (…) Thus, it appears that the main reason that larger population is associated with civil war onset is that larger countries have been prone to have SoS civil wars."

1.1 Motivations for Testing the SOS Explanation

The SOS explanation has become a reference-point within conflict studies and is convincingly supported by a highly statistically significant finding in Fearon`s (2004) analysis. However, several questions remain unanswered about why SOS wars last longer. For example, one strong feature of SOS wars is that they involve territory. Could it be that territorial conflicts last longer rather than any special dynamic relating to SOS? Moreover, since these wars are supposed to be small wars without much political consequence to the international system, perhaps these wars tended to be more ignored by the international community, particularly

[4] See appendix for a complete list of Fearon`s (2004), and Fearon and Laitin`s (2011) SOS wars.
[5] Fearon and Laitin (2011:299) claim that 31 civil wars are SOS wars in their updated dataset, however their list include 32 SOS wars.

during the Cold War when large wars would have received more attention from superpowers? However, the explanation SOS has received very little attention thus far and no study to date has tested the many interesting expectations from this interesting proposition, particularly using the new list of SOS wars offered by Fearon and Laitin (2011).

Thus, the SOS explanation has never been retested rigorously, nor has the SOS variable been tested in a dataset with a lower battle-death threshold which is relevant as these wars are supposedly low-intensity conflicts[6]. Further, the updated list of SOS wars has not been tested to date[7]. The explanation of SOS wars was recently updated as Fearon and Laitin (2011:200) argue that the SOS proposition may explain brutal civil wars, such as the case of Sri Lanka, as much as it explains several non-violent conflicts. According to Fearon and Laitin (2011:200) a SOS conflict "may be violent, but it need not be". This updated list, thus, includes a more heterogeneous group of conflicts and should be tested in a dataset that captures very low levels of violence, such as the 25 battle-death threshold used by the UCDP civil war data[8]. Secondly, Fearon (2004:290) argues that the commitment problem could prevent SOS wars being ended in any way except by military defeat, which allows this study to test exactly how these wars have ended with the UCDP Conflict Termination dataset (Kreutz 2010). Thus, this is a better test of the mechanism rather than assuming that long wars are driven by the commitment problem. Fearon (2004:290) argues:

> "The model shows how a commitment problem could prevent an insurgency from being ended in any other way except by a military defeat. This is so despite the ability of the parties to bargain over the extent of regional autonomy by regional leadership/rebels and the absence of private information about military capabilities or resolve".

Thirdly, the SOS explanation disregards the trend of increased intervention and the international community as a plausible actor in a bargaining process as they are not included in Fearon`s (2004) explanation, game model or analysis. If a third party intervenes it could possibly guarantee a peace agreement or ceasefire as they are based on a minimum level of trust between the belligerents (Fearon 2004). A third party intervention may therefore remove the first strike advantage which decreases the effect of the commitment problem. Thus, it seems relevant to test whether the end of the Cold War which allowed the UN to be more

[6] Note that I tested some implications of the SOS explanation in my Bachelor thesis, however this was limited to testing whether SOS wars were over territory and whether they were more likely to start during the Cold War (Gaski 2009).
[7] Fearon and Laitin (2011) published the updated definition and list of SOS wars without a dataset.
[8] Fearon (2004) has set the battle-death threshold to 100 killed per year and 1000 killed per conflict, while the UCDP Conflict Termination dataset has set the battle-death threshold to 25 killed per year.

active in terms of intervention in civil wars, has had any effect of the duration and termination of SOS wars, especially as SOS conflicts may have been allowed to fester out of neglect. As the effect of the end of the Cold War and external intervention on civil war duration and termination has been questioned in the general debate in civil war research, it seems highly relevant to test whether these factors have influenced the duration and termination of SOS wars which are supposedly some of the longest lasting intrastate conflicts (Fearon 2004; Weinstein 2007; Cunningham 2010:115). SOS wars are assumed to be local and internally focused, however interventions are important for intrastate conflicts as they often contain high degrees of external influence (Cunningham 2010:115).

1.1.1 Propositions to be Tested

Thus, this thesis will test the following propositions:

1. SOS wars largely end in military victories because of the commitment problem.

2. SOS wars last longer than other civil wars because of neglect by the international community of these wars during the Cold War.

3. Since SOS wars might range from extremely bloody to low-level violence, the new SOS data will be tested using a lower threshold of deaths identifying civil wars.

4. Since SOS wars are largely about territory rather than over the control of government, this study will test whether these wars last long simply because they are over territory or whether the duration is caused by the identifiable SOS dynamics outlined in the explanation.

Consequently, this thesis performs several quantitative analyses using Fearon`s dataset (2004) and the new Uppsala Conflict Termination dataset (UCDP) (Kreutz 2010) which is a unique dataset to answer the questions raised. The UCDP Conflict Termination dataset identifies how civil wars end by distinguishing between peace agreement, ceasefire, military victory or other outcome (Kreutz 2010: 243). As an important explanation for why some civil wars last longer than others, SOS should be tested properly as we want to make sure that the dynamic is independent of varying circumstances, that the assumptions made in the SOS explanation is correct, and that the variable is not driven by influential outliers. Most empirical studies in political science do not subject their inferences to robustness or specification tests, while replication studies address this issue to some extent (Hegre and Sambanis 2006:508). Fearon

has not performed any robustness tests, but the following analysis will prioritize it as a crucial part of the analysis.

The rest of the thesis is laid out as follows: next, the SOS wars are set within the context of the larger problem of civil war, and then theory around SOS wars is discussed. The SOS explanation is then critically examined in the light of other possible explanations, justifying the need for further analyses. I then discuss the data and methods employed by this thesis, present results and briefly conclude by examining some implications.

2 Civil War

The following section briefly summarizes the nature of civil wars and recent empirical findings within the civil war literature. Empirical studies of civil war have found highly contradictory results which have led to a polarization of explanations focusing on the importance of ethnicity or feasibility, although both approaches emphasize rebel movements, motivations, capacities and physical environments. Further, this chapter suggests that if the proposition of SOS is correct it may build a bridge between the explanations of ethnicity and those of feasibility.

2.1 The Nature of Civil Wars

Civil wars are massively destructive to life, society and economy. They are increasingly prevalent, lethal and threaten human security (Collier et al 2004:253; Ward et al 2010:363). A conservative measure of the direct death toll from civil wars since 1945 exceeds 16 million, which is more than five times the estimate of people killed in interstate wars (Weinstein 2007: 5). The indirect effect of civil war such as disease, famine, and destruction of economic and social infrastructure increases this estimate dramatically (Weinstein 2007:5).

The early 1990s saw an increase in civil war onset and duration. The high-water mark for intrastate conflicts was in 1994 with 44 ongoing civil wars in almost one-quarter of the states in the international system (Fearon 2004:275). Moreover, the average duration of civil wars have been steadily increasing since 1945, reaching almost 16 years in 1999 (Fearon 2004:275) [9]. Consequently, recent research suggest that civil wars tend to last more than six times longer than international wars, which makes questions concerning shortening their duration and creating a lasting peace important research and policy questions (Hegre 2004:243; Collier et al 2009:253).

Civil war literature has tended to focus on the onset of intrastate conflicts, but the decrease of civil wars has led to an increased focus on duration and termination (Collier et al 2004:253). Further, important studies have also focused on why some civil wars last so much longer than

[9] Intrastate conflicts are characterized by a longer duration than interstate wars regardless of the outcome (Kreutz 2010:246). However, the median duration for intrastate conflict episodes is dramatically lower than the mean duration. This may possibly be due to a positively skewed data where a few of the cases display a long-term conflict activity (Kreutz 2010:246). Outliers may have a dramatic effect on the data by driving certain variables, especially in datasets with few units.

others, and why so many of them recur (Fearon 2004; Walter 2009: 244; Kreutz 2010). However, the research community still struggles in explaining and predicting the onset, duration and termination of civil wars. Some scholars focus on either onset, duration or termination, while others suggests that civil war onset determines its dynamic and how it can be terminated, which means that terminating a civil war is dependent on understanding its onset (Fearon 2004). Consequently, it is argued that the challenge lies in classifying the civil war correctly according to its onset, thus uncovering its dynamic and prerequisites for peace (Fearon 2004). However, this argument assumes that civil wars may be categorized into groups and that civil wars display similar features, while the opposing argument is that intrastate conflicts are complex events affected by numerous factors which makes them heterogeneous in onset, duration and termination (Hegre 2004:249; DeRouen and Sobek 2004; Sobek 2010:267).

Thus, a large amount of empirical studies on civil war has resulted in little consensus (Mack 2002:515; Hegre and Sambanis 2006:508). The contradictory results might be due to the heterogeneous nature of civil wars; that the empirical studies have prioritized significant coefficients to contest others findings as opposed to finding variables to improve our understanding of civil wars; or it may simply be a function of different coding rules (Mack 2002:517; Ward et al 2010:363) [10].

However, the research community seems to have agreed that the onset of civil war is more likely in less economically developed countries and these countries are rarely on top of the foreign policy agendas of the major powers (Mack 2002:519; Sambanis 2002a:217). With the exception of Yugoslavia and a few other countries, civil wars have tended to take place without attracting much attention from the camera lenses or involving the strategic interests of major powers in Western parts of the world (Sambanis 2002a: 216). Although, civil wars rarely attract attention, they have important implications for security and economy as instability of intrastate conflicts affect neighboring states and the stability of the entire region (Sambanis 2002a: 216). Thus, the regions which seem most affected by civil violence are Sub-Saharan African, South-east Asia, and the Middle East including North Africa. As civil wars are more likely to occur in poor countries, it exacerbates economic problems by

[10] The search for significant variables which contest others results have dominated civil war research, as few run their results through robustness tests and little effort have been made to resolve the differences (Mack 2002:515; Hegre and Sambanis 2006; Ward et al 2010). However, different coding rules may also be a plausible explanation for some of the contradictory findings, as the correlation between pairs of databases has been less than 50 percent in some cases (Sambanis 2002b:32).

destroying economic capacity and reduces growth (Mack 2002:519; Sambanis 2002a:217). Thus, the empirical studies on civil war have concluded that the risk of civil war decreases as average income increases and the size of a country`s population decreases (Hegre and Sambanis 2006:509; Ward et al 2010:363). It is also near consensus that a low level of economic development, a prior history of civil war, and political instability increases the risk of civil war (Walter 2009:244; Kreutz 2010). Additionally, natural resource dependency, ethnic diasporas, concentrated populations, rough terrain, and anocracies are positively associated with civil war onset and duration (Fearon 2004; Walter 2009:244). However, there are also striking disagreements, where the two most controversial issues seem to relate to the relationship or absence thereof between democracy and civil war; and the debate of explaining civil war with arguments related to ethnicity or feasibility (Mack 2002:519) [11].

2.2 Feasibility or Identity?

An on-again, off-again rebellion where I work, on the northern tip of Sumatra, has been about the control over the region`s vast oil and gas resources (although the Western press continues to stereotype it as "ethnic conflict").

Bowen (2002:340)

The following section differentiates between two important and opposing approaches for why civil wars occur: feasibility and ethnicity/identity. Fearon (2004) is one of the main advocates of the understanding of ethnicity in conflict, while Collier et al (2009) have focused more on materially driven and opportunistic rebel movements. As these explanations focus on the motivations of the combatant groups, a third option to understanding civil wars is to focus on the processes through which organizations produce violence (Weinstein 2007). As the explanation of SOS incorporates important features of feasibility and ethnicity, it may build a bridge between the opposing approaches.

The study of civil war is largely focused on the relationship between the state and civilians, but civil wars are more complicated than interstate wars as there may be uncertainty regarding who the actors are and what the motivation for the rebellion is. Thus, rebel groups are often included as an important factor as most studies of civil war seem to begin with the question of who is willing to fight (Weinstein 2007:27). However, the difficulty often lies in

[11] Fearon and Laitin (2003) and Collier and Hoeffler (2004) argue that once GDP per capita is controlled for, democracy has no effect in explaining civil war. However, they disagree on the importance of ethnicity and feasibility.

operationalizing the motivations of the rebel group, and whether they are acting as freedom fighters or war-agitators. Since motivations are impossible to measure in quantitative analysis, we use proxies to find whether the war is fought over greed or grievance. Is there a weak state capacity? Is the state ethnically fractionalized? Are there natural resources in the area which may tempt rebel leaders? Where is the rebel group in the causal chain? Is it a conflict a bottom-up or a top-bottom conflict and does it matter?

Thus, explanations for the onset, duration, and dynamics usually highlight economic inequality, ethnic antagonism and political repression as these factors are expected to reveal motivations or highlight the context for those who participate in the rebellion (Weinstein 2007:27). It may be that repression drives those excluded from the political system to embrace violent means to obtain power or policies shaped by ethnic favoritism force groups who are being discriminated to organize (Weinstein 2007:27). Thus, the explanations for civil war onset tend to build on feasibility or identity, although both emphasize rebel movements, motivations, capacities, or physical environments (Fearon 2004; Hegre and Sambanis 2006; Collier et al 2009; Sobek 2010:268). The two approaches are clearly opposites, partly due to the fact that it is difficult to measure motives. While some criticize "the myth of irrelevant ethnicity", others argue that ethnic grievances serve as a cover for greed-driven motives (Cederman 2010).

Those focused on feasibility assume that a rebellion will occur if it is financially and military feasible (Collier et al 2009), while the competing theories argue that conflict is driven by questions of identity (Fearon 2004; Aspinall 2007). The former approach claim that feasibility or opportunity is an important part of the explanation of rebellion, and that insurgent movements emerge when resources are available to finance them (Mack 2002; Collier and Hoeffler 2009) [12]. Thus, it is argued that motivations may be a traditional way of understanding civil war, while it may be more informative to focus on the sheer financial and military feasibility of the rebellion (Collier et al 2009:2). As the establishment of a rebel army is extremely dangerous and expensive, the rare occasions in which rebellion is financially and militarily feasible it is likely to occur. Thus, they suggest "where a rebellion is feasible it will occur" (Collier et al 2009:2). They also argue that the two most obvious material conditions

[12] Gaining access to finance is crucial for rebel group strength, as the question of opportunities available for rebel groups to organize an army, recruit soldiers, and obtain the funds to cover running costs is highlighted in several of the most leading theories within this field of research (Collier and Hoeffler 2002; Fearon and Laitin 2003). It has also been suggested that grievance as a cause for war fits our commonsense understanding of the world, but that intense grievance may be an effect rather than a cause of war (Mack 2002:521).

for rebellion are financial and military, as it is costly and dangerous to wage war. Thus, the explanation of feasibility highlights the importance of circumstances and suggests that rebel groups are opportunistic and driven by material motives.

As some ignore the aspect of ethnic grievance, others argue that ethnicity is an important feature of intrastate conflicts[13]. For many the term "ethnicity" has become an umbrella concept that embraces groups which are differentiated by color, language, religion, and covers tribes, nationalities and castes (Chandra 2006:397). Ethnic divisions within a state seem to affect the probability of experiencing civil war, and many have argued that identity conflicts are particularly intractable (Fortna 2004:273). Further, scholars have suggested that the criticism of the correlation between ethnic grievance and the outbreak of war rests on "shaky foundations" (Cederman 2010). Although, Fearon and Laitin (2011:199) observe that ethnic diversity is not significantly associated with a higher risk of civil war when comparing countries at similar levels of economic development, they claim that "ethnic" civil wars are quite common. They argue that most of the civil wars since 1945 have included rebel groups advocating on behalf of an ethnic or religious group, or the rebels have mobilized and recruited principally along the lines of an ethnic cleavage (Fearon and Laitin 2011:199)[14]. However, advocates of understanding the importance of ethnicity in civil war argues that onset of civil wars due to ethnic grievance is dependent on factors such as organizational resources, political institutions, terrain and transborder support. Consequently, it is suggested that ethno-nationalist grievance can be proxied through ethno-demographic measures such as diversity and polarization as probabilistic measures of ethic grievance.

Thus, recent empirical studies of causes of civil wars are largely divided between ethnicity or opportunities for private gain (Jakobsen and de Soysa 2009:137). Since we cannot measure feasibility and motivations directly scholars use proxies as indirect measures, which may explain some of the contradictory results within civil war literature as these proxies tend to be

[13] Ethnicity as a term designates a sense of collective belonging, which could be based on common descent, language, history, culture, race, or religion (or a combination of these) (Varshney 2007: 277). An ethnic group can do without a state, and should therefore be separated distinctly from the term nation. Dispersed ethnic groups typically demand affirmative action, which means preferences in jobs, education, and political representation. In addition they demand protection of language, religion, and culture (Varshney 2007: 277). Some ethnic conflicts may not remain ethnic, as in might escalate towards separatist nationalism. Recent studies have questioned whether civil war is more likely in ethnically diverse countries, and found that plural societies are more prone to intense internal conflicts. In such cases, multiple groups imply that a territorial political unit can only become ethnically homogeneous if it kills, expels, or assimilates all non-nationals.

[14] Doyle and Sambanis (2000) have also found that identity wars are more likely to resume than others, while and Dubey (2002) found no significant difference.

imperfect. However, others suggest that the study of violence should provide more accurate answers to the motivation of the rebel group (Weinstein 2007).

2.2.1 Inside Rebellion

While, attention is given to factors such as feasibility and ethnicity, others argue the focus should be on the processes through which organizations produce violence. Violence may emerge as a strategy in different contexts and to different degrees as a consequence of the interaction between rebels and governments battling for control of the state on the one hand and civilians who choose to offer or withhold support from the competing parties on the other (Weinstein 2007:27) [15]. Rebel groups often share the responsibility for the violence inflicted on civilians, although their tactics, strategies and patterns of violence remain largely unexplored. Some rebel group abuse noncombatant populations, while others exhibit restraint, discipline, and control (Weinstein 2007:6). While insurgent leaders in some states transform local structures and engage the civilians for political change, others focus on extracting resources. The level of violence differs as some rebel groups kill selectively, while others attack randomly (Weinstein 2007:7). Further, some rebel groups loot and destroy the property of civilians, while others protect it from government attacks. Consequently, the understanding of the pattern of violence may contribute to uncover the motivations of the rebel group.

Thus, Weinstein (2007:7) argues that the differences in how rebel groups employ violence are a consequence of variation in the initial conditions that leaders confront. Weinstein (2007) finds that rebel groups that emerge in environments rich in natural resources or with the external support of an outside patron tend to commit high levels of indiscriminate violence, while movements which arise in resource-poor contexts perpetrate far fewer abuses and employ violence selectively and strategically. As insurgencies require massive resources and an organization capable of challenging the government militarily, a rebel leader may choose economic or social endowments. Economic endowments could include natural resource extraction, taxation, criminal activity or external patronage, while social endowments includes shared beliefs, expectations, and norms which may exist in (or be mobilized from within)

[15] Despite the differences, recent research has focused on the willingness of actors to utilize violence to alter the status quo. Although, it seems as if the focus on rebels and their motivations may exclude how the state affects the onset and termination of civil wars. It is therefore argued that the focus on motivations ignores half of the theoretical puzzle, as it leaves state strength out (DeRouen and Sobek 2004; Sobek 2010:267). Perhaps a better conceptualization would be to differentiate between willingness versus opportunity, or opportunities and motives (Sobek 2010:267).

certain ethnic, religious, cultural, or ideological groups (Weinstein 2007:7). Thus, this approach differentiates between civil wars in which rebel groups have mobilized due to feasibility or ethnicity, but claims that we may understand the motivations of rebel group more clearly if we take the pattern of violence into consideration.

Thus, the debate of understanding the onset of civil wars seems polarized between feasibility and ethnicity. Further, most empirical studies use proxies such as natural resources, GDP per capita as a measure of state capacity and ethnic fragmentations, although others suggest that we may understand the motivation of the rebellion by looking at the patterns of violence. However, there is one explanation of civil war which seems to build a bridge between the explanation of feasibility and those of ethnicity. The explanation of SOS includes the ethnic aspect as it assumes that the belligerents are a minority ethnic group and a majority ethnic group, but it is not stated that SOS wars are due to ethnicity but rather caused by in-migration and competition over territory and scarce resources. Consequently, the latter part incorporates a more material approach to the understanding of these civil wars. Thus, the proposition of SOS may offer an explanation for why ethnic grievance do little to explain civil wars, as it may contribute to establish under what conditions ethnic minorities rebel.

SOS wars displays features which are proven to be vital in explaining civil war, such as in-migration, natural resources, territory, populous countries and lower levels of GDP per capita. As SOS wars are most often placed in the periphery of a state, it also offers an explanation for why some researchers have found that “the risk of conflict increases with the distance from group to the capital” (Buhaug and Gates 2002). Moreover, recent cross-national studies have found moderate support for increased probability of conflict due to population pressure, in-migration and scarce resources, although qualitative studies suggest a stronger correlation (Urdal 2008:590). Although, it has been suggested that the difference may be caused by discrepancy, it may be that an increase of conflict due to population pressure and scarce resources are dependent on a specific context. The explanation of SOS includes factors which empirical studies have found to be vital features in understanding the onset, duration and termination of civil wars. As scholars have found contradictory results, the previously mentioned variables such as scarce resources, ethnicity, population pressures and distance to capital may be important pieces of the puzzle that the SOS explanation provides. Consequently, the explanation of SOS may be important for the future understanding of civil

wars, and as it has already become a reference-point within conflict studies it begs further empirical scrutiny.

3 “Sons of the Soil”

There is much talk these days about the “Sons of the Soil”. The advocates and opponents of this theory do not seem to agree among themselves. Perhaps, the following classification might solve the problem of those involved in the controversy.

Pushparaman (Weiner 1978: vii)

This chapter introduces the SOS theory (Weiner 1978) before it proceeds to the explanation of SOS (Fearon 2004; Fearon and Laitin 2011)[16]. Further, the SOS explanation will be discussed and compared to the initial theory as it has evolved from a theory for conflict in India to an intricate explanation for why some civil wars last longer than others in the 20th and 21st centuries. Further, the commitment problem in SOS wars will also be discussed, while the last section of this chapter is devoted to discussing the civil war in Sri Lanka through the narrative of the SOS explanation as it is viewed as the most likely case of SOS wars (Fearon 2004; Fearon and Laitin 2011).

3.1 The SOS Theory

Do people who “belong” to a given territory have a special claim to educational facilities, housing, and employment within that territory? Does “belonging” to the place of one`s birth imply a kind of proprietary claim on behalf of the specific ethnic group to the territory it occupies? Why have the reactions to migrants been more acutely hostile in some regions than in other, and toward some but not all migrants? How has the local, state and national government responded? Weiner (1978:14) focused on these questions to explain why conflict arises due to migration in some ethnic societies, and defined the dynamic in these conflicts “Sons of the Soil”. Although he derived his explanation based on conflicts in India, the phrase “Sons of the Soil” and its many variants convey this special collective right of an ethnic group over a territory and how some societies respond to in-migration.

[16] As previously mentioned the SOS theory refers to Weiner`s (1978) initial definition of Sons of the Soil. The SOS explanation/dynamic refers to cases where the ethnic minority group fight against the ethnic majority group for the rights to territory and/or resources and includes the commitment problem which may hinder the SOS war to end in any other way than military victory (Fearon 2004; Fearon and Laitin 2011). An important notion regarding the difference between the SOS theory and the explanation of SOS is that the former explains the onset of a SOS conflict, while the latter focus on onset, duration and termination of a SOS war. SOS wars refer to all SOS wars proposed in Fearon (2004) and Fearon and Laitin (2011).

3.1.1 Three Notions

Weiner (1978) examined the social and political consequences of internal migration in a multiethnic low-income society for mainly demographic study purposes. He found three concepts to be particularly useful in explaining why some societies saw the rise of conflict among certain ethnic groups because of in-migration:

- Territorial ethnicity
- Dual labor market
- Ethnic division of labor

Firstly, the notion of territorial ethnicity refers to a situation where some ethnic groups seem "rooted" in space (Weiner 1978:4). This notion focuses on whether people see themselves as having an exclusive proprietary right over a certain area, or whether they are willing to share this space with others. The notion of territorial ethnicity seems particularly critical in terms of integration within a political system (Weiner 1978:4). The second concept is the dual labor market which differentiates between two types of markets, the informal, traditional, low-skilled manpower at low wages versus the formal, organized high-skilled market. Weiner (1978:4) finds this notion important in reference to migrants from the center to the periphery in search of low-skilled jobs. The final concept is the idea of an ethnic division of labor, where the dual labor market may be ethnically stratified (Weiner 1978:4).This notion focuses on whether an occupation recruits from one single ethnic group in the society. In a multiethnic society, migration may be ethnically selective, leaving the dual market with an ethnic division of labor (Weiner 1978:5).

Therefore, Weiner (1978) three notions focus on the competition which may arise among the ethnic groups if the state favors or discriminates one group in particular. He claims that the conflict is due to competition over the same jobs or resources, but that it may cause a sharpening of the ethnic distinctions. Further, Weiner (1978:7) argues that it is not inequalities between ethnic groups that generate conflict, but competition. However, he concludes that whether inequalities are real or perceived, it is not enough to cause a conflict. There has to be competition for control or access to economic wealth, political power, or social status (Weiner 1978:7).

3.1.2 Conditions for Conflict

However, there are several conditions for the competition to escalate to conflict, such as whether the migrant and non-migrant enter a class relationship that ordinarily have a high conflict potential, such as landlord and peasant. Conflict may arise once the local population seeks access to occupations that they previously did not seek or from which they were once excluded. Conflict may also occur when a change in the power structure stimulates competition by favoring one group, thus transforming the ethnic division. An additional situation for conflict occurs if the new power elite are economically and socially subordinate to the ethnic group that dominates the urban center (Weiner 1978:9).

Tensions are most often produced when modernization opens new spheres. The arenas in which migrants and locals compete are defined by what the development process and the political process have opened, for a critical dimension of ethnic conflict is the extent to which different ethnic groups battle over access or control over new resources (Weiner 1978:10). In a competing environment, the group interactions lead to a sharpening of ethnic distinctions, which further strengthens ethnic identities, promotes ethnic solidarity, and intensifies ethnic exclusiveness (Weiner 1978:10). In the competitions for resources, ethnic groups may create their own resources and infrastructures, which may lead to the emergence of ethnic leaders. Weiner argues that these are conflicts which may occur in any society, but may be perceived as an ethnic problem because of the ethnic division of labor (Weiner 1978:7).

Although, Weiner (1978) derived the theory based on India he argues that these are conflicts which may occur in any society, and may be perceived as an ethnic conflict due to the i.e. ethnic stratification of job market. Thus, Weiner (1978) claims that SOS conflicts and it`s many variants convey the special collective right of an ethnic group over a territory, and his theory focuses on how a society is affected by in-migration. By following the logic of the theory of SOS, these conflicts seem to begin as bottom-up conflicts in which workers who claim a special right to educational facilities, housing and employment, react to in-migration in into what they perceive as their territory. As Weiner (1978) finds that some reactions to migrants have been more hostile in certain regions and ethnic group, he argues that this illustrates that it is not an ethnic conflict, but rather a conflict spurred by competition between some groups based on inequalities. However, as this conflict progresses the competing environment leads to a sharpening of ethnic identities which intensifies ethnic exclusiveness.

3.2 The SOS Explanation

The initial explanation of SOS (Fearon 2004) is largely based on the framework of the theory of SOS. In general, a SOS war is a conflict between a minority ethnic group and a majority ethnic group as in-migration causes a dispute over the rights to a territory or competition over natural resources belonging to or perceived to be (in) the traditional homeland of the ethnic minority group (Fearon 2004). Thus, the conflict sharpens ethnic distinctions as the belligerents in SOS wars mobilize by ethnic lines. According to Fearon (2004:297):

> "Civil wars since 1945 have lasted significantly longer when they have involved land or natural resource conflicts between state-supported migrants from a dominant ethnic group and the ethnically distinct "sons of the soil" who inhabit the region in question".

SOS Wars over Territory

In the first variant of SOS the minority see themselves as the indigenous people of a certain territory (Fearon 2004). Immigrants belonging to the majority may move into the minority`s area because of population pressure in the center (Fearon 2004:283). If the state is controlled by a majority ethnic group whose members include large numbers of impoverished, land-poor farmers, the government has an enduring interest in favoring migration to less populated peripheral areas (Fearon 2004:296). As the majority ethnic group migrate into less populous and less developed peripheral regions of the country, the minority ethnic group, "the sons of the soil",- take up arms and support insurgencies against the migrants (Fearon 2004:283). If the immigrants belong to the ethnic majority in the state, the government will often support the majority and fight back. Although the center has incentives to cut regional autonomy deals to reduce costly fighting with minority guerilla, both sides know the government will face strong political pressures to renege on behalf of migrants (Fearon 2004:296). Thus, the most likely termination mode for creating a lasting and credible peace after a SOS war is a military victory.

SOS Wars over Natural Resources

In the second variant, the sons of the soil are less concerned with in-migration by the ethnic majority, and primarily focused on the dispute of monopoly exploitation of fuel or mineral resources in their traditional areas (Fearon 2004:283). However, the pattern of the conflict remains the same as the sons-of-the-soil take up arms to defend resources they see as

rightfully theirs. Since the government has enduring interests in resource exploitation, the minority does not trust the commitments given by the state. Although, this variant of SOS wars focus on natural resources it is equally difficult to construct a negotiated settlement (Fearon 2004:296). Thus, the most distinctive feature of both variants of SOS wars is the commitment problem as the strength of the state fluctuates during the conflict, it will agree to more of the minority ethnic groups` conditions for peace when weakened. However, the ethnic minority group expect the state to renege on the deal once they regained their strength mainly because of four factors: (i) The state has enduring interests in the territory or monopoly exploitation of the natural resources; (ii) the state is assumed to have more resources to endure a long-lasting civil war; (iii) the state is most often recruited from the ethnic majority and prefer to be loyal this group; (iiii) the state face population pressures and encourage the ethnic majority group to migrate into less populous and less developed peripheral regions of the country through state development projects[17]. Consequently, the motivations and interests of the state hinder the government from giving credible commitments to the ethnic minority group. According to Fearon (2004:298):

> "The model`s results showed that a stable regional autonomy deal is harder to construct when the political center`s stakes in the region are greater, as when land is wanted for migration of members of the ethnic minority or the region has valuable natural resources".

Thus, peace in SOS wars seems dependent on a military victory. Unless one of the belligerents wins the war militarily, most likely the government, the conflicts recur.

3.2.1 The Updated SOS Explanation

The updated version of the explanation of SOS is different from the initial explanation as it only includes conflicts where in-migration is an issue. A SOS war involves a conflict between members of a minority ethnic group concentrated in some region of a country and fairly recent ethnically distinct migrants to this region from other parts of the same country (Fearon and Laitin 2011)[18]. Further, the updated explanation of SOS includes cases where the belligerents fight over a territory, but also competition over scarce resources such as land, jobs, educational quotas, government services, or natural resources. Further, Fearon and Laitin (2011) argue that the nature of the conflict may not always be violent. The members of

[17] This feature is true when the belligerents are fighting over territory, and not necessarily the case when the SOS war is over natural resources.
[18] Recent migration is within a generation before the violent conflict`s onset (Fearon and Laitin 2011).

the minority group think of their group as indigenous, and as rightfully possessing the area as their group`s ancestral (or at least very long-standing) home (Fearon and Laitin 2011). Consequently, they exclude conflicts where locals protest to the exploitation of natural resources exploitation by center and there is no competition arising from in-migration of another group (Fearon and Laitin 2011). The definition is therefore slightly changed from 2004 to 2011 as it previously was a civil war over territory or natural resources, but now refers to conflicts caused by competition over land, jobs, educational quotas, government services. Moreover, the change does not have to have large implication as the large majority of cases the competition is mainly over land, and there are only a handful of natural resources cases that do not involve migration issues as well. However, the changes done to the explanation of SOS in may be confusing as it now includes a far more heterogeneous group of wars. Although, Fearon and Laitin (2011) continue to suggest that SOS wars are longest-lasting and propose the civil war in Sri Lanka, which turned out to be one of the longest and most brutal civil wars in the last 30 years, as the most likely case they also claim that a SOS conflict does not have to be violent. According to Fearon and Laitin (2011:200):

> "By "conflict" we mean competition and dispute over scarce resources such as land, jobs, educational quotas, government services, or natural resources. A SoS conflict may be violent, but it need not be".

As the explanation of SOS wars is based on an assumption where SOS wars follow a similar pattern which makes it homogenous to the degree that their onset, duration and termination can be predicted, it is surprising that civil wars which exhibit the same features may range from being extremely brutal to non-violent[19].

3.2.2 The SOS Theory versus the SOS Explanation

The assumption that one ethnic group finds itself as the indigenous people of the territory and therefore belong to a certain area is important in both the theory and explanation of SOS (Fearon 2004; Weiner 1978). The theory of SOS and the explanation of SOS are clearly built on the assumption that an ethnic group claims to have a special collective right over a territory, and in-migration is regarded as the main cause of conflict. Consequently, the theory and explanation of SOS highlight the feature of competition between ethnic groups. However, the interpretation of the onset of conflict is outlined differently in the theory of SOS and the explanation of SOS. Weiner (1978) clearly states that inequalities, in-migration and

[19] Note that it may be argued that the relevance of this theory may be lost in conflict studies as it now also includes non-violent cases, which seems of little interest to the field.

competition between the different ethnic groups it does not necessarily lead to conflict. Rather the conflict is due to competition between groups as they enter a traditionally conflicting relationship such as landlord and peasant. As the theory of SOS focuses on the relationship between the ethnic groups, the explanation of SOS includes the role of the state and the importance of a commitment problem. Consequently, the explanation of SOS is based on the initial theory of SOS as it focuses on the consequences of in-migration in a territory in which the minority regard as their homeland, which spurs a bottom-up, ethnic conflict between the ethnic groups. Thus, Fearon`s (2004; Fearon and Laitin 2011) contribution and further development of the SOS theory is his focus on the state`s role and how this creates a commitment problem between the belligerents. This hinders the parties on settling on a peace agreement, which determines the duration of the conflict. However, the updated version of the explanation of SOS seems closer to the theory of SOS as they focus increasingly on Weiner`s (1978) second and third notion regarding competition over sectors and government jobs.

3.3 The Nature of Sons of the Soil

The former section discussed the abstract and theoretical part of the SOS explanation, while the following part focuses on the actual nature of the SOS wars. Thus, this section introduce the geography and duration of SOS wars, before discussing the commitment problem and how well the most likely case of SOS wars, the civil war in Sri Lanka between the Sri Lankan government and the LTTE display the features outlined by the SOS explanation.

3.3.1 SOS Geography

In “Why Do Some Civil Wars Last So Much Longer Than Others?” Fearon (2004) finds 128 civil wars from 1945 to 1999 where 21 of them are SOS wars, while Fearon and Laitin (2011) found 32 SOS wars among 139 intrastate conflicts from 1945 to 2008. They argue that most of the SOS wars are placed in Asia as the physical and social geography of many Asian states is conducive to this form of conflict. China, India, Bangladesh, Pakistan, Thailand and Myanmar have major lowland river plains densely populated by a large ethnic group that dominates the state. The plains are often bordered by rough, less developed mountainous terrain inhabited by diverse ethnic minorities, referred to as hill tribes, who use slash-and-burn agriculture or are pastoralists (Fearon and Laitin 2011:200). Population pressure in the

river valleys can make expansion to these formerly peripheral lands attractive for poor farmers from the dominant ethnic group.

Further, Fearon (2004; Fearon and Laitin 2011) claim that the pattern is the SOS explanation, as civil wars in which rebels are seeking independence or greater autonomy for a region tend to be slightly less deadly on average than civil wars where the rebel`s goal is to capture the center. Consequently, SOS wars are much less lethal even within the set of autonomy-seeking civil wars (Fearon and Laitin 2011:201). However, as empirical studies have found that civil wars over territory last longer than those over government, we should question whether SOS wars last longer simply because they are over territory or whether their duration is actually caused by the SOS dynamic. Recent research has suggested that the most intractable intrastate conflicts in the last 60 years were not ethnic war or ideological wars, but wars over territory (Walter 2003:137). Territorial civil wars tend to escalate and produce greater numbers of fatalities, while negotiations rarely brought peace (Walter 2003:137)[20]. Consequently, scholars suggest that governments display a "surprising unwillingness to negotiate over land in order to avoid or end otherwise costly conflicts" (Walter 2003:137).

Recent empirical studies have also found that conflicts which are located at a distance from the capital, along remote international borders and in regions with valuable minerals last substantially longer (Buhaug and Gates 2002:417; Buhaug et al 2009:544). Further, Buhaug (et al 2009:544) suggest that geographical factors such as location, terrain and natural resources "play a crucial role in determining the duration of conflict". Thus, there seem to be a distinct difference in duration of civil wars over government and territory as the former tend to be shorter and more dynamic as they are all-out-wars with a high intensity, while the latter tend to be local, with low-intensity and generally with long duration (Buhaug and Gates 2002:417).

Consequently, it seems relevant to test whether all SOS wars are over territory, and whether the SOS variables capture the effect of territory. There are several implications of testing this, as the feature of autonomy over the homeland area is vital for the explanation, SOS wars cannot per definition be over government. Further, civil war over territory tend to last longer than other civil wars, thus it is relevant to test whether SOS wars last longer because of the SOS dynamic and not because it captures the effect of territory.

[20] Despite the large number of fatalities, these findings correspond with the explanation of SOS.

H_{1a}: SOS wars involves either land conflict or dispute over scarce resources, consequently SOS conflicts are over territory, not government.

$H_{1b:}$ SOS wars over territory last longer than SOS wars over government.

3.3.2 SOS Duration

One of the most striking facts about SOS wars is their duration. They seem to simmer at a low intensity level, and seem to be very difficult to end. While the estimated median duration for all civil wars are 7 years, the model estimates the median duration of SOS conflicts to be about 15 years (Fearon and Laitin 2011:201). Further, they find one quarter of all non-SOS wars to last more than 15 years, while one quarter of SOS wars are predicted to last longer than 31 years making the duration twice as long. Because of these large differences Fearon and Laitin (2011) claim that it is extremely unlikely that these differences are random, but rather caused by a previously undiscovered pattern. Thus, SOS wars tend to be less lethal, but last longer than other civil wars.

Table 3.1. Duration and Lethality of SOS versus Other Civil Wars

	SOS Wars	Non-SOS wars
Estimated median duration (years)	15.1	7.1
Average killed	33,254	138,54
Median killed	11,000	20,000
Average killed/year	3,180	21,106
Median killed/year	992	3,000

Source: Fearon and Laitin 2011

Fearon`s (2004) analysis showed that SOS wars last longer than other civil wars, but is this because his high battle-death threshold includes high-intensity civil wars which are typically all-out wars, and consequently has a short duration? As we want to know whether the duration of SOS is statistically longer compared to other low-intensity civil wars, we may test the

duration of SOS wars in a dataset with a low battle-death threshold as it will include civil wars with lower levels of violence.

H_2: SOS wars last longer than other civil wars when tested on lower battle-death threshold.

3.4 A Commitment Problem

The idea that commitment problems are important obstacles to reaching stable regional autonomy deals is advanced here as a theoretical conjecture that has implications consistent with the empirical record. Future research might profitably investigate whether or how this mechanism matters in particular cases.

Fearon (2004:298)

The commitment problem in the explanation of SOS is the most interesting and important feature of SOS wars, as it supposedly hinders a peaceful termination of these wars and consequently affects the duration of these wars. Thus, this section offers a general understanding of a commitment problem in civil wars, before placing it within the narrative of the explanation of SOS. The following part also discusses Sri Lanka as the most likely case of SOS[21].

3.4.1 Spoiling Peace

Civil wars are often examined from the perspective of commitment problems (Mattes and Savun 2010:511). According to the bargaining and war literature, commitment problems may make war a rational strategy in situations where the disputants cannot credibly commit to an agreement over time (Walter 2009:246). Most scholars using the rationalist approach to understand the occurrence and reoccurrence of civil wars assume that a commitment problem postpones the peace (Mattes and Savun 2010:511). It is therefore argued that the uncertainty regarding military capabilities may persist and hinder and/or lead to the breakdown of peace (Mattes and Savun 2010:511). A commitment problem exists whenever somebody has an incentive to back out from a threat, an assurance or promise when the time comes to translate their words into action (Hovi 1998:1). Thus, the government can never give credible commitments to the rebels that they will not renege on the ceasefire or peace agreement when they regain their strength, because both parties know that the state has an incentive to do so

[21] When a case is thought to be a most likely case it gives more credibility to the testing. Where evidence drawn from a most likely case, may falsify or confirm a theory (Gerring 2007:42).

(Fearon 2004). Commitment problems may be divided into three main contexts: a threatening state`s credibility, commitments in negotiations and finally the compliance problem, where the parties might be tempted to cheat after it has committed to a peace agreement (Hovi 1998:2). In the case of SOS, it is either commitments in negotiations or a compliance problem where the state may be tempted to cheat when it regains strength.

Research suggests that weak state capacity during the transition period determine the duration of a peace agreement, as post-conflict institutions which have been weakened by years of strife, may not be capable of enforcing the agreement (DeRouen et al 2010:336) [22]. Therefore, military victories has tended to provide a more enduring peace than peace agreements, although many civil wars have ended with a negotiated peace (DeRouen et al 2010: 333).This may be due to a commitment problem, where one or both sides seek renegotiation. Recent research suggests that an important part of securing a lasting peace by means of a peace agreement, lies in the credible information and the agreement`s design (Mattes and Savun 2010:511). Information asymmetries between the parties are a central explanation for civil war, but commitment problems are considered an important part of the problem. Commitment problems and information asymmetries play an equally important part in spoiling the peace, which suggests that third parties may therefore contribute to a lasting peace by securing information and credible commitments (Mattes and Savun 2010:511).

Thus, third party intervention has proven vital in post-war societies as they may guarantee the integrity of the agreement and fosters trust between the sides (DeRouen et al 2010:334). The empirical study of Mattes and Savun (2010:511) demonstrates that 51 civil war settlements from 1945 to 2005 were possible due to international monitoring and credible information, especially with regards to military capabilities. They argue that provisions where the belligerents are required to report their military information to a third party may reduce the risk of renewed war. The third parties may verify the information, which adds credibility in negotiations in post-conflict states (Mattes and Savun 2010:511).

[22] State capacity is understood as the means of overcoming those problems addressed by a weak government, such as autonomy, effectiveness, accountability and responsiveness in economic, political and military matters (DeRouen et al 2010:334).

3.4.2 The Commitment Problem in SOS Wars

"The model shows how a commitment problem could prevent an insurgency from being ended in any other way except by military defeat".

Fearon (2004:290)

Fearon (2004) develops a game model where secessionist war is modeled as a commitment problem, because the government cannot commit credibly to autonomy deals signed in periods when it is relatively weak. Fearon`s (2004) understanding and argument for why civil wars cannot reach a peace agreement is well-founded in the rationalist explanation for war and the SOS wars may be viewed in the light of the bargaining model of war[23]. Fearon (2004) argues that the bargaining failure in these conflicts are due to commitment problems, and disregards asymmetric information because he assumes that the belligerents know each other`s strengths and capabilities as the belligerents in SOS wars fight for a long period of time. Consequently, more information would not have an effect for the ending SOS wars, but increased credibility between the belligerents could ameliorate the commitment problem (Mattes and Savun 2010:513).

SOS wars have a dynamic tailor made to emphasize the bargaining model of war. The government cannot credibly commit to a peace deal with the rebels, and if the rebels were to disarm the balance of power shifts in favor of the government which may tempt the government to exploit the situation (Mattes and Savun 2010:512). Because the rebels know about the government`s incentive to renege on the deal, they are less likely to put down their weapons and sign a peace agreement (Mattes and Savun 2010:512). In case of commitments in peace agreements, the government might suspect that the rebels will break the commitments. Thus, the compliance problem may be more relevant in the case of SOS wars, as the minority believe that the government will renege on the peace deal after regaining their strength. Even if both parties want a peace agreement, it may be difficult to commit to because of the incentive to defect, or the fear that the other party will cheat (Werner and Yuen 2005:261). Consequently, a first strike advantage hinders any commitment between the belligerents. Because the rebels in SOS wars suspect that the government will defect they will

[23] The basic premise of the bargaining model of war is that fighting is costly so both parties would receive a higher utility with a peace agreement than with war. Since both parties know this, they should be able to agree on a deal which reflects exactly what they would receive after the war, without fighting a war. However, civil wars occur supposedly due to bargaining failure. The two main explanations for bargaining failure are commitment problems and information asymmetries (Mattes and Savun 2010:512).

not dare not put down their arms. An increased cost of defection, enhanced monitoring, or rewarded cooperation may work to some extent as carrot and stick, although research on the matter has suggested that these measures will prove inadequate if the belligerents are not committed to keeping the peace.

H3: Due to the commitment problem SOS wars are believed to terminate in military victories than in other modes of termination.

3.4.3 Sri Lanka- the most likely case

Put another way, as one anonymous reviewer pointed out in regard to the Sri Lankan case, the Sinhalese (the nation-builders) saw themselves as sons of all Sri Lankan soil, and saw Tamils as the cultural threat. Eliminating such cultural threats is a nation-building tactic.

Fearon and Laitin (2011:207)

The civil war in Sri Lanka between the Sri Lankan government and the LTTE is perceived as the most likely case of the explanation of SOS. Sri Lanka was formerly a British colony, which gained its independence in 1947. It has a population of twenty million, where the majority ethnic group Sinhalese amounts to 74 percent, while the largest minority ethnic group are Tamils and account for 19 percent of the population (Fearon and Laitin 2011:202). The Tamils may be divided between the Sri Lanka Tamils from the North and East who regard themselves as the indigenous people, and the Indian Tamils who arrived in the nineteenth century as workers to the central plantations (Fearon and Laitin 2011:202). During the 1950s and 1960s the Sri Lankan Tamils dominated the business world and the higher positions in the civil service, but this changed after the elections in 1956 as the new government presented the Official Language Act which declared Sinhala as the one official language (Fearon and Laitin 2011: 202). The act stirred reactions among Tamils, who perceived their language, culture and economic position to be under attack (Fearon and Laitin 2011:202). However, the Sri Lankan Tamils did not form violent militias in the period of 1950s and 1960s, which was the period in which the cultural oppression intensified.

In 1972 Sri Lankan Tamil groups attacked state targets and became armed secessionists after 1977. Local elections in 1981 sparked an increase in the violence as Sri Lankan Tamil extremists opposed working in the existing political framework (Fearon and Laitin 2011:202). The violence reached civil war levels in 1983 as the Sri Lankan Tamil`s rebel group, the

LTTE, ambushed an army patrol in the north which left 13 Sinhalese soldiers dead. A collective retaliation occurred, and the violence on both sides increased as Sri Lankan politicians did little to control the violence, while India supported the LTTE (Fearon and Laitin 2011:202). The LTTE guerilla base was in Jaffna which is far North in Sri Lanka, although riots, assaults and looting also became a part of everyday life in the Eastern Province as many Sri Lankan Tamils were located there. Fearon and Laitin (2011:203) argues that the Tamils in the East may not have been concerned with the language act, but claim that the violence was due to the complex multiethnic space and complementary to the actions against settlers by outraged indigenous populations. The Northern Province was overwhelmingly Tamil, although the Eastern Province included Sinhalese and Muslim settlers which objected to the merger of these two provinces as it would leave them as minorities in the area. The state continued to support Sinhala settlement in Tamil areas, although they understood the implications of their policy. The state development scheme was perceived as provocative by the Sri Lankan Tamils who increased the violence which made it impossible for the police to control.

The civil war lasted until 2002 in which Norway supported a ceasefire in 2002 which the LTTE broke in 2006 (Fearon and Laitin 2011). The civil war restarted in 2006 and lasted until 2009, when the Sri Lankan army militarily defeated the LTTE, and ended one of the longest and most brutal civil wars in the last 30 years (Fearon and Laitin 2011:202). Certain features may be highlighted from this conflict as it is not unique to the case of Sri Lanka (Fearon and Laitin 2011: 204):

1. Migration proceeds from a relatively densely settled core to a more sparsely populated and ethnically distinct periphery, sometimes with the active support and encouragement of state policy. As the state intends to reduce poverty in overpopulated areas and develop regions it encourages migrants, most often from the ethnic majority, to settle in a new territory (Fearon and Laitin 2011).

2. Frictions and low-level violent clashes of various sorts arise between migrant and indigenous communities, sometimes “naturally” and sometimes with deliberate agitation of local leaders on each side. The indigenous population usually feels threatened by the new migrants to their region, and a series of incidents raises tension between the ethnic groups. Fearon and Laitin (2011) claim that in-migration by dominant settlers implicates the state and causes a higher level of violence.

3. Although the police are called on to restore order, they often fail. Fearon and Laitin (2011) argue that the police are poorly paid and drawn from the indigenous people, consequently they have little interest in protecting the migrants. If the police are able to restore order, the conflict does not escalate, however, incidents may recur where the police may fail.

4. If the police are ineffective, the state may call in the army, choosing to side on balance with either the sons-of-the-soil or the migrants. If the state supports the indigenous group, the defenseless migrants can either return to their home areas or face uncontrolled pogroms from the locals. If the state favors the interest of the immigrants (e.g. by attacking rebels or even by remaining neutral and making sure that all residents` security is protected), the indigenous can either accept their losses or challenge the forces of the state, who are now allied with the immigrants. In such cases, the likelihood that members of the local`s gangs (or militias) will kill soldiers is high (Fearon and Laitin 2011). If this happens, the army is likely to respond with indiscriminate violence against the indigenous population, which becomes the first salvo in an escalating rebellion against the state. Thus, the state`s decision of which side to ally determines whether the conflict will escalate or not, although in SOS cases it is most likely that the state supports the migrants as the migrants belong to the dominant ethnic group (Fearon and Laitin 2011).

3.4.4 Sri Lanka – A Most Likely Case?

I don`t think we need weapons or armed cadres any longer. We are a political party now. All our leaders have entered the democratic process and we all get security provided from the government.

Colonel Karuna (Pathirana 2008)

Fearon and Laitin (2011: 199) argue that the civil war in Sri Lanka between the Sinhalese-dominated state and the Sri Lankan Tamils is well-studied, although greatly misunderstood as scholars have missed the importance of Sons-of-the-Soil dynamics in the escalation and maintenance of violence in Sri Lanka. As the civil war in Sri Lanka between the state and the LTTE is regarded as the most likely case of SOS wars, they provide a summary of the civil war on Sri Lanka and highlight the features of the intrastate conflict which support the SOS explanation. Fearon and Laitin (2011) mention that the fighting between the Sri Lankan Tamils and the government were spread to the Northern and Eastern Province. However, they

treat the LTTE as one military group and fail to mention that the Eastern LTTE, which controlled 60 percent of the LTTE`s military strength, agreed on a peace agreement with the Sri Lankan government in 2004 (Haviland 2010).

The LTTE was divided into the Eastern and Northern LTTE, although they collaborated and fought for an independent Tamil homeland (Haviland 2010). The former group was lead by Colonel Karuna, while the latter was lead by Prabhakaran. In 2004 Colonel Karuna agreed on a peace agreement with the state, a defection from the Tamil Tigers which lead to the loss of the Eastern Province and has also been interpreted as an important factor in explaining the military defeat of LTTE in 2009 (Haviland 2010). The peace agreement between the Eastern LTTE and the Sri Lankan government was never broken, and Colonel Karuna entered politics after the peace agreement to promote Tamil interests (Haviland 2010) [24].

As Sri Lanka is regarded as the most likely case of the SOS explanation, the peace agreement between the Eastern LTTE and the Sri Lankan government weakens the notion of the commitment problem. If the LTTE was fighting for their homeland, how could Colonel Karuna and the Eastern Tigers put down their guns?[25] How could they agree on a peace agreement if there was a commitment problem? One could argue that Colonel Karuna assumed that the war for an independent Tamil homeland would continue with the remaining Northern LTTE. However, as the Eastern tigers contributed 60 percent of the LTTE`s military capabilities, is it difficult to see how they could win the war without the Eastern part of the LTTE. Fearon (2004) assumes that the commitment problem hinders any other termination than military victory, which makes it difficult to fit this part of the Sri Lankan civil war in the SOS explanation. It should also be noted that the majority Sinhala immigration to the Eastern Province was greater than to the North as both Sinhalese and Muslims lived and moved to the East, where new lands opened up due to the diversion of Sri Lanka's longest river, the Mahaweli.

[24] Today Colonel Karuna is the vice-president of Sri Lanka`s governing party, while Prabhakaran was killed when the Sri Lankan state won the civil war militarily over the LTTE (Haviland 2010).

[25] It also promotes the question of why Fearon and Laitin (2011) have left the peace agreement between the Eastern LTTE and the Sri Lankan government out of their summary of the civil war in Sri Lanka. Please note that the UCDP Conflict Termination dataset also fails to register the peace agreement with the Eastern Tigers in 2004. This promotes a debate concerning coding of termination and rebel groups. Although, the UCDP dataset mention that it does not include changes with regards to the identity of the belligerents it may collapse conflict episodes into wars with rebel groups which in reality is not related or ignore important terminations as in the case of Sri Lanka. If these concerns are left unresolved, it can lead to systematic failures.

Thus, some of the features of the civil war in Sri Lanka correspond with the explanation of SOS, while other decisive features contradict the proposition. The civil war in Sri Lanka lasted for a long period of time before it ended in a military victory in favor of the government[26]. However, SOS wars are low-intensity with a low lethality rate, while the civil war in Sri Lanka was one of the most brutal civil wars that lasted thirty years (Fearon and Laitin 2011). How can one of the most brutal civil wars that lasted three decades be the most likely case for a category which also includes non-violent cases? According to the coding rules of Fearon (2004:279) he codes a new war if one of the main parties in the conflict was defeated or otherwise dropped out. Thus, the civil war in Sri Lanka should not be treated as one civil war, but rather two as the Eastern part of the LTTE which controlled 60 percent of the rebels group's military capabilities represented by the Eastern Tigers dropped out because they signed a peace agreement with the Sri Lankan government. While discrepancies such as this exist in cases, the aggregated results should also be carefully analyzed.

[26] Note that this is not registered in any of the datasets as it is outside of the range in time.

4 Civil War Termination

This chapter focuses on the importance of the end of the Cold War as an explanation of how civil wars have ended and the importance of the emergence of an intervening international community for intrastate conflicts. I will also examine how this may have mattered for the termination of SOS wars as the neglect of non-ideological small wars during the Cold War might explain why SOS wars last longer, as opposed to the SOS dynamic leading to commitment problems.

4.1 The Post-Cold War Period

Civil war termination has not been subject to the same methodological rigor as civil war onset and duration, and the empirical studies which focus on termination have found contradictory results (Kreutz 2010). Although the effect of the end of the Cold War on intrastate conflicts is still questioned (Weinstein 2007), most view 1991 as an important turning-point for civil wars (Lacina 2004; Mack 2008; Kreutz 2010). Many scholars argue that the end of the Cold War has had an impact on civil war politics (Lacina 2004:191). When the international system changed from a bipolar to a unipolar world, intrastate conflicts were no longer perceived as been driven by superpowers politics and East-West ideologies (Lacina 2004:191; Mullenbach 2005:529). Intrastate conflicts went from “side show” to center stage because of the absence of the superpower conflict (Lacina 2004:191). This also allowed media, policymakers, scholars and the United Nations to change focus (Lacina 2004:191). During the Cold War the superpowers usually used their vetoes in the UN Security Council to block the UN from intervening in their proxy wars in many parts of the world. However, after 1991 the primary global security threat changed from a possible nuclear war between the superpowers to zones of internal conflict dominated by illegal drugs, human and weapons trafficking, HIV/AIDS, famine, terrorism, and theft (Lacina 2004:192).

As intrastate conflicts became threats to international security and peace, the threshold for intervening in what had traditionally been perceived as a state`s own business was lowered (Lacina 2004:193; Mullenbach 2005: 529).Therefore, civil wars were no longer understood as a national concern, but an object of international responsibility where the global society intervened to stop suffering, promote ideals such as democracy or human rights concerns; and contribute to peace-building and post-conflict reconstruction (Lacina 2004:193). Maintaining

peace in the aftermath of civil war is considered a difficult endeavor, therefore the international community has increasingly been called on to help (Fortna 2004:481). Obviously, scholars differ in their perception of separating the pattern of civil wars into before and after the end of the Cold War due to simply looking at the changes in the international community, although the majority in this debate seems to defend this differentiation. However, some scholars disagree with the assumption that 1991 can be used as an important turning point regarding changes in civil war, while others doubt whether there has been real changes after the end of the Cold War. According to Gates (2002:2):

> "The end of the Cold War led some to optimistically predict an end to war. A decade later we find this optimism was premature. War persists".

Some scholars argue that the variation in the characteristics of civil war and its perpetrators in terms of Cold War and post-Cold War dynamics is simplistic, theoretically unsatisfying, and empirically wrong (Weinstein 2007:19). They claim that the variation in conduct of warfare are best explained by looking inside insurgent organizations, at how they form and which organizational challenges they meet than looking at the changes in the international community (Weinstein 2007:19). This means that although the end of the Cold War may coincide with a change in the general pattern of civil wars, it is caused by the rebel groups and their conduct of warfare. Thus, the best way of understanding the changes may be to focus on the insurgent organizations, and disregard the changes in the international community after 1991.

However, the trend of increased intervention after 1991 is apparent, although it`s consequences and effects on civil war duration and termination are uncertain. Despite an increase of third party intervention in the post-cold war period, empirical analyses have found contradictory results concerning the international community`s effect on civil wars. While parts of the literature claim that third party interventions improve the probability of a lasting peace after a peace agreement, others argue interventions prolong human suffering as the intervening actors struggle to establish peace. Therefore, it is uncertain how the shift in the international society has affected the duration of civil wars. This poses the question for how civil wars end and whether the pattern of termination has changed after the end of the Cold War. Further, are third parties capable of creating peace in post-conflict societies and in which cases do they intervene?

4.1.1 UN Intervention

Some suggest that peacekeepers are sent to intervene in intrastate conflicts where they are most needed where peace would otherwise be difficult to keep (Fortna 2004:273) [27]. Gilligan and Stedman (2001) claim that peacekeepers are more likely to intervene after very deadly civil wars, which suggests that they may choose the more difficult cases[28]. Fortna (2004:273) argues that peace is more stable after decisive military victories than after wars that end in a tie may be the most consistent finding of the literature on the durability of peace after both intrastate and interstate conflicts (Fortna 2004:273). Recent research on UN intervention suggests that one of the best predictors of UN intervention is the number of deaths in a conflict and the military capacity of the state as it is less likely that UN peacekeepers are deployed to civil wars with low numbers of battle-death and it is less likely to intervene in militarily strong states (Gilligan and Stedman 2001; Fortna 2004:275).

Possibly more interesting is that they find the level of democracy, war aim for the rebels, primary commodity exports nor former colony of a permanent member of the UN Security Council make any difference for whether the UN intervenes or not (Gilligan and Stedman 2001; Fortna 2004:275). Fortna (2004:276) examines the effects of peacekeeping on maintaining peace, and claims that "we would want information on every cease-fire in every civil war. Unfortunately, given the messy nature of most civil wars, and, frequently, their stop and start nature, a comprehensive accounting of cease-fires does not exist"[29]. Fortna (2004) finds that international personnel were sent to keep peace in 41of 115 civil wars, where 7 of the 41 wars were during the Cold War, while the remaining 34 was after 1989 (Fortna 2004:276). The UN intervened in 30 of the total 115 cases, in which 5 intrastate conflicts were during the Cold War and the remaining 25 were after 1989 (Fortna 2004:276). This suggests that the duration of civil war misses much if one does not account for the activist-period of intervention after the end of the Cold War. Since the SOS explanation does not take

[27] There are competing explanations for the relationship between the cost of war and the durability of peace as it is argued that states differ in their tolerance for costs of war and their willingness to make concessions (Fortna 2004:274; Filson and Werner 2007:691). Some claim that autocratic leaders are less sensitive to cost and conflict outcomes than democrats, as the latter is held accountable for their decisions via elections. Democrats may be replaced if the population find their actions irresponsible, but the consequences of removal for democrats are relatively small compared to autocrats who may face death (Filson and Werner 2007:693).

[28] Recent research suggests that a higher death toll decreases the probability of reconciliation (Doyle and Sambanis 2000; Fortna 2004:275). It is also argued that civil wars with higher number of killed are more likely to resume than less deadly conflicts (Fortna 2004:275).

[29] As of now that kind of data exists in the UCDP Conflict Termination dataset (Kreutz 2010).

the activist period seriously, we may test whether the Cold War period has affected the duration and termination of these intrastate conflicts.

4.2 Military Victory or Peace Agreements?

Generally, a civil war can terminate in military victory; a peace agreement; a ceasefire; or the conflict may wither away (Kreutz 2010). Since the peacekeeping mission in Namibia in 1989, the international community has intervened in an increasing number of intrastate conflicts, and negotiated settlements have become the preferred method for ending civil wars (Fortna 2004:271; DeRouen et al 2010; Kreutz 2010). The involvement has moved beyond "traditional peacekeeping", and become more apparent in different aspects of monitoring and managing the transition from war to peace within a state with tasks such as peace agreement implementation, election monitoring and police training (Fortna 2004:269; DeRouen et al 2010:334). Therefore, there has been an increase in peace agreements, cease fires and other outcomes after the end of the Cold War, while military victories have become the least likely method of ending intrastate conflicts (Kreutz 2010).

Most empirical studies on civil war termination find that bargains are difficult to reach and implement in civil wars and they seem to be harder to establish in civil wars that interstate wars (Walter 1997; Walter 2009:244). Few negotiated settlements are signed, and those which are signed are less likely to be implemented. As peace agreements are likely to break down, the commonly assumed termination mode to end civil wars are military victories. Most argue that it is difficult to establish a lasting peace through negotiations after civil wars because of information problems (Walter 2009:245). Information about the rebel groups military capabilities are often difficult to obtain, as their potential army, financial flow, degree of support among the population is unknown (Walter 2009:246).

A peace agreement leaves both parties vulnerable to attack or abuse because they have to put down their weapons and decrease the size of their armies, this promotes a situation of first-strike advantage. As intrastate wars are assumed to have large power asymmetries between the government and the rebel group, it is easy for the government to renege on its promises (Walter 2009:246). The government may offer a reform of the political process, share power, or transfer autonomy to competitors, but since the rebel group is most often weaker, it has little ability to penalize a government should it fail to follow through (Walter 2009:246). The

rebel group is most often weakened by a settlement as several armies are not allowed within the state. Consequently, soon after an agreement is signed, control over territory is likely to be transferred back to the central government, which decreases the strength of the rebel group further (Walter 2009:246).

The bargaining problem may also affect a peace agreement as it may be more difficult if the combatants cannot divide the stakes over which they are fighting (Walter 2009:246). However, recent empirical studies suggest that even though territory is easily divided the government neither will nor consider it as an alternative as it affects its reputation and damages its strength (Walter 2003). If both sides seek sole ownership over a piece of territory, or control over a single government, then a settlement short of war may be unworkable. However, scholars have identified two mechanisms which address the rebels` security concerns: securing guarantees from third parties and adopting institutional safeguards to share or divide power between the domestic groups (Mattes and Savun 2010:512). The third party promise that it will intervene if the government acts opportunistically and reneges on past promises (Mattes and Savun 2010:512). The power-sharing institutions reduce the government`s ability to take advantage of the rebel group once it has demobilized (Hartzell and Hoddie 2003; Mattes and Savun 2010).

4.2.1 Termination of SOS Wars

By the logic of Fearon`s argument, a SOS war cannot achieve a lasting peace without a final military victory because of the commitment problem. Arguably, ceasefires and peace agreements are based on a minimum level of trust between the belligerents, but as the minority ethnic group in the SOS conflict assumes that the government will renege on any deal there is a lack of credibility and consequently difficult to terminate these wars peacefully (Fearon 2004). As the government is believed to have greater military capabilities than the rebels, the minority is expected to choose a military strategy such as guerilla warfare which is typically the case for long lasting wars (Arreguín- Toft 2005). Thus, SOS wars last longer due to commitment problems and a lasting peace can only be achieved after a military victory, most likely in favor of the state (Fearon 2004).

However, how the SOS wars actually ended have not been tested directly. If a lack of trust between the ethnic minority group and the ethnic majority group is the main obstacle for reaching a peace agreement a third party might guarantee the credibility of the peace

agreement. Recent research has demonstrated that peace agreements may be sustainable, if the peace is supported by a third party who intervenes if either party ignores the negotiated conditions (Walter 1997:361). In these cases it does not matter whether the state is strong or weak, or whether the majority presses for the government to intervene. If there is a third party guaranteeing for peace, and securing equal rights for all, there is no incongruity. If SOS wars are a bottom up wars, both sons-of-the-soil and the government will benefit more from peace as civil wars are extremely expensive. Further, if the sons-of-the-soil demands autonomy of their homeland and the state cannot agree on their terms, a third party may intervene and guarantee some sort of agreement between the belligerents, such as restrictions on the governments development scheme or secure the minority ethnic group`s rights to parts of the territory or resources in the area[30].

Previous studies argue that the end of the Cold War has led to a more willing and capable international community for negotiating settlements (Mack 2008; Kreutz 2010:246). Empirical studies have found that military victories have become less common in intrastate conflicts after 1989, largely because of increased peacekeeping by third parties (Kreutz 2010:246). The international community`s involvement in post-conflict societies have increased dramatically after the end of the Cold War as the annual number of intrastate conflict terminations tripled after the end of the Cold war (Kreutz 2010). However, this image is complicated by the fact that both onset and termination rose by the end of the Cold War (Elbadawi et al 2008). The increase of both onsets and terminations may be an important factor in explaining why scholars have found contradictory results concerning the international community`s effect on civil war termination. Although, global incidences of conflicts seem reduced as there were more terminations than onsets, a large part of inactive conflicts have increasingly recurred which may affect the results (Elbadawi et al 2008).

Logically, we would think that a third party would improve SOS wars chances for a lasting peace after a peace agreement. If commitment problem is the only reason for why SOS wars last longer, the change in the international community and third party intervention should have affected SOS wars more than other types of civil war. This statement is supported by the fact that SOS wars cannot end because of commitment problems, while other types of civil

[30] This argument assumes that the rebel group in a SOS war is fighting for a territory or natural/scarce resources in their homeland. If the rebel group is opportunistic and attempts to secure benefits in which the rebel leaders would not receive if there was not a war, a third party intervention is not assumed to improve the conditions of the civil war.

wars are caused by other incompatibilities. As SOS wars are the longest lasting civil wars, the understanding of this dynamic and how to shorten their duration, may be of great importance for both policy and research within civil war duration and termination, including third party intervention literature. Thus, scholars still disagree on how the shift in the international society has affected intrastate conflicts including SOS wars, although it seems likely that this change has affected SOS duration and termination. Possibly more so than other types of civil wars, since SOS wars are low-intensity and may have received little attention in the past.

Assumptions for H_4-hypothesis: "The problem is that bargains are unenforceable due to fluctuations in the government`s capabilities" (Fearon 2004:291). An agreement between the belligerents may be guaranteed by a third party, making the agreement independent of fluctuations in the government`s capabilities. Previous studies argue that the end of the Cold War has led to a more willing and capable international community when it comes to intervention and negotiation of settlements (Mack 2008; Kreutz 2010:246). The general trend of increased intervention should affect SOS wars in several accounts:

H_{4a}: SOS wars terminate in other outcomes than military victory after the end of the Cold War

H_{4b}: SOS wars lasted longer during the Cold War, than after 1991.

H_{4c}: If the commitment problem is the sole reason for why SOS wars last longer than other civil wars, the end of the Cold War should have a larger effect on SOS wars than other civil wars because a increased intervention should improve credibility between the belligerents: The end of the Cold War has had a larger effect on termination of SOS wars than other intrastate conflicts.

5 Method and Research Design

Put differently, if we have no explanation for why the parties are fighting at all (rather than settling), it is not clear how we can "explain" variation in war duration.

Fearon (2004:289)

5.1.1 Hypotheses

The SOS explanation has become a reference point within civil war literature, and it may also build a bridge between two important approaches to understanding civil war; feasibility and ethnicity. Thus, it is crucial to test whether the SOS wars follow the proposed pattern. This thesis will test the proposition that the commitment problem implies that SOS wars end in military victory by analyzing how the SOS wars have ended; whether SOS wars last longer than non-SOS wars by using a lower threshold for battle-deaths as measured by the UCDP data; whether the increased intervention after the end of the Cold War has affected the duration and termination of SOS wars; and whether increased intervention have ameliorated the commitment problem in SOS wars. This thesis will also test whether SOS wars are over territory or government which is a vital part of the SOS explanation since the ethnic minority group are assumed to have no political ambitions, but are only concerned with the in-migration to their traditionally perceived homeland or scarce natural resources in their homeland[31]. Put differently, are SOS wars long-lasting because of SOS dynamics as specified by the theory or because they are inherently territorial disputes? Further, if SOS wars are over government, this challenges the explanation of SOS, as it questions whether in-migration in an important feature in SOS wars.

[31] Note that I tested some implications of the SOS explanation in my Bachelor thesis, however this was limited to testing whether SOS wars were over territory and whether they were more likely to start during the Cold War (Gaski 2009).

H_{1a}: SOS wars involves either land conflict or dispute over natural resources, consequently SOS conflicts are over territory, not government.

H_{1b}: SOS wars over territory last longer than SOS wars over government.

H_2: SOS wars last longer than other civil wars when tested on lower battle-death threshold

H_3: Due to the commitment problem SOS wars terminate in military victories

H_{4a}: SOS wars terminate in other outcomes than military victory after the end of the Cold War

H_{4b}: SOS wars lasted longer during the Cold War, than after 1991.

H_{4c}: The end of the Cold War has had a larger effect on termination of SOS wars than other intrastate conflicts.

5.2 Three Datasets, Same Questions

This thesis uses three datasets because of the nature of the questions, which require different setups of the data. This may be a source of confusion so I name the dataset 1, 2 and 3 by which they will be referred to throughout the analysis. However, the analysis performed in the analysis chapter focuses on dataset 1 and 3, while the analyses using dataset 2 is placed in the Appendix E for reference.

- Dataset 1: Fearon`s (2004) dataset in which I have implemented the incompatibility variable from the UCDP Conflict Termination dataset (Kreutz 2010). The dataset ranges from 1945-99. Fearon's dataset has a relatively high battle-death threshold as it only includes civil wars with a total of 1000 deaths, and a minimum of 100 deaths per year. The dataset includes 128 civil wars, where 20 of them are SOS wars[32].

- Dataset 2: The UCDP Conflict Termination dataset (Kreutz 2010) ranges from 1946-2009 and disaggregates civil wars into conflict episodes to better capture the nature of the civil wars as the level of violence often ceases or drops below the battle-death

[32] Fearon`s (2004) initial list of SOS wars includes 21 civil wars, although one could not be found in the UCDP dataset (China, Xinjiang, 1990). The same SOS war is missing for the updated list of SOS.

threshold before it resumes[33]. Further, the dataset uses a much lower battle-death threshold than dataset 1, as it includes conflicts where at least 25 deaths have occurred in a single year. I have created two dummy variables for SOS wars: one distinguishes between SOS conflict episodes according to Fearon`s (2004) dataset, and the other recognizes SOS conflict episodes according to the updated list of SOS wars (Fearon and Laitin 2011). Although, the initial UCDP Conflict Termination dataset does not differentiate between the identities of the belligerents, dataset 2 does as only SOS conflict episodes which include the rebel groups who are SOS are coded as SOS conflict episodes. Thus, dataset 2 includes 371 conflict episodes where 62 of them are SOS2004 conflict episodes, while 61 of them are SOS2011 conflict episodes. However, this dataset may treat low-intensity, long-lasting civil wars such as SOS wars unfavorably as they may be divided into more conflict episodes than other civil wars. Consequently, all analysis using dataset 2 is placed in the appendix, while the analysis chapter of this thesis uses dataset 1 and 3[34].

- Dataset 3 is similar to dataset 2, although there is one important difference. Dataset 2 treats long-lasting, low-intensity civil wars unfavorably since they are divided into more conflict episodes because the low battle-death threshold may lead to increased number of starts and stops leading to increased number of conflict episodes within each civil war. This could lead to misleading results as the analysis could report that brief wars such as coups and revolutions last longer than i.e. SOS wars because they are coded into fewer conflict episodes. Thus, I identified all the conflict episodes for each civil war and collapsed them if there are 5 years or less between the start year of the new conflict episode and the end year of the previous conflict episode. This means that dataset 3 includes 245 conflict episodes, where the list of SOS2004 show 22 SOS conflict episodes, and the list of SOS2011 show 32 SOS conflict episodes, which is

[33] This thesis uses the UCDP Conflict Termination Dataset Version 2010-1 – November 2010 (Kreutz 2010). Although, the dataset offers information of interstate, intrastate conflicts and a dyad-level dataset, the following analysis will only include the information of the dataset on intrastate conflicts and some of the extra state wars as some of them are SOS wars.

[34] As dataset 2 produces very different results from dataset 1 and 3, it is plausible that the disaggregated data treats long-lasting civil wars unfavorably, as it separates these wars into more conflict episodes compared to other civil wars. Consequently, the reported results regarding SOS wars may be misleading regarding SOS wars, as it may lead to an overestimation of the termination and an underestimation of the duration of these wars.

very close to Fearon (2004) and Fearon and Laitin's (2011) original list of SOS wars[35].

Therefore, this thesis argues that there are several advantages to using three different datasets. First, it provides a validity test as we want to know whether we get the same results for SOS wars by using datasets with different criteria for gauging a civil war. The reason for contradictory results in much of the civil war literature may to some degree be caused by differences in the operationalizing of variables, the lethality- threshold and criteria for what constitutes a civil war. As SOS has become an important explanation for the longest-lasting civil wars we want to know whether the results are independent of specific coding rules.

Secondly, dataset 1 has a higher lethality threshold than dataset 2 and 3 (100 killed compared to 25). As SOS wars are low-intensity wars it`s dynamic and pattern may be displayed more accurately in dataset 2 and 3, as the it includes more detailed information. The duration of SOS wars should increase in the disaggregated datasets if they simmer at low-intensity levels for long periods of time, as they should be registered in dataset 2 and 3 before they enter dataset 1 due to the lowered battle-death threshold. Further, the SOS conflict episodes should last longer in the disaggregated dataset compared to other low-intensity intrastate conflicts because of the commitment problem, which Fearon (2004; Fearon and Laitin 2011) claims hinders any other outcome than military victory. Consequently, a ceasefire or a temporary peace agreement between the belligerent seems more likely in other civil wars where peace is not hindered by the commitment problem. Therefore, by testing SOS wars in a disaggregated dataset with a lower battle-death threshold we may gain a better understanding of SOS conflicts; ensure that the SOS dynamic is really driving the duration and that these wars are not neglected, low-intensity civil wars; and that the long duration of SOS conflicts are statistically different from other low-intensity civil wars.

Gates and Strand (2004:1) claim that there are several fundamental problems related to the estimation of civil war duration. They argue that these problems relate to the battle-death

[35] Which means that the initial number of SOS wars (2004 include 21 wars, 2011 include 32 wars) is not very different from the conflict episodes in dataset 3 (SOS2004 include 22 conflict episodes, SOS2011 include 32 conflict episodes), while it is very different from dataset 2 (SOS2004 include 62 conflict episodes, SOS2011 includes 61 conflict episodes). For dataset 3 this means that almost all civil wars have only one conflict episode, as the difference between conflict episodes is rarely more than five years. The only exemption for SOS2004 and SOS2011conflicts are India (Nagaland), Pakistan (Baluchistan) and Indonesia (OPM) which is coded into two conflict episodes. Indonesia (GAM I and II) are also coded in to two different wars, but Fearon (2004; Fearon and Laitin 2011) treats these conflicts as two separate wars too.

treshold, repeated events in the same country and the precision of the measurement in time (Gates and Strand 2004) . These issues are relevant for the following analysis as the datasets use different criteria for what constitutes a civil war, but also affects the duration as the battle-death threshold for dataset 2 and 3 are ¼ of the casualty threshold in dataset 1. This criticism is particularily useful for why Fearon's (2004; Fearon and Laitin 2011) list of SOS wars should be tested in a dataset with a lower battle-death threshold. Further, accounting for repeated events in one country is especially important regarding civil war as they tend to recur.

If the SOS explanation describes the accurate pattern of SOS wars the disaggregated dataset should be to these wars advantage as they are supposedly long-lasting, low-intensity civil wars. Further, the duration and termination of SOS wars compared to other low-intensity intrastate conflicts may be more precise in a dataset with a lower threshold[36]. As all civil wars are coded into conflict episodes in dataset 2 and 3 it should display how each conflict episode ended, not just how each civil war ended.

In chapter 6: The Analysis, I use dataset 1 to perform a replication study, before I test whether the belligerents were fighting over territory or government[37]. Further, I use dataset 3 to test how the civil wars ended; whether the belligerents were fighting over territory or government; and the effect of the post-Cold War period on SOS wars duration and termination. The cause of contradictory results in the civil war literature may be due to the hunt for significant coefficients to contest others and few robustness tests, thus this thesis will also test residuals

[36] Fearon (2004) argues that the dynamic of SOS is different than the dynamic of non-SOS wars, however his civil war categories are not mutually exclusive, which naturally poses the question whether the nature of SOS wars are that different from non-SOS wars. Further, Fearon (2004) argues that anti-colonial conflicts are civil wars and some of the anti-colonial wars are even SOS wars. Dataset 2 and 3 (Kreutz 2010) treat anti-colonial wars as extra state wars and exclude them from the list of intrastate conflicts. These two understandings of anti-colonial wars display an important debate within the literature of civil war. Kreutz (2010) may argue that civil wars are conflicts between parties within a state, and as the colonial regimes were not proper states it is not a civil war, while Fearon (2004:282) argues that Kreutz` handling of anti-colonial wars is an ex post assessment of proper states as we cannot make the definition of civil wars depend on whether secession is successful or on territorial contiguity. As there are few SOS cases the loss of these data points could report misleading results, consequently I have coded the anti-colonial wars into dataset 2 and 3 from the extra state version of UCDP. This means that all the datasets in this thesis include anti-colonial wars. It concerns the following cases: For SOS wars in dataset 2: UK/Kenya (Mau Mau) 1952. For SOS wars in dataset 3: UK/Kenya (Mau Mau) 1952; France/Algeria 1954; Portugal/Angola 1961; Portugal/Mozambique 1964.

[37] Note that I have performed a complete replication study of Fearon`s (2004) analysis which is placed in Appendix B. Note that I cannot test the effect of the end of the Cold War in dataset 1 as the included year variable only contains information for when each conflict started and not when they ended. Consequently, a dummy for this variable would only show whether it is more likely for a SOS to start before or after the end of the Cold War.

and possible influential outliers in all three datasets (Ward et al 2010:363). The rest of this chapter is laid out as follows: First, I introduce the relevant variables and coding of dataset 1, before I move on to the coding of important variables in dataset 2 and 3.

5.3 Dataset 1

Rather than just start throwing independent variables at such a diverse list, I decided to proceed inductively, sorting the cases by duration and looking for striking patterns.

Fearon (2004:278).

Dataset 1 has coded civil wars based on the following criteria: (1) They involve fighting between agents of (or claimants to) a state and organized, non-state groups who sought either to take control of a government, take power in a region, or use violence to change government policies. (2) The conflict killed at least 1,000 people 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). (4) If one of the main parties in the conflict was defeated or otherwise dropped out, it is a new war if the fighting continues. (5) The start year is the first year in which 100 people were killed or in which a violent event occurred, followed by a sequence of actions that came to satisfy the primary criteria (Fearon 2004:279). (6) The war is coded as ended by observation of military victory, wholesale demobilization, or truce, or peace agreement followed by at least two years of peace. By comparing the civil war`s duration from 1945 to 1999, Fearon (2004) identifies five categories of civil war to be strongly correlated with the duration as they end either more quickly or last longer than other civil wars (Fearon 2004:277): Coup/revolution, Eastern Europe and not-contiguous wars tend to be brief; civil wars where the fighting is funded by contraband or SOS wars last longer[38].

5.3.1 Five Categories of Civil Wars

Coups and popular revolutions

Several civil wars display violence during or after coup attempts or popular revolutions in capital cities, or they are brief popular revolutions which involves mass uprisings and

[38] Note that some cases have none of the five attributes (47), some cases have just one (68), some have two (12), and some has three. The most common overlap is between not-contiguity and SOS wars (6), while some cases are coded both SOS and contraband financed (4) (Fearon 2004:284).

demonstrations in the capital city in support of efforts to unseat a dictatorial regime (Fearon 2004:280). A popular revolution is defined as a civil war which involves mass demonstrations in the capital city in favor of deposing the regime in power, while a coup-related civil war is defined as a civil war between groups that aim to take control of a state, and that are led by individuals who were recently members of the state`s central government, including the armed forces[39]. According to Fearon (2004:297):

"Wars originating as coups or popular revolutions have tended to be short because the `technology´ for taking state power turns on the success or failure of a rapid tipping process- hoped-for defections within the security apparatus".

Civil wars in Eastern Europe

Fearon (2004) has sorted all civil wars by region and found that the Eastern European cases display similar patterns as they tend to be brief. Some of them are related to the fall of communism, and most of them have had the support from a strong power which allows for decisive rebel victories at an early stage against weak states (Fearon 2004:298).

Table 5.1. Estimated Median and Mean Civil War Duration by Region

Region	*Median*	*Mean*	*N*
Eastern Europe	2.3	3.2	13
North Africa	4.7	6.7	17
Western Europe + US/Canada/Japan*	6.0	8.5	15
Latin America	6.9	9.8	15
Sub-Saharan Africa	9.1	13.1	34
Asia	12.2	17.5	34

* 13 anti-colonial wars + Northern Ireland (1969-99) and Greece (1945-49). Source: Fearon (2004:282)

Not-Contiguous Civil Wars

Cases included in this category are colonial wars (13) or cases in which the rebel group operated primarily on land separated from the land mass of the capital city by at least 200 kilometers of water or by international boundaries (9). Fearon (2004:282) has collapsed these cases because of two assumptions; it is materially costly to carry a war effort across the ocean; the norm holding that a proper state is territorially contiguous might cut against a

[39] Typical coup-related civil war is cases such as Argentina in 1955 or Paraguay in 1947, while typical popular revolution-cases are Cuba in 1958, Iran in 1978 and Nicaragua in 1978.

government`s efforts to gain domestic and international support for such wars (Fearon 2004:282) [40].

Contraband

Fearon (2004:283) argues that the use by rebel groups of finances from contraband such as cocaine, precious gems or opium, dramatically prolong the duration of civil wars. However, contraband is not the only source of finance for rebel groups, as support from foreign states or ethnic diasporas may also help the rebels to sustain a long-running war[41].

Sons of the Soil

A SOS war is a civil war in which an insurgent band fighting on behalf of an ethnic minority group in the periphery of a state dominated by another ethnic group; against the state`s military or paramilitary formations, and/or members of the majority group who have settled as farmers in the minority group`s declared home area; and involves either land conflict with migrant from the dominant group or profits and control for fuel or mineral resources in the minority`s home area (Fearon 2004:283). A SOS war involves a conflict between members of a minority ethnic group concentrated in some region of a country, and relatively recent, ethnically distinct migrants to this region from other parts of the same country.

5.3.2 New Coding in Dataset 1

I downloaded Fearon`s (2004) replication dataset from the Journal of Peace Research`s replication data website which includes a dta-file and a do-file[42]. Further, I merged the incompatibility variable from the UCDP Conflict Termination dataset into Fearon`s (2004) dataset as the variable identifies whether the belligerents were fighting over territory or

[40] Fearon argues that wars against formal colonial empires such as French Algeria or the Mau Mau rebellion in Kenya satisfy the criteria of civil wars, but claims that these cases are often excluded as they are assumed to be international wars or assigned to Algeria instead of France (Fearon 2004:282). This may be due to the fact that civil war is a war between parties within a state and that colonial regimes were not proper states as the colonial territories were separated from the metropoles by water and succeeded in their national liberation wars. Fearon (2004:282) argues that this is an ex post assessment of what is a proper state results in misguided coding as Algeria was French at the time of the rebellion and should not be coded based on the outcome.

[41] Cases in which contraband has played a vital role since 1945 are Colombia (cocaine; 37 years to 2000 as coded in Fearon 2004), Angola (diamonds; 25 years to 2000), and Sierra Leone (diamonds; 9 years to 2000).
[42] A dta-file is a Stata dataset, while a do-file is the list of commands.

government[43]. When I coded the incompatibility variable into dataset 1, there were eleven civil wars which could not be identified adequately. Consequently, there are eleven cases missing when I use the incompatibility and termination variable[44].

Table 5.2. Descriptive Statistics for Dataset 1

Variable	*Observations*	*Mean*	*Std.dev*	*Minimum*	*Maximum*
SOS	128	0.16	0.37	0	1
Territory	117	0.49	0.50	0	1
Territory*SOS	117	0.13	0.34	0	1
GDP/Capita (lagged)	125	7.13	0.93	3.91	9.01
Population (lagged)	128	9.72	1.59	6.08	13.94
Duration	128	8.75	9.56	1	52
Outcome	117	2.62	1.35	0	5

5.4 Dataset 2 and 3

Dataset 2 and 3 are based on the UCDP Conflict Termination dataset (hereafter the UCDP dataset) which is based on the UCDP-PRIO Armed Conflict dataset [45]. It introduces conflict episodes defined as years of continuous use of armed force in a conflict, which allows for a deeper understanding of countries with multiple conflicts as well as recurring armed violence in post-conflict environment (Kreutz 2010:243). This gives even more detail and nuances to the analysis[46]. Further, as the UCDP dataset is disaggregated with a low threshold for lethality it may contribute to a deeper understanding of duration and terminations of SOS wars compared to other low-intensity wars.

[43] In most cases I have identified the correct wars based on country and rebel group and/or territory and used the start year as a guideline due to differences in criteria`s and lethality threshold, while I had to use secondary literature in few cases to ensure that it was the right civil wars. This has been most important for civil wars in Iran, Afghanistan and Yemen as these are countries which have experienced many civil wars in which some conflicts overlap in years and where the rebel groups merge or split.

[44] The missing-cases are: Colombia (La Violencia) 1948; Belgium (Rwandan Revolution) 1956; Central African Republic (Fractional fighting) 1996; Congo (Fractional fighting) 1998; Burundi (Hutu uprising) 1972; Burundi (Org. massacres in both sides) 1988; Rwanda (Post-rev strife) 1962; Zimbabwe (Ndebele guer`s) 1983; Turkey (Militia-ized party politics) 1977; Jordan (Fedeyeen/Syria v. govt) 1970; China (Xinjiang) 1991. The latter case is a SOS war, the rest of the cases are non-SOS wars. It is surprising that Fearon (2004) would have civil wars the UCDP doesn't, as the former has stricter criteria's.

[45] This thesis uses the UCDP Conflict Termination Dataset Version 2010-1 – November 2010 (Kreutz 2010). Although, the dataset offers information of interstate, intrastate conflicts and a dyad-level dataset, the following analysis will only include the information of the dataset on intrastate conflicts and some of the extra state wars.

[46] The following coding-rules are based on the 2010 update of the codebook, corresponding with the conflict-level datasets 2010-1. Due to space and relevance only the coding of essential variables will be mentioned. Please Kreutz (2010) or the website of Uppsala Conflict Data Program for a detailed codebook of the UCDP dataset.

Armed Conflict

The start date of each conflict episode is the data when a conflict becomes active according to three criteria: (1) a stated incompatibility, (2) organized groups of which at least one is the government of a state, (3) armed activity resulting in at least 25 battle deaths, all of which must be observed in a given calendar year (Kreutz 2010:244). A conflict episode ends when an active year is followed by a year in which there are fewer than 25 battle-related deaths. All of the three criteria are considered equally important.

Incompatibility

Incompatibility concerning government denotes incompatible positions regarding the state`s type of political system or the composition of the government or an aim to replace the current government. Incompatibility concerning territory refers to incompatible positions regarding the status of a territory and may involve demands for secession or autonomy or the aim of changing the state that controls a territory (Harbom and Wallensteen 2009:104).The stated incompatibility is what the parties claim to be fighting over. In the UCDP dataset incompatibility is coded in three categories: 1= Territory; 2= Government; 3= Government and Territory. However, as none of the civil wars in the dataset were over government and territory, I have dummy coded incompatibility: 1 = Territory and 0=Government.

Coding of SOS Conflict Episodes

First, I dummy coded all SOS wars from Fearon`s (2004) dataset and the updated list of SOS wars (Fearon and Laitin 2011) into the UCDP dataset, which translates it to dataset 2[47]. Secondly, I created dataset 3 by copying dataset 2 before I collapsed conflict episodes which differ less than five years from previous end year to following start year. It is important to differentiate between the initial list of SOS wars from 2004 (Fearon 2004) and the updated list of SOS from 2011 (Fearon and Laitin 2011), as several of the SOS conflicts have been replaced. To simplify it, the dummy variables are called SOS2004 and SOS2011, where SOS2004 is the SOS wars from the 2004 version, and SOS2011 are the SOS wars from the updated list. Further, I have called them the same in both dataset 2 and 3. Thus, dataset 2 includes 371 conflict episodes, 62 SOS2004 episodes and 61 SOS2011 conflict episodes.

[47] The start date and duration of the civil wars does not always correspond between the UCDP Conflict Termination dataset (Kreutz 2010) and Fearon (2004) as they operate with different thresholds and criteria's for civil wars. Therefore, I identified the correct cases by rebel group and location, and to some extent year.

Dataset 3 includes 245 conflict episodes, 22 SOS2004 conflict episodes and 32 SOS 2011 conflict episodes.

Conflict Termination

Conflict termination focuses on at least one year of non-activity or when the conflict ceases. Non-activity in this sense mean that the criteria with regards to incompatibility, level of organization, and 25 battle-related deaths are not met. Concerning the information about type of termination, the coding is based on observations about the relations between the parties in the last year of activity and the first year of non-activity that follows. The UCDP dataset include 6 different types of termination in the intrastate conflict dataset, but includes 7 different categories in the variable as ongoing remains in the variable: 0=ongoing; 1= Peace agreement; 2= Ceasefire agreement with conflict regulation; 3= Ceasefire agreement without regulation; 4= Military victory; 5= Low activity; 6= Other outcome (Kreutz 2010).

Peace agreement

A peace agreement is an agreement concerned with the resolution of the incompatibility signed/ or publicly accepted by all, or the main, actors in the conflict (Kreutz 2010:245). At a minimum the agreement addresses the central issues of contention. Civil wars which were terminated by a peace agreement are those where agreements were signed during the last year of conflict activity or the first year of inactivity that follows. The focus is thus on the signing or a verbal commitment by both parties to an agreement, and not whether the agreement is implemented or not (Kreutz 2010:245).

Ceasefire

The UCDP dataset separates between ceasefire agreements with and without conflict regulation. The following analysis will collapse these two categories as I do not believe that I loose important information by combining them, but rather improve the pattern of termination by doing so. A ceasefire is an agreement between all or the main actors in the last year of the conflict or the first year of inactivity in which terminates military operations. It may only consist of a pledge to stop fighting, or can include additional measures such as demobilization or withdrawal of forces (Kreutz 2010:245). In cases when a ceasefire agreement with conflict

regulation is immediately followed by a more comprehensive peace agreement, the latter is considered the main cause of termination.

Military victory

A victory is when one side in an armed conflict is either defeated or eliminated, or otherwise succumbs through capitulation, surrender, or similar public announcement (Kreutz 2010:244).

Other outcome = Low Activity or Any Other Theoretical Outcome

Other outcome is the fourth and most important termination method in this dataset, as Kreutz (2010:245) argues that this category is the most common type of termination. It includes the low activity category and other outcome. The low activity category includes cases where fighting is still reported, but does not reach the 25 battle deaths. This category includes possible unofficial ceasefires and delayed military victories, but also cases in which there is a lull in the fighting because the rebel group reorganize, split or are involved with other armed actions. Any other theoretical outcome includes cases when the government is defeated in another conflict, the country ceases to exist, or the rebel group merges into another rebel group but continues to be active. In some cases the conflict may continue although under the death threshold. A party may withdraw for tactical reasons, leadership changes, or change to a non-violent strategy. There are also cases where one of the actors are defeated in another simultaneous conflict, or simply withdraws (Kreutz 2010:245). Thus, low activity and any other theoretical outcome consist of cases where the conflict ceases without a victory or any type of agreement (Kreutz 2010:245).

Kreutz (2010:245) collapses low activity and any other theoretical outcome into one category called other outcome and claims that these are the most common outcome whether we look at the aggregated totals or separate types of conflict. Consequently, he argues that differentiating between these categories may contribute to a deeper understanding within the civil war literature, as the previous studies have failed to single out this termination method. Kreutz (2010:243) claims that the two latter categories largely present the general trend and pattern among both intrastate and interstate wars as conflicts tends to end more often under unclear circumstances where fighting simply ceases. Kreutz (2010:246) finds i.e. that only one-third of intrastate conflicts end in military victory, while the majority of intrastate conflicts end without any decisive outcomes.

Table 5.3. Intrastate Conflict Terminations over Time

1946-89	*Intrastate Conflict*	*%*
Peace agreement	12	8.5
Ceasefire	2	1.4
Victory	82	58.2
Other outcome	45	31.9
Total	141	100
1990-2005		
Peace agreement	27	18.4
Ceasefire	29	19.7
Victory	20	13.6
Other outcome	71	48.3
Total	147	100

Source: Kreutz 2010

5.4.1 Recoding Outcome

The outcome variable in the dataset is the most relevant variable in this thesis, and I have made a few changes. The first is fairly unproblematic as I combine ceasefire and ceasefire with regulation to one category as I do not lose valid information by combining them. The category of other outcome is more problematic. Other outcome includes low activity and any other theoretical outcome, although the category is clearly dominated by low activity[48]. As a large share of the civil war episodes seems to end in low activity, the treatment of this category is theoretically important both generally and for the analysis. Although, Kreutz (2010) argues that the category is very important, he offers a very broad definition of it which makes it difficult to achieve a clear understanding of it, and one may argue conflicting arguments for what this category actually includes.

In addition to representing cases where there is a lull in fighting, low or no activity may also be interpreted as an unofficial ceasefire, where there is no formal agreement. In the case of SOS wars over territory, this may mean that the government avoids or stops in- migration of the ethnic majority group into the traditional homeland of the ethnic minority group. In cases of SOS over natural resources the government may forgo the goal of monopoly exploitation of the natural resources in the homeland of sons-of-the-soil.

[48] This is only apparent when I run my own analysis, as Kreutz (2010) combine them in his analysis, although they are separated in the dataset. Due to few units/ empty cells with "any other theoretical outcome" I have to collapse it with "low activity" in the analysis, and therefore also in the descriptive statistics.

However, low or no activity may also be a delayed or possibly represent a less dramatic military victory. In the case of SOS wars the ethnic minority group may simply give up the idea of an autonomous homeland, and put down their guns without the dramatic end military victories often imply. Although, this may be less likely according to the explanation of SOS, as the minority ethnic group would fear the loss of their homeland or scarce resources to the majority ethnic group. Kreutz (2010) may argue that this category reports cases in which the fighting is simply put on hold by the rebels or government to i.e. reorganize. As the "low activity" category includes so many cases it is crucial that we gain a thorough understanding of it, otherwise empirical studies stand to make basic mistakes and future analysis may report misleading results which may lead to even more conflicting results within the literature of civil war.

I treat "low activity" and "any other theoretical outcome" as "other outcome" because Kreutz (2010) does the same in his analysis. Since "any other theoretical outcome" has so few units or often empty cells it reports insignificant result. Thus, the interpretation of the cases which end in this category may seem complicated, as some of these may be caused by a lull in fighting or de facto ceasefires or military victories. However, since I have not found convincing arguments to leave the "other category" unchanged or used as one of the more traditional categories; I have chosen to experiment with the category in the multinomial analysis using dataset 2[49]. The treatment of this category is only relevant for the multinomial as it test the likelihood of a SOS war ending in military victory relative to other categories. I have created three different variables based on Kreutz (2010) outcome variable which I use in dataset 2: one variable where I treat "other outcome" as a separate category; one variable where I collapse "other outcome with ceasefire; and one where I collapse "other outcome" with military victory[50]. Although, this does not solve the debate on how to treat this category, I want to see how it affects the termination SOS conflict episodes in the analyses.

[49] Dataset 2 is the only dataset in which an overwhelming number of civil wars are terminated by other outcome, this may indicate that this category is most needed when the dataset is disaggregated to the extent the initial UCDP dataset is. It may also indicate that most of the cases in other outcome are correctly coded, as dataset 3 includes fewer lulls in fighting due to collapsed conflict episodes. Dataset 3 does not include nearly as many conflict episodes which end in other outcome. See Appendix C for a detailed list of the termination of SOS conflict episodes using dataset 3. Note that Appendix E includes two tables which display how SOS conflict episodes and other conflict episodes were terminated using dataset 2.

[50] The multinomial analyses using dataset 2 are placed in Appendix E.

5.4.2 Post-Cold War Dummy

I have generated a dummy variable for the post-Cold War period to test the difference in the duration of SOS wars before and after 1991, which I use in dataset 2 and 3. It is relevant to control for the end of the Cold War as it is regarded as an important turning point for increased intervention. Since SOS wars are low-intensity conflicts, they are very likely to have been neglected during the Cold War, or it is plausible that intervention was vetoed by the superpowers in the UN Security Council during the Cold War[51]. If the primary obstacle of ending a SOS war is a commitment problem and there has been a trend of increased intervention, the duration and means of termination of SOS wars may have changed considerably. By following the logic of this argument, the duration of SOS wars after the end of the Cold War may have been shortened to a larger degree than other civil wars in which termination is hindered for other causes.

Some object to the use of a Cold War dummy as they claim it is theoretically unsatisfying and simplistic (Weinstein 2007). It has also been suggested that a Cold War dummy only introduces an "extra variable into the vector of predictors of conflict likelihood", or in this case conflict duration (Brown and Langer 2011:189). Therefore, the Cold War dummy may only illustrate whether there was a statistically significant chance of longer or shorter duration, ceteris paribus, during the Cold War (Brown and Langer 2011:189). Consequently, it is suggested they that the interpretation of this variable is unsatisfactory because it gives no idea why the chances of conflict or duration of civil war were higher or lower during the Cold War, unless we "indulge in speculative assignment of interpretations" (Brown and Langer 2011:189).

However, the end of the Cold War is largely understood as a turning point for the international community`s increased intervention (Lacina 2004; Collier et al 2009). Collier and Hoeffler (2004) interpret their Cold War variable as a proxy for the availability of outside funding to rebel organizations, although Brown and Langer (2011:189) claim that this may just be one of many possible impacts of the Cold War. The dummy variable may work as a proxy for i.e. a more globalized world, increased intervention or the CNN-effect where media shows more interests and focuses more on conflicts in peripheral parts of the world, which are all symptoms of a more interventionist international community. Consequently, I interpret the

[51] Note that Asian countries which were regarded important during the Cold War such as Afghanistan has no SOS wars.

post-Cold War dummy as a proxy for the increased attention and intervention by the international community in intrastate conflicts. If the duration and means of termination of SOS wars have changed after 1991 it may indicate that increased intervention has ameliorated the commitment problem.

Table 5.4. Descriptive Statistics for Dataset 3

Variable	*Observations*	*Mean*	*Std.dev*	*Minimum*	*Maximum*
SOS2004	245	0.08	0.28	0	1
SOS2011	245	0.13	0.33	0	1
Territory	245	0.46	0.49	0	1
Territory*SOS2004	245	0.07	0.26	0	1
Territory*SOS2011	245	0.11	0.32	0	1
Post-Cold War	245	0.50	0.50	0	1
Post-Cold War*SOS2004	245	0.07	0.26	0	1
Post-Cold War*SOS2011	245	0.07	0.26	0	1
GPD/Capita (logged)	197	6.95	1.35	3.49	10.49
Population (logged)	212	9.84	1.75	5.95	13.96
Outcome	245	2.47	1.39	0	4
Duration	245	7.72	11.1	1	60

5.4.3 Independent Variables in Dataset 2 and 3

A wide range of independent variables have been controlled for in conflicts studies, but GDP per capita and population size are the only control variables which appear robust (Brown and Langer 2011:188). Fearon and Laitin (2002) and Collier and Hoeffler (2004) agree that GDP per capita and other surrogate variables for modernization/economic development are crucial predictors of the risk of armed conflict (Mack 2002:519; Sambanis 2002a:217). Ceteris paribus, as GDP rises the incidence of war falls (Mack 2008:521). As rich countries are relatively peaceful and poor countries seem to suffer more civil wars it may seem as if development is the best from of conflict prevention (Mack 2002:521). Therefore, the empirical studies on civil war have concluded that the risk of civil war decreases as average income increases and the size of a country`s population decreases (Hegre and Sambanis 2006:509; Ward et al 2010:363). Consequently, it has become more of norm to include GDP per capita and population size into the analysis, although it has been suggested that the latter may be unnecessary once SOS is included (Fearon and Laitin 2011). As dataset 2 and 3 does not include any control variables, I have implemented GDP per capita and population size from the Penn World Tables dataset (PWT). The PWT dataset only includes information of GDP and population from 1950 and excludes Myanmar, which creates 48 missing data points

for the GDP per capita variable and 30 missing values for the population variable in dataset 3[52]. Although, this is not ideal, it is the best alternative as I find it important to include these control variables.

[52] Note that the value of the logged population and logged GDP per capita represent the value of the year civil war broke out. The GDP per capita variable includes more missing values than the population variable on some of the relevant cases, as it is often difficult to gather information regarding GDP during a war. Further, SOS cases like the civil wars in Latvia, Estonia and Lithuania drop out because we do not have information of GDP per capita for these countries during the Cold War. The PWT dataset does not include population for Algeria in 1954 and Angola in 1961, but I coded in the values for respectively, 1960 and 1970 to include them in the analysis when using the control variables.

6 The Analysis

The following analyses will use only dataset 1 and 3. I have organized the analysis chapter by hypotheses, as the first part focuses on hypothesis 1 and 2 which examines the influence of incompatibility and duration, while the second part addresses hypothesis 3 and 4 which is on the nature of termination and the effect of the end of the Cold War[53].

The idea that commitment problems are important obstacles to reaching stable regional autonomy deals is advanced here as a theoretical conjecture that has implications consistent with the empirical record. Future research might profitably investigate whether or how this mechanism matters in particular cases.

Fearon (2004:298)

6.1 SOS Wars Over Territory or Government?

$H_{1a:}$ SOS wars involves either land conflict or dispute over natural resources, consequently SOS conflicts are over territory, not government

There are large differences between civil wars where the belligerents are fighting over territory or government, as the former tend to be more local and low-intensity, but longer-lasting. SOS wars tend to be the longest lasting civil wars because of their dynamic between the ethnic minority group and the ethnic majority group who fight over territory or natural resources. By following the logic of the SOS explanation, the sons-of-the-soil have no political ambitions, but are concerned with in-migration and is caused by competition over scarce resources such as land, jobs, educational quotas, government services, or natural resources . Consequently, all SOS wars should be over territory and not the fight for governmental power. To test whether SOS wars are over territory I have created table 6.1, which is based on dataset 1 and displays whether the belligerents in the different types of civil wars were fighting over territory or government.

Table 6.1 shows that coups and revolutions have been most often over government, which is not surprising. Most of the civil wars in the category of Eastern Europe are related to the fall of communism, where all but one was over territory. The not-contiguous category and SOS

[53] As dataset 2 separates SOS wars into more conflict episodes than non-SOS wars because of the nature of SOS wars, the results may be misleading and the coefficients are most often insignificant. However, I have performed the same analysis in dataset 2 as with dataset 3, where the results from the former are included in the appendix.

wars display the same pattern, as the belligerents were fighting over territory in 19 of the 21 cases. Civil wars which include the contraband factor are over government in two thirds of the cases. Most of the SOS wars correspond with the SOS explanation, as 16 of the 20 cases were over territory.

Table 6.1. Estimates of Civil War over Territory or Government

Type of civil war	*Territory*	*Government*	*Total*
Coup/Revolution	5	16	21
Eastern Europe	12	1	13
Not Contiguous	19	2	21
Sons of the Soil	16	4	20
Contraband	6	11	17
Total	58	34	92

Source: Fearon 2004 and Kreutz 2010

To test whether the difference of type of war over territory is statistically significant we can perform chi-squared tests. The smaller chi-square signifies that the null hypothesis is true, conversely, the larger it is the more certain we are that we can reject the null hypothesis. Therefore, the test measures the degree of deviance between the theoretical and the observed data. I collapse the other types of civil war to one group in order to test whether there is a statistical difference for civil wars over territory between SOS and non-SOS.

H_0: *There is no correlation between SOS wars and territory.*

H_1: *There is a correlation between SOS wars and territory.*

Simple calculations of expected and observed values show that chi-square is 3.15 and since I have collapsed all non-SOS wars into one category the df = 1. Usually, we want to reject the null hypothesis at a 95 percent level, meaning $p < 0,05$. In this case chi-squared is too small to be significant on a 5 percent level, although it is statistically significant at the 10 percent level. Consequently, we cannot reject the null hypothesis as the relationship between SOS wars and territory is not statistically significant. The chi-squared test shows that there is no

correlation between SOS wars and wars over government. Since there are some SOS wars over government we may reject H_{1a}.

6.2 The Duration of SOS Wars

H_{1b}: *SOS wars over territory last longer than SOS wars over government*

H_2: *SOS wars last longer than other civil wars when tested on a lower battle-death threshold*

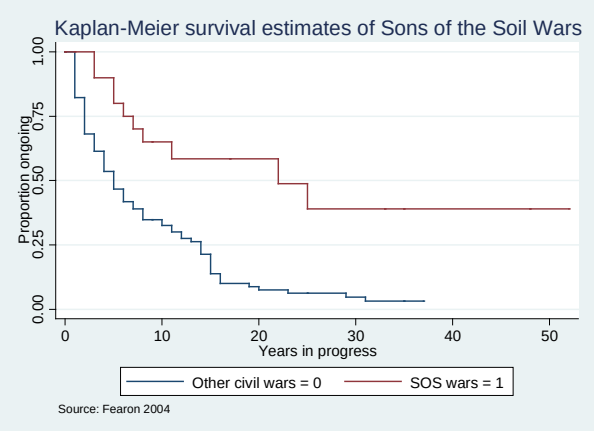
The following analyses test the remaining hypotheses which mostly focus on the duration and changes in duration of SOS wars due to certain factors[54]. Thus, to replicate Fearon`s (2004) analysis and to test whether SOS over government or territory last longer, whether SOS conflict episodes last longer than other conflict episodes, and whether SOS last longer after the end of the Cold War, I use a Weibull analysis[55]. In this thesis the Weibull analysis measures how each variable would affect the duration of a conflict episode relative to if it was not present. This means that the duration of all the conflict episodes which exhibit this factor is compared to the duration of all the conflict episodes in the dataset which do not include that factor[56].

Fearon (2004:283) argues that SOS wars last longer than other civil wars as his analysis reveals that the estimated median and mean for non-SOS wars are 5.8 and 8.5 years, compared to 23.2 and 33.7 years for SOS wars. As I want to display the difference in the duration of SOS wars and other civil wars using dataset 1, I use a Kaplan-Meier graph as it illustrates the probability of the duration of civil wars and the proportion of ongoing for each category included. Thus, Figure 6.1 is a Kaplan-Meier graph using dataset 1 to illustrate the probability of survival past time t for SOS wars compared to non-SOS wars (Cleves et al 2004:93). The figure shows large differences in the survivor function of SOS2004 wars and non-SOS wars as the graph clearly displays that SOS wars last longer than other civil wars. It also illustrates that the proportion of other ongoing civil wars drops quicker than SOS wars.

[54] The only exemption is the multinomial analysis and predicted probabilities which is concerned with how the SOS wars were terminated.
[55] As I had to stset dataset 2 and 3 before performing the Weibull analysis I followed the stsetting of Fearon (2004). Thus, I created two variable called cumduryrs: one in dataset 2 and one in dataset 3, which counts the duration of each conflict episode. Thus, I stset using cumduryrs and failure is obviously ended which is a dummy variable that Kreutz (2010) has already coded in UCDP dataset.
[56] Note that the coefficients in a Weibull analysis are called covariates. The interpretation of the covariates is rather simple, although I will also include more information and interpretation when I comment on the analyses.

Figure 6.1 displays that SOS wars last longer compared to other civil wars and that the proportion of ongoing SOS wars decreases at a slower rate than other civil wars.

Figure 6.1. Kaplan-Meier Estimate of SOS Wars and Non-SOS Wars



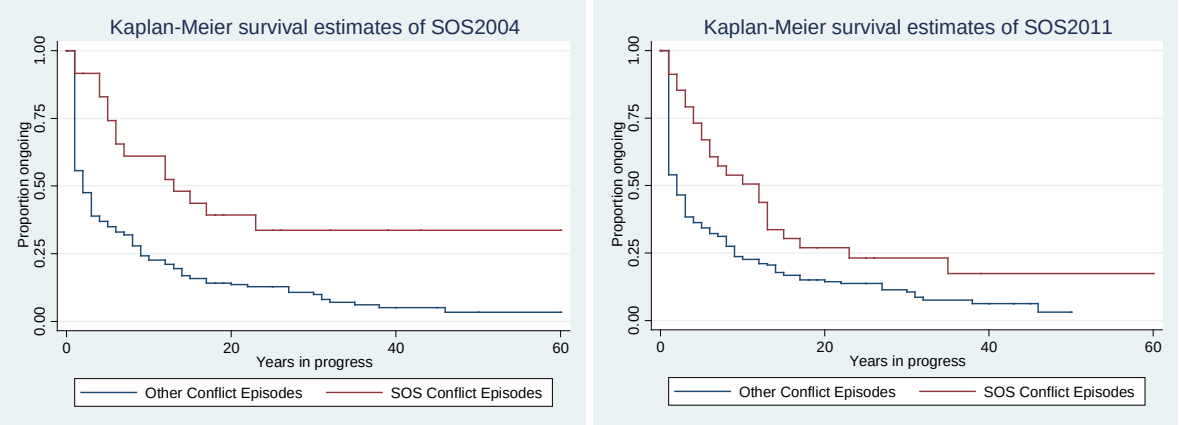
To test whether these differences are statistically significant I use the log-rank test, which is one of several available nonparametric tests which allow testing the equality of survivor functions (Cleves et al 2004:113) [57]. The log-rank test indicates statistically significant difference ($p< 0.001$) between SOS wars and other civil wars, which indicates that we may accept H_2[58]. However, this analysis is performed using dataset 1, while the difference in duration between SOS conflict episodes and other intrastate conflict could be different in dataset 3 as the battle-death threshold is lower and consequently includes more low-intensity civil wars.

Figure 6.2 and 6.3 are Kaplan-Meier graphs using dataset 3 to illustrate the probability of survival past time t for SOS conflict episodes and other intrastate conflict episodes (Cleves et al 2004:93). By comparing these three Kaplan-Meier graphs we see that the difference in proportion of ongoing SOS wars compared to other civil wars, and their predicted duration seems more extreme in Figure 6.1. However, Figure 6.2 also indicate large differences in survival probability between SOS2004 and other conflict episodes, while Figure 6.3 indicates less difference between SOS2011 conflict episodes and non-SOS conflict episodes. The Kaplan-Meier graphs illustrate large differences in the probability of survival time for

[57] The log-rank test is a global test which compares the overall survival functions and compares the expected versus the observed number of failures for each group, and combines these comparisons over all observed failure times. The log-rank test is a rank test, but it can be viewed as an extension of the familiar Mantel-Haenszel test applied to survival data (Cleves et al 2004:114). Note that these tests do not test the equality of the survivor functions at a specific time point, which means that i.e. the difference between SOS wars and non-SOS wars after the end of the Cold War cannot be tested here (Cleves et al 2004: 113).
[58] See Appendix F for the do-file conducting the analyses in this section.

SOS2004 conflict episodes relative to other intrastate conflict episodes, while the SOS2011 indicate fewer differences. Since dataset 2 shows no difference between SOS conflict episodes and other conflict episodes this confirms that the coding of conflict episodes does have an effect on the outcome of duration. This justifies my recoding of SOS conflict episodes in dataset 3.

Figure 6.2 and 6.3. Kaplan-Meier Estimates of SOS Wars and Non-SOS Wars



To test whether these displayed differences are statistically different, I use the log-rank test for Figure 6.2 (P<0.001) and Figure 6.3 (P=0.001), which confirms that the pattern displayed in the Kaplan-Meier graphs is statistically significant. Thus, both dataset 1 and 3 indicate that the difference in duration between SOS and other civil wars is highly statistically different[59]. Additionally, the updated list of SOS given by Fearon and Laitin (2011) confirms that SOS wars last longer than other civil wars. To test these differences further, I replicate Fearon`s (2004) analysis using both dataset 1 and 3.

6.2.1 Testing SOS Duration and Territory in Dataset 1

In this section I perform a replication study of Fearon`s analysis using dataset 1, before I include the Territory variable to test whether SOS wars over territory last longer than SOS wars over government. I also perform the same analysis using dataset 3 with both SOS2004 and SOS2011, as I want to know whether the results differ between dataset 1 and 3, but also whether SOS2004 and SOS2011 produce different results. After each analysis I test influential outliers using dfbeta, before I reject or confirm H_{1b} and $H_{2.}$

[59] Dataset 2 finds no statistically significant difference between SOS2004 and other intrastate conflict episodes, while some difference for SOS2011.

To replicate Fearon`s (2004) analysis I use a multivariate Weibull analysis, which is a parametric approach which is based on a general Weibull distribution (Hamilton 2009:323). The Weibull distribution allows the failure to increase or decrease over time, and the model implies that ln(-ln(S(t))) is a function of ln(t) (Hamilton 2009:323). The covariates are reported in time ratio form, consequently it reports the estimate of change in war duration when a factor is present (Fearon 2004:284)[60]. The interpretation of the covariates are rather simple as the reported covariates are the multiple by which the expected war duration is estimated to change when the factor is present, i.e. the average duration of a SOS war lasts more than three times longer (3.102) than a case without the attribute. Consequently, the expected duration increases by a factor of more than three for SOS cases. This means that covariates which are above 1 indicate a longer duration, while covariates below 1 predict a short duration, i.e. coups and revolutions tend to be brief, consequently, their covariate reports a duration of 0.320, which means they last three times shorter compared to cases without this attribute.

Table 6.2 (Model 1) displays Fearon`s (2004) basic model and the covariate which is highly statistically significant indicates that SOS wars last three times longer (3.102) that civil wars without this attribute. Model 2 includes the same variables as Model 1, but excludes Indonesia as 4 of the 20 SOS cases in dataset 1 are placed in Indonesia[61]. This affects the covariate (2.667) and the significance of the SOS variable from significant on a 1 percent level to 5 percent level in model 2. However, the exclusion of Indonesia does not affect it more than what we would expect as the SOS variable has few units, and indicates that it is not Indonesia which is driving the significance of the SOS variable.

Model 3 includes Indonesia again, but also a dummy variable which differentiates between civil wars over territory and government as SOS wars are supposedly caused by the dispute of territory, but also because civil wars are assumed to last longer if they are over territory[62]. However, the covariate of the territory variable is negative (0.865) and not statistically significant, nor does it affect the significance of the SOS variable. To further ensure that the SOS variable does not capture the effect of territory, I exclude SOS from model 4 which

[60] Note that all covariates in the following Weibull analyses are reported in time ratio.
[61] Note that Indonesia has several wars in dataset 1, consequently 4 SOS wars and 3 non-SOS wars are excluded which decreases the observations from 128 to 121.
[62] Note that 11 cases are excluded as they cannot be found in the UCDP dataset, consequently 1 SOS case and 10 non-SOS are not included in the remaining models in the table. See footnote in method chapter for which cases this concerns.

makes little difference to the result on the territory variable. This proves that SOS wars are not sensitive to the inclusion of territory in the model.

Table 6.2. Determinants of Civil War Duration using Dataset 1, 1945-1999

	Model 1	Model 2	Model 3	Model 4	Model 5
Coup/Revolution	0.320***	0.317***	0.291***	0.300***	0.273***
	(-5.36)	(-5.56)	(-5.61)	(-5.16)	(-5.95)
Eastern Europe	0.330***	0.325***	0.325***	0.311***	0.320***
	(-4.21)	(-4.40)	(-4.00)	(-3.84)	(-4.13)
Not-contiguous	0.684	0.705	0.690	0.899	0.647
	(-1.62)	(-1.45)	(-1.39)	(-0.37)	(-1.68)
Contraband	2.562**	2.517**	2.270*	2.975**	2.023*
	(2.76)	(2.78)	(2.44)	(3.07)	(2.14)
SOS	3.102***	2.667**	3.017***		0.899
	(3.86)	(3.20)	(3.79)		(-0.22)
Territory			0.865	1.102	0.789
			(-0.67)	(0.43)	(-1.10)
Territory*SOS					4.483*
					(2.56)
N	128	121	117	117	117
Log lik.	-160.5	-149.3	-143.3	-152.0	-140.8
Chi-squared	72.35	69.89	70.49	53.11	75.52
N (ended)	103	98	93	93	93

Source: Fearon 2004 and Kreutz 2010. Weibull regression with duration in years as the dependent variable. The coefficients are reported in the estimated multiplicative effect of a one-unit change in the independent variable on mean war duration; e.g. .32 means that a one-unit change is associated with a reduction in mean war duration by a factor of about three. T-statistics are in parentheses. Estimations performed by using Stata 11.0. Exponentiated coefficients; *t* statistics in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

To test whether SOS is really driven by the fight over territory I created an interaction term with SOS and the incompatibility variable (SOS*Territory) in Model 5. If SOS cases are really over territory this variable should be highly statistically significant with a large covariate[63]. Model 5 displays that the SOS covariate which now measures the duration for SOS wars over government is not statistically significant and drops to a negative predicted

[63] Note that the interpretation of the covariates changes when I include an interaction term.

duration, which means that SOS wars over government tend to be brief (0.899). Further, the territory variable is still not statistically significant, and indicates an even shorter duration for other conflict episodes over territory (0.789) than SOS wars over government. The Territory*SOS variable measures the duration of SOS wars over territory. This is statistically significant on a 5 percent level and the covariate increases from 3.102 in the basic model to 4.483. This means that SOS wars over territory last 4.483 times longer than civil wars which do not include this attribute. As SOS2004 and territory may drop in significance due to inflated standard errors and fewer observations I test the joint significance of SOS2004, territory and SOS*Territory, which shows that the parameters are jointly statistically highly significant ($p<0.001$). Thus, we can accept that the interactive terms are statistically meaningful.

Consequently, Table 6.2 confirms the pattern displayed in the Figure 6.1, and reports large differences in duration between SOS wars and non-SOS wars. Further, it displays that the interaction term increases the size of the covariate from Fearon`s (2004) initial analysis. This is because the interaction term now includes the SOS wars which fulfill the initial criteria described in the explanation of SOS, as these wars are supposedly over territory or scarce resources and not over governmental power. Thus, Table 6.2 largely confirms the explanation suggested by Fearon (2004; Fearon and Laitin 2011), but the territory variable included from the UCDP dataset indicates that Fearon (2004) has included some wars which do not fulfill the criteria as they were over government. Consequently, the interaction term improves Fearon`s (2004) initial findings. To ensure that these results are reliable, I test the influential outliers in the SOS variable in dataset 1.

6.2.2 Influential Observations in the SOS Variable in Dataset 1

After running the analysis, it is important to determine whether any observations or groups of observations have a disproportionate influence on the estimated parameters (Cleves et al 2004: 193). This is known as influence or leverage analysis, and an appropriate tool used to uncover influential outliers is dfbeta. Thus, I use dfbeta to see whether there are a few units driving the results[64]. However, a disadvantage with the dfbeta is that the number of values to examine grows with sample size and number of regressors. Another disadvantage is that since there has been little focus on testing influential outliers, there are few guidelines for what

[64] Note that I focus on the SOS variable in dataset 1 and 3 when testing the dfbetas.

constitutes an influential outlier and little literature of what the cut-off point should be[65]. It has been suggested that the cut-off point can be $2/\sqrt{n}$, which would translate to a cut-off point of 0.17 for dataset 1[66]. Although, none of the outliers in Figure 6.4 exceeds this limit, this formula seems to be used as a guideline more than a set rule. Thus, I have to experiment with the data and exclude the most extreme observations. Further, the interpretation of dfbeta as measures of influence is fairly straightforward[67]. The dfbeta indicate how much each observation influences the regression coefficient, consequently is reports how much the coefficient would change if the observation was removed (Hamilton 2009:223). The outliers below zero would affect the time ratios in the Weibull analysis negatively if they were removed, while those above zero would increase the size of the covariate.

As Figure 6.4 tests the data points in the SOS variable it differentiates between SOS and non-SOS wars, where the former is reported in red and marked with an x, while the latter is reported in blue and marked with a *. From Figure 6.4 we find that if Papua New Guinea was removed it would decrease the covariate of SOS by approximately 0.05, and if we remove Sri Lanka it would increase the covariate of SOS with approximately 0.05. Based on the plot it seems relevant to exclude observations such as Chad, Indonesia, Zimbabwe, Pakistan and Papua New Guinea when rerunning the analysis. As Indonesia includes four of the SOS wars, I have already tested SOS without these observations in Table 6.2, Model 2, which made little difference to the analysis, this may also be because Indonesia has observations which according to the dfbeta-plot increases and decreases the SOS covariate. Thus, I test possible influential outliers in the basic Table 6.2, Model 1, which seems to have extreme values both above and below zero, such as Chad, Pakistan and Zimbabwe, but also India, Burma and Philippines. These tests do not report any significant changes although the removal of Sri Lanka and the Philippines affects the SOS covariate to some degree. However, this may also be due to few observations. Consequently, it seems as if the SOS variable is quite robust.

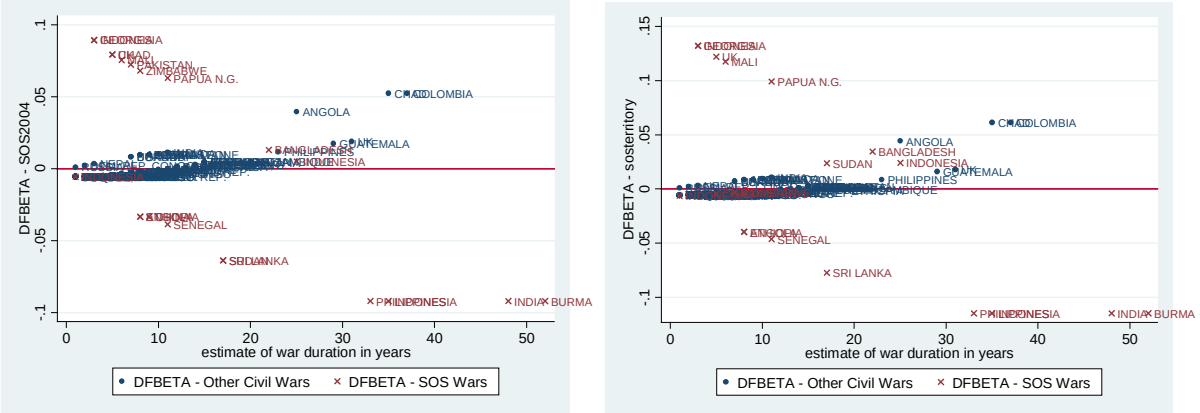
However, the contradictory results are not primarily connected to a dispute of the duration of SOS, but rather the duration of SOS over government and territory. Consequently, I test dfbeta using the interaction term, which suggests that many of the same observations as when

[65] Although, STATA manuals offer information on how to perform these tests, there is little information of what the cut-off point should be.
[66] Thus, datasets with fewer data points has a higher threshold for influential outliers.
[67] Note that the coefficients reported in the dfbetas are hazard ratios, while the covariates reported in the Weibull analysis are time ratios.

testing the SOS variable. Figure 6.5 shows that Chad and Myanmar are potential influential data points.

Figure 6.4. Influential Outliers in the SOS2004 Variable in Dataset 1

Figure 6.5. Influential Outliers in the Territory*SOS2004 Variable in Dataset 1



When testing the interaction term of SOS*Territory the covariate of the interaction term drops considerably when Chad is excluded and become statistically not significant. The same happens when several other cases are excluded. This raises doubts about the results. Especially as Chad is a case which does not really qualify the definition of SOS according the UCDP dataset as it was over government and not territory, and it is excluded from the updated list of SOS wars (Fearon and Laitin 2011). However, a test of the parameters of SOS, Territory of SOS*Territory shows that they are jointly significant. It should be noted that the dfbeta-plot shows that the most extreme cases in the graph are SOS cases, while the other civil war cases are closer to zero.

Thus, after controlling for influential outliers we may confirm H_{1b} as SOS wars over territory last longer, while the remaining SOS wars over government tend to be brief wars, although, the covariate for the interaction term drops dramatically when I exclude cases such as Chad. This may mean that SOS wars explained as lasting longer because of the territorial dimension might in fact have to be subjected to closer scrutiny. According to Figure 6.1 and Table 6.2 we may also accept H_2 SOS wars last longer than other civil wars. I want to test the SOS variable in a disaggregated dataset with a lower threshold to see whether the results uphold. Consequently, I perform the same tests with dataset 3 in the following section where civil war conflict episodes are determined at a lower battle-death threshold than in dataset 1.

6.2.3 Testing SOS2004 Duration and Territory in Dataset 3

Table 6.3 uses dataset 3 and focuses on the SOS2004 conflict episodes. The reported results confirm the difference in duration indicated by Figure 6.2. Model 1 indicates that SOS2004 conflict episodes last more than 4 times (4.555) longer than other intrastate conflict episodes, and is highly statistically significant. Model 2 indicates that the SOS2004 covariate captures some of the effect of population and GDP per capita, as it decreases slightly when these variables are includes, however this may also be due to the loss of 48 data points. The population and GDP per capita variables indicate that civil wars in richer and more populous countries tend to last longer, and the results are statistically significant. The latter finding is quite established within civil war literature, as populous countries tend to experience civil war and longer conflicts than less populous countries. However, as it has been claimed that richer countries experience less civil war, therefore the results of GDP per capita is surprising[68].

Model 3 includes SOS2004 conflict episodes and the territory variable. The covariates in Model 3 indicate that SOS2004 conflict episodes last longer than other intrastate conflicts. The covariate for the territory variable indicates a longer duration for conflicts over territory (1.197), but it is not statistically significant. Table 6.3, Model 4 includes the SOS2004 variable, the territory variable and the interaction term of Territory*SOS2004. Rather, surprisingly the covariate for the SOS variable indicate that the duration of SOS2004 conflict episodes over government is more than eight times (8.884) longer than intrastate conflict episodes which do not include this attribute, and the covariate is statistically significant. The covariate for the territory variable indicates that civil wars over territory last longer (1.246), although it is not statistically significant. The interaction term indicate that SOS2004 conflict episodes over territory last dramatically shorter (0.399), although this is not statistically significant. This may be due to inflated standard errors, and a test of the joint significance shows that the variables are highly statistically significant ($p<0.0065$). Thus, it seems as if SOS2004 conflict episodes over government last dramatically longer than SOS2004 conflict episodes over territory, consequently the Weibull analysis using dataset 3 indicate the opposite of what dataset 1 reported as the former indicates that SOS wars over government last longer than SOS over territory. Table 6.3, Model 5 confirms the reported findings from

[68] This result may be due to the low lethality threshold as this dataset would register a civil war before other datasets with higher battle-death threshold. Consequently, the latter datasets may measure the levels of GDP per capita in the middle of a war, which would naturally be lowered due to the disastrous effect a civil war has on a state.

model 4, and the SOS2004 covariate increases even more in this model (11.78) as population and GDP is controlled for, but as this result is so dramatically increased it may be caused by drop in observations.

Table 6.3. Determinants of Civil War Duration using SOS2004, 1946-2009

	Model 1	Model 2	Model 3	Model 4	Model 5
SOS2004	4.555***	3.664***	4.285***	8.884*	11.14*
	(3.96)	(3.49)	(3.76)	(2.23)	(2.57)
Population(logged)		1.262***			1.285***
		(3.55)			(3.61)
GDP/Capita(logged)		1.205*			1.226**
		(2.42)			(2.60)
Territory			1.197	1.246	0.930
			(0.93)	(1.10)	(-0.31)
Territory*SOS2004				0.399	0.245
				(-0.86)	(-1.38)
N	245	197	245	245	197
Log lik.	-425.2	-328.8	-424.8	-424.3	-327.4
Chi-squared	21.55	35.84	22.41	23.27	38.63
Prob.>chi-squared	0.0000	0.0000	0.0000	0.0000	0.0000
N(ended)	208	164	208	208	164

Weibull regression with duration in years as the dependent variable. The coefficients are reported in the estimated multiplicative effect of a one-unit change in the independent variable on mean war duration; e.g. .32 means that a one-unit change is associated with a reduction in mean war duration by a factor of about three. T-statistics are in parentheses. Estimations performed by using Stata 11.0. Exponentiated coefficients; *t* statistics in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Source: Kreutz 2010 and Fearon 2004

The probability of a greater chi-squared is low enough in model 5 to reject the null hypothesis ($p<0.0001$). Consequently, the findings in Table 6.3 seem to reject H_{1b} as SOS wars over territory do not last longer than SOS wars over government, but confirms H_2 as SOS wars last longer than other civil wars.

6.2.4 Influential Observations in the SOS2004 Variable

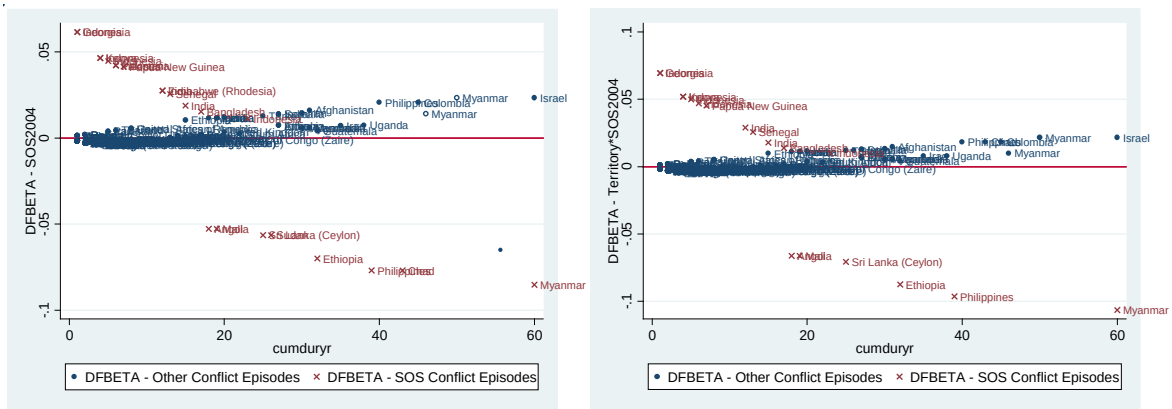
As the results for the duration of the same SOS conflict episodes changed dramatically from dataset 1 to dataset 3 the findings raise some doubts about the robustness of the SOS explanation, but also whether the reported covariates are reliable. It seems likely that the SOS covariates in either dataset 1 or 3 are driven by a few influential observations. As we already know that the covariates in Table 6.2 dropped considerably when Chad was excluded, this result is not that surprising as it seems as if there are some influential outliers in the SOS variable. However, the results may also be caused by a drop of observations, which also indicates that the results of the SOS covariate may be driven by a few observations, especially

since table 6.1 established that only a few SOS wars are over government, observations like Sudan, Chad or Pakistan may be driving these results. Although the previous analysis might display a convincing pattern, it may reveal a different pattern if the robustness tests display disproportionally influential outliers. The results of the robustness test imply that analysts should worry about the fragility of their inferences as closely related variables, as uncertainty regarding meaning and measuring including interactions may produce different results (Hegre and Sambanis 2006:532). Robustness tests such as dfbeta focuses on how much influence the observations have on the results.

Consequently, I test the SOS2004 with dfbeta to control for influential outliers before I reject or confirm the hypothesis. Figure 6.5 is a dfbeta-plot based on the SOS2004 variable in dataset 3. The figure displays that if Georgia was removed it would increase the covariate of SOS by approximately 0.05, or if we removed Algeria it would increase the covariate of SOS by approximately by 0.05. First, I test the general model of SOS2004 Table 6.3, Model 1 as I lose several cases if I include the control variables GDP per capita and population. I exclude possible influential cases suggested by the dfbeta-plot such as Georgia, Papua New Guinea, Zimbabwe, but also Sri Lanka, Angola, Ethiopia Chad, Myanmar and Philippines.

Figure 6.6. Influential Outliers in the SOS2004 Variable in Dataset 3

Figure 6.7. Influential Outliers in the Territory*SOS2004 Variable in Dataset 3



The test shows that the exclusion of these cases has little effect on the SOS variable, and the SOS2004 covariate never drops in significance. However, as the contradictory results seem to concern the differentiation between SOS conflict episodes over government and territory, I perform the same test as with dataset 1 where I exclude possible outliers from the model which includes the interaction term. Consequently, I exclude the same cases as previously, but

the covariate forSOS2004 and the interaction seem robust, with one important exemption which is when I exclude Chad from the analysis, in which the SOS covariate drops from 6.109 to 3.170 and it is no longer statistically significant, conversely the interaction term which measures the duration of SOS over territory increases from 0.582 to 1.118. Although, neither of the covariates are statistically significant, this may be due to inflated standard errors as a test of the parameters shows that they are jointly statistically significant. Consequently, it may seem as some of the reported results concerning the long duration of SOS wars seems to be due to a disproportionate influence from Chad. Although, the dfbeta-test does not fully explain why dataset 1 find a longer duration for SOS wars over territory, while dataset 3 finds that SOS conflict episodes over government last longer, we are probably closer to an explanation as we know that some of the difference in the reported results using dataset 1 and dataset 3 is caused by influential observations. Consequently, some of the difference may also be due to discrepancies in the identification of civil wars using two different thresholds of battle-death.

As the updated list of SOS2011 was published without a dataset I cannot perform a replication study of it (Fearon and Laitin 2011). However, as the list contains all information needed to identify the correct SOS wars, I test SOS2011 conflict episodes in dataset 3 next, before I test possible influential outliers with dfbeta.

6.2.5 Testing SOS2011 Duration and Territory in Dataset 3

Table 6.4 is uses dataset 3 and includes the same variables as in Table 6.3, but tests the SOS2011 variable. The covariate for SOS2011 is statistically significant ($p<0.01$) and indicates that SOS2011 conflict episodes last almost three times longer (2.825) than other conflict episodes, which is slightly less than the covariate reported in Table 6.3 for SOS2004 conflict episodes (4.555). Model 2 includes logged population and GDP per capita which displays that populous countries tend to experience longer-lasting conflict episodes, while the effect for richer countries is smaller and insignificant. Model 3 includes only the SOS2011 variable, but leaves out the observations which drops when using the control variable, to test whether SOS2011 is weakened by the drop in observations, but also to test whether the variable capture some of the effect of the control variables. As the covariate clearly increases,

Model 3 indicates that the SOS variable captures some of the effect of GDP per capita and population[69].

Table 6.4. Determinants of Civil War Duration using SOS2011, 1946-2009

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
SOS2011	2.825***	2.565**	2.867**	2.670**	3.949	3.366
	(3.44)	(2.96)	(3.22)	(3.08)	(1.39)	(1.28)
Population(logged)		1.270***				1.311***
		(3.62)				(3.80)
GDP/Capita(logged)		1.127				1.141
		(1.53)				(1.67)
Territory				1.120	1.143	0.743
				(0.56)	(0.64)	(-1.16)
Territory*SOS2011					0.641	0.876
					(-0.42)	(-0.13)
N	245	197	197	245	245	197
Log lik.	-428.9	-331.4	-340.4	-428.7	-428.6	-330.6
Chi-squared	14.14	30.65	12.52	14.45	14.65	32.15
Prob.>chi-squared	0.0002	0.0000	0.0004	0.0007	0.0021	0.0000
N(ended)	208	164	164	208	208	164

Weibull regression with duration in years as the dependent variable. The coefficients are reported in the estimated multiplicative effect of a one-unit change in the independent variable on mean war duration. Estimations performed by using Stata 11.0. Exponentiated coefficients; *t* statistics in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Source: Kreutz 2010 and Fearon and Laitin 2011

Model 4 includes the SOS variable and the territory variable. The SOS covariate decreases some, but is statistically significant. The territory covariate is not statistically significant, but indicates that intrastate conflicts over territory last longer than those over government (1.120). Model 5 includes the SOS variable, the territory variable and the interaction term of Territory*SOS2011 and displays the same patterns as the analysis using SOS2004 in dataset 3. Although, the significance of the covariates drops, they indicate the opposite of what we would expect from the definition of SOS wars and what Table 6.2 using dataset 1 reported. SOS conflict episodes over government last almost four times longer (3.949) than those which do not exhibit these attribute, while SOS over territory have a shorter duration (0.641). The covariate for territory indicates that intrastate conflicts over territory last longer (1.143), although it is not statistically significant. As the covariates may not be statistically significant

[69] This is a surprising finding as Fearon has previously tested for GDP per capita and population which reported insignificant results. See Appendix B for replication study of Fearon`s (2004) analysis. Additionally, it has previously been claimed that SOS may explain civil war in populous and poorer countries (Fearon and Laitin 2011). I created an interaction term with GDP per capita and SOS to test SOS in richer countries which indicated positive results, although the interaction term was not statistically significant which may be due to inflated standard errors and few observations. Consequently, I tested the joint significance which showed that the correlation was in fact highly statistically significant which indicates that there is a correlation between SOS wars and richer countries.

due to inflated standard errors or few observations, I test the joint significance for the parameters, which shows that the results are statistically significant (P<0.0159). Model 5 includes all the variables where population is the only statistically significant covariate.

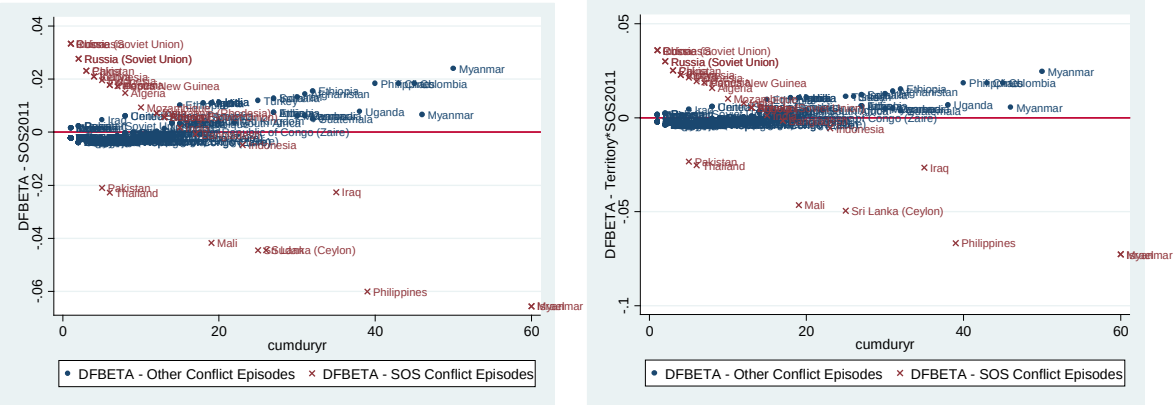
Log likelihood shows that the final model explains the data best while Chi-square test indicates that we may reject the null hypothesis in all the models (p<0.0001).Table 6.4 displays much of the same pattern as Table 6.3. Consequently, we may reject H_{1b} as SOS conflict episodes over territory do not last longer, and confirm H_2 as the analysis clearly shows that SOS conflict episodes over government last longer than other conflict episodes. Although it may be questioned whether this means that SOS conflict episodes last longer than other intrastate conflicts, as SOS over government should not fulfill the criteria`s of the definition of SOS wars. As previously mentioned, the results from the analyses should be tested using dfbeta, before I reject or confirm the hypothesis.

6.2.6 Influential Observations in SOS2011 Variable

Graph 6.5 is a dfbeta-plot based on the SOS2011 variable in dataset 3. The graph displays that if we remove Russia it would increase the covariate of SOS by approximately 0.03, or if we removed Myanmar it would increase the covariate of SOS by approximately by 0.06. First I test the general model of SOS2011 Table 6.4, Model 1 as I lose 48 data points if I include the control variables GDP per capita and population. I exclude possible influential cases suggested by the dfbeta-plot such as the cases of Russia (Soviet Union), but also Mali, Sri Lanka, Philippines and Myanmar. The exclusion of these cases has little effect on the SOS2011 covariate. Further, I include the interaction term of Territory*SOS2011, but the exclusion of these cases has little or no effect of any on the reported results of the covariate. This indicates that the interaction term of SOS2011 has fewer influential observations that the interaction term using dataset 1 or the Territory*SOS2004 variable using dataset 3.This means that the reported results using SOS2011 in dataset 3, may report more reliable results. Table 6.4 reports shorter duration for SOS2011 conflict episodes and less difference between SOS2011 conflict episodes compared to other intrastate conflict episodes than Table 6.2 and 6.3. However, the results reported in Table 6.4 seem more reliable as the covariates are more stable, which would indicate that the results are not dependent on a few data points. The dfbeta plot confirms this as there are fewer influential data points in Figure 6.8 compared to the dfbeta plots for dataset 1 and SOS2004 using dataset 3.

Figure 6.8. Influential Outliers in the SOS2011 Variable in Dataset 3

Figure 6.9. Influential Outliers in the Territory*SOS2011 Variable in Dataset 3



The previous analyses test the duration of SOS, and the duration of SOS wars after differentiating between SOS conflicts over government and SOS over territory. They indicate very different results. Dataset 1, Table 6.2, Model 5 shows that SOS2004 wars over territory last more than four times longer (4.483) than civil wars which do not include this attribute, while SOS2004 wars over government tend to be brief (0.899). Dataset 3, Table 6.3, Model 4 finds that SOS2004 conflict episodes over territory tend to be brief (0.399) compared to conflict episodes which do not include this attribute, while SOS2004 conflict episodes over government are rather long-lasting (8.884). Dataset 3, Table 6.4, Model 5 displays that SOS2011 over government are long-lasting (3.949), while SOS2011 conflict episodes over territory are rather brief (0.641). Possible influential outliers have also been indentified, although none of the data points seem to dominate the variable. The interaction term using dataset 1 and Territory*SOS2004 using dataset 3 indicated that Chad may be influencing the reported results disproportionally. The interaction term of Territory*SOS2011 using dataset 3 indicates fewer influential outliers, and it may also be worth noting that Chad is not included by Fearon and Laitin (2011) in the updated list of SOS conflicts. Thus, the difference in the reported results may in part be due to Chad, but may also be caused by coding discrepancies or that one of the datasets fits the model poorly. I will test how well the datasets fits the model after the following analyses which focus on the termination of SOS conflict episodes and the changes of duration of SOS conflict episodes after the end of the Cold War using dataset 3.

6.3 How SOS Wars End

The model shows how a commitment problem could prevent an insurgency from being ended in any other way than except military victories due to the commitment problem

Fearon (2004:290)

H_3: *Due to the commitment problem SOS wars terminate in military victories*

H_{4a}: *SOS wars terminate in other outcomes than military victory after the end of the Cold War*

Table 6.5 and 6.6 are based on dataset 3, but separate between SOS2004 and SOS2011[70]. I have also separated the between two periods of time, 1946-1990 and 1991-2009, as I want to know whether the termination of SOS wars changed after the end of the Cold War[71]. By following the logic of Fearon`s (2004) SOS-explanation, all SOS wars are expected to end in military victory as a commitment problem hinders the government from giving credible commitments to the ethnic minority group. As SOS wars are internally focused civil wars in which the belligerents cannot agree on a peace agreement, Fearon (2004; Fearon and Laitin 2011) has not considered third parties as plausible actors which may construct or guarantee a peaceful termination of these wars.

Table 6.5 is based on dataset 3 and it differentiates between SOS2004 and other conflict episodes and reveals a different pattern than what we would expect by following the logic of the SOS-explanation. Table 6.5 shows that 5 SOS conflict episodes were terminated during the Cold War, while 17 SOS conflict episodes were terminated after the 1991. Further, it displays that one SOS2004 conflict episodes ended in military victory from 1946 to 1991, while none of the SOS conflict episodes ended with this termination mode after the end of the Cold War. Two SOS conflict episodes ended in low or no activity from in the first time period, while 3 SOS wars ended with this termination mode after the end of the Cold War[72].

[70] Note that I have made two tables based on dataset 3 which include information of how the SOS2004 and SOS2011conflict episodes were terminated and whether they were over government or territory. The only SOS case which follows the assumptions of the explanation of SOS in SOS2004 is the case of UK/Kenya over Mau Mau in 1952 which ended in military victory. Initially, UCDP regard this as an anti-colonial war, but as I have implemented extra state wars into the dataset this case is now included in all the analysis. Further, in SOS2011 it is UK/Kenya and two conflict episodes in China over Tibet end in military victories.

[71] Table 6.5 and 6.6 are based on dataset 3, consequently it collapses conflict episodes with less than five years between the end year of the previous conflict episode and the start year of the new conflict. However, I have included two tables in the appendix which is based on dataset 2 and includes all the conflict episodes.

[72] As this category is vague and it`s definition unconvincing, I cannot interpret much from this finding nor place it in one of the more traditional categories of termination, although future research should define this category

More surprisingly, 1 SOS2004 conflict episode ended in a peace agreement before 1991, while 4 SOS2004 episodes ended with a peace agreement after the end of the Cold War. Three SOS2004 conflict episodes ended in ceasefires in the entire time span. These findings indicate that peaceful terminations of SOS conflict episodes after 1991 increase by a factor of four. However, it also confirms the explanation of SOS to a certain degree as 8 SOS conflict episodes are ongoing after 1991, but this is a shorter time span.

Table 6.5. Termination of SOS2004 and Non-SOS Conflict Episodes using Dataset 3

1946-1990	*SOS2004 Conflict Episodes*	*%*	*Other Conflict Episodes*	*%*
Ongoing	-	0	-	0
Peace agreement	1	20.0	10	8.6
Ceasefire	1	20.0	5	4.4
Military victory	1	20.0	64	56.6
Other outcome	2	40.0	34	30.1
Total	5	100	113	100
1991-2009				
Ongoing	8	47.1	27	25.0
Peace agreement	4	23.5	17	15.7
Ceasefire	2	11.8	17	15.7
Military victory	-	-	18	16.7
Other outcome	3	17.7	29	26.9
Total	17	100	108	100

Source: Kreutz 2010 and Fearon 2004

The duration and termination of SOS wars are supposedly independent of the change in the international system, but Table 6.5 supports the idea that something in the context of these wars must have changed after the Cold War as several of SOS wars have ended peacefully, especially after 1991. It may very well be that increased intervention by the international community has led to more peaceful terminations of SOS wars. Thus, Table 6.5 suggests that SOS conflict episodes rarely end in military victories, especially after the end of the Cold War.

Table 6.6 is based on dataset 3, but focuses on SOS2011. As several of the SOS wars have changed from the initial list of SOS wars (Fearon 2004) to the updated list of SOS wars (Fearon and Laitin 2011), it shows that three SOS2011 conflict episodes ended in military victory from 1946 to 1991, while none of the SOS2011 conflict episodes were terminated in military victory after the end of the Cold War. Four SOS2011 conflict episodes ended in

more detailed as it seems important especially for SOS wars as so many SOS conflict episodes end in this category.

peace agreements during the entire period of the Cold War (48 years:4/48=0.08), while three SOS conflict episodes ended in the same termination mode after the end of the Cold War (19 years: 3/19=0.15). Further, two SOS conflict episodes ended in ceasefire in the first time period, while two SOS conflict episodes ended in ceasefire after the end of the Cold War. However, 5 SOS wars ended in no or low activity during the Cold War, while 5 SOS conflict episodes ended in the same terminated mode after the end of the Cold War. As Fearon (2004) claims that ceasefires or peace agreements are dependent on a minimum of trust between the belligerents, this is a surprising result. Although, we cannot draw conclusions based on the descriptive statistics, it certainly points in a rather surprising direction of how these SOS conflicts actually ended. It does not seem to correspond with an interesting part of the SOS explanation.

Table 6.6.Termination of SOS2011 and Non-SOS Conflict Episodes using Dataset 3

1946-1990	*SOS2011 Conflict Episodes*	*%*	*Other Conflict Episodes*	*%*
Ongoing	-	-	-	-
Peace agreement	4	28.6	7	6.7
Ceasefire	2	14.4	4	3.9
Military victory	3	21.4	62	59.6
Low activity	5	35.7	31	29.8
Total	14	100	104	100
1991-2009				
Ongoing	8	44.4	27	25.2
Peace agreement	3	16.8	18	16.9
Ceasefire	2	11.1	17	15.9
Military victory	-	-	18	16.8
Low activity	5	27.8	27	25.2
Total	18	100	107	100

Source: Kreutz 2010 and Fearon and Laitin 2011

Table 6.5 and Table 6.6 indicate that military victory is one of the least likely outcomes for SOS wars, which is the opposite of what the SOS explanation predicts. Further, none of the SOS2004 or SOS2011 conflict episodes ended in military victory after 1991. To formally test the likelihood of the different termination modes of SOS conflict episodes, I run multinomial regression analyses for SOS004 and SOS2011 using dataset 3.

6.3.1 Multinomial analysis – The Termination of SOS

Table 6.7 is a multinomial analysis using dataset 3. I use military victory as the baseline outcome[73]. Following the logic of the SOS explanation, this category is the most likely outcome for SOS conflict episodes. The outcome with most observations is usually chosen as the base outcome, but as we are interested in the probability of SOS wars ending in military victory compared to the other categories, military victory is used as the reference category. The coefficients are reported in relative risk ratios (hereafter rrr),which means that rrr is the relative risk ratio in comparison with the base outcome, i.e. the rrr of a SOS2004 war ending in a peace agreement compared to ending in a military victory (Long and Freese 2006:227). As the rrr is multiplicative it means that values above 1 are positive and more likely to be the outcome compared to the base outcome, while rrr value below 1 denotes the opposite[74]. Table 6.7, Model 1 and Model 2 use the SOS2004 variable, while Model 3 and 4 focus on the SOS2011 variable. I have included two control variables which are GDP per capita and population[75].

Table 6.7, Model 1 reveals that SOS wars seem to be far more likely to be ongoing, terminate in peace agreement, or ceasefires than terminate through military victory. The results are highly statistically significant and substantively large. Further, it may be worth noting that other outcome is not statistically significant. Table 6.7, Model 2 includes the logged GDP per capita variable and the logged population variable, which leads to a decrease in data points. Consequently, Model 2 indicates that the rrr for a SOS2004 conflict episode ending in a peace agreement compared to ending in a military victory is 16.52 time and highly statistically significant, and the same is true for ceasefires (14.18).Model 2 also indicates that the rrr for a SOS2004 conflict episode to be ongoing compared to end in military victory is quite large (19.99) and statistically significant. However, other outcome is still not statistically significant.

[73] I performed three additional multinomial analyses using dataset 2 with military victory as base outcome, one with low activity in the ceasefire category, and one with low activity in the military category. The results remained in favor of ceasefire, ongoing and low activity as the most likely outcome.

[74] Only the relevant findings will be discussed.

[75] Note that 48 observations drops out of the when I use the population and GDP variables as the data is not registered before 1950 and excludes Myanmar for which there is no GDP per capita data in the Penn World Tables dataset.

Table 6.7. Multinomial Analysis of SOS Termination, 1946-2009

	Model 1	Model 2	Model 3	Model 4
Ongoing				
SOS2004	23.71**	19.99**		
	[25.70]	[23.16]		
Population(logged)		1.724***		1.709**
		[0.284]		[0.285]
GDP/Capita(logged)		1.796**		1.722**
		[0.348]		[0.353]
SOS2011			7.714*	6.670*
			[6.534]	[5.863]
Peace Agreement				
SOS2004	15.37*	16.52*		
	[17.84]	[19.87]		
Population(logged)		0.843		0.795
		[0.152]		[0.150]
GDP/Capita(logged)		1.158		1.150
		[0.253]		[0.231]
SOS2011			7.560*	13.44**
			[6.622]	[11.35]
Ceasefire				
SOS2004	11.32*	14.18*		
	[13.35]	[16.34]		
Population(logged)		0.969		0.932
		[0.177]		[0.171]
GDP/Capita(logged)		1.441		1.420
		[0.316]		[0.306]
SOS2011			5.143	9.240**
			[4.792]	[7.902]
Other Outcome				
SOS2004	6.587	6.540		
	[7.903]	[6.963]		
Population(logged)		1.702***		1.683***
		[0.238]		[0.251]
GDP/Capita(logged)		1.324		1.317
		[0.214]		[0.214]
SOS2011			4.655	3.563
			[4.358]	[3.041]
N	245	197	245	197
Log lik.	-359.7	-267.6	-361.6	-267.9
Chi-squared	10.37	55.34	6.942	61.47
Prob.>chi-squared	0.0346	0.0000	0.1390	0.0000

Exponentiated coefficients; Standard errors in brackets. Base outcome is Military Victory.
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Interestingly, Model 3 and Model 4 focus on the conflict episodes included in SOS2011 and reveal that ongoing (rrr=7.714) and peace agreements (rrr=7.560) are more likely termination modes than military victory. Model 3 indicates that ceasefire (rrr=5.143) may also be a more likely termination mode for SOS2011 conflict episodes compared to military victories, although it is not statistically significant. Thus, Model 3 indicates a different pattern for the termination of SOS2011 conflict episodes compared to SOS2004 as Model 1 and 2 displayed that ceasefire was statistically significant in the latter models.

Model 4 includes the control variable, in which all the other outcomes are highly statistically significant and more likely termination modes for SOS2011 wars compared to military victory. As the rrr increases rather dramatically it may indicate that the inclusion of the control variable exclude several important cases.

The findings in table 6.7 indicate a different pattern of the termination of SOS wars than the explanation of SOS wars suggests since all four models using SOS2004 and SOS2011 reported that SOS conflict episodes are more likely to end in most of the other categories relative to military victories. It also supports the explanation of SOS to some degree as it suggests that they are very likely to be ongoing compared to military victory. As H_3 was derived from the definition of the SOS explanation, it assumed that SOS wars terminate in military victories due to the commitment problem, but this hypothesis has to be rejected ($p<0.0001$). This does not support the theoretical expectations and leads to some questions about the strength of the commitment problem as suggested by the theory. It might also mean that the nature of insurgency is such that military victories are simply too rare in the SOS category, but it is interesting that so many peace agreements and ceasefires have also occurred despite the SOS explanation's prediction.

To test the pattern of termination of SOS conflict episodes, I test the predicted probabilities. The following model differentiates between SOS2004 and SOS2011 and displays the predicted probabilities for the termination in different termination modes while holding the control variables constant at their mean.

Table 6.8. Predicted Probabilities of SOS Termination

Termination/ Type of War	Ongoing	Peace Agreement	Ceasefire	Military Victory	Other Outcome
Non-SOS2004	0.1244	0.1280	0.1060	0.3835	0.2581
SOS2004	0.3043	0.2587	0.1838	0.0469	0.2064
Non-SOS2011	0.1356	0.1137	0.1009	0.3892	0.2607
SOS2011	0.1931	0.3263	0.1991	0.0831	0.1983

Source: Dataset 3

Table 6.8 indicates that the probability of ongoing increases when we hold the control variables at a mean and move from other conflict episodes (0.1244) to SOS2004 conflict episodes (0.3043), this pattern is less clear when testing SOS2011 conflict episodes. This confirms one important feature in the explanation of SOS as it is claimed that SOS wars last longer than other civil wars, thus a termination of the former is less likely. The difference in reported predicted probabilities between SOS2004 and SOS2011 could indicate that SOS2011 have a shorter duration than SOS2004, which is a pattern that the previous analyses also have reported. Further, the predicted probability of terminating in a peace agreement when we hold the control variables at their mean and move from other conflict episodes to SOS conflict episodes increases dramatically (from 0.1280 to 0.2587), and the difference is even larger for SOS2011 conflict episodes (0.1137 to 0.3263). This indicates large differences in predicted probabilities and it contradicts the explanation of SOS. The predicted probabilities indicate that SOS conflict episodes have a higher predicted probability in ending in peace agreements and ceasefires compared to other conflict episodes. Further, the predicted probability of terminating in a military victory decrease when you move from other conflict episodes to SOS conflict episodes decreases dramatically (from 0.3835 to 0.0469), and the same pattern is indicated for SOS2011 conflict episodes (0.3892 to 0.0831). Thus, the predicted probability of

a military victory in other conflict episodes is dramatically higher compared to SOS conflict episodes. This is the opposite of what the explanation of SOS predicts. Recall that other outcome is a fuzzy category as it includes cases with a lull in fighting, but may also include conflict episodes with informal agreements and other informal outcomes. The predicted probability of other outcome decreases when you move from other conflict episodes to SOS conflict episodes. This pattern is obvious for both SOS2004 and SOS2011, which means that other conflict episodes are more likely of ending with this category. The descriptive statistics in Table 6.5 and Table 6.6, the multinomial analysis in Table 6.7, and the predicted probabilities in Table 6.8 report the same pattern and allows us to reject $H_{3,}$ which is that SOS wars end in military victories since peace agreements and other forms of termination are difficult due to commitment problems.

6.3.2 The Duration of SOS2004 Conflicts After 1991

The previous analyses have demonstrated that there are SOS wars which are over government, although most SOS wars are over territory. Further, SOS conflict episodes last longer than other conflict episodes, although dataset 1 and 3 disagree in whether it is the SOS conflict over government or those over territory which cause longer duration. Further, Table 6.5 and Table 6.6 displayed that there was one SOS2004 conflict episode and three SOS2011 conflict episode which ended in military victory, while the rest are either ongoing or have ended in peace agreements, ceasefires or other outcome. The multinomial analyses and the predicted probabilities have confirmed this pattern and demonstrated that military victory is the least likely termination mode for SOS2004 and SOS2011 conflict episodes. The explanation of SOS corresponds rather poorly with the pattern of the empirical observations and tests that have been conducted here. The remaining hypotheses test the effect of the end of the Cold War on SOS conflict episodes. Consequently, I test these hypotheses using SOS2004 and SOS2011 in Weibull analyses employing dataset 3.

H_{4b}: *SOS wars lasted longer during the Cold War, than after 1991*

H_{4c}: *The end of the Cold War has had a larger effect on the duration of SOS conflict episodes than other intrastate conflicts, as the commitment problem in SOS wars may be ameliorated by third party intervention.*

Table 6.9 use dataset 3, it focuses on SOS2004 and includes a dummy variable for the post-Cold War period (1991-2009) and an interaction term for SOS2004 conflict episodes after the end of the Cold War. Table 6.9, Model 1 includes the SOS2004 variable which is statistically significant and indicates a longer duration (2.925) for SOS2004 conflict episodes, while the dummy variable for the post-Cold War period indicates that intrastate conflict episodes last over three times longer (3.614) after 1991. This is surprising as we would assume that civil wars would end quicker after the end of the Cold War because of increased intervention. However, this covariate may include cases of SOS2004 in which a termination is hindered by a commitment problem. Consequently, I create an interaction term between SOS2004 and post-Cold War.

Table 6.9. Determinants of Civil War Duration using SOS2004, 1946-2009

	Model 1	Model 2	Model 3
SOS2004	2.925**	2.462	2.335
	(3.02)	(1.52)	(1.49)
Post-Cold War	3.614***	3.557***	3.701***
	(7.11)	(6.83)	(6.22)
Post-Cold War*2004		1.284	1.049
		(0.35)	(0.07)
Population(logged)			1.173*
			(2.56)
GDP/Capita(logged)			1.032
			(0.43)
N	245	245	197
Log lik.	-400.6	-400.6	-309.4
Chi-squared	70.64	70.77	74.63
Prob.>chi-squared	0.0000	0.0000	0.0000
N(ended)	208	208	164

Weibull regression with duration in years as the dependent variable.
The coefficients are reported in the estimated multiplicative effect of a one-unit change in the independent variable on mean war duration. T-statistics are in parentheses.
Estimations performed by using Stata 11.0. Exponentiated coefficients; *t* statistics in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Source: Kreutz 2010 and Fearon 2004.

Table 6.9 Model 2 includes the SOS2004 variable, the post-Cold War variable and the interaction term with post-Cold War*SOS2004, which means that the covariates change in interpretation. As the SOS2004 variable measures the duration of SOS2004 conflict episodes during the Cold War it indicates that they lasted longer during the Cold War, although it not significant. The post-Cold War covariate is statistically significant and shows that non-SOS conflict episodes last more than three times longer after 1991. The interaction term with post-Cold War*SOS2004 measures the duration of SOS wars after the end of the Cold War,

although it is not statistically significant it indicates that the duration of SOS conflict episodes has decreased after 1991(1.284). Thus, the duration of SOS2004 conflict episodes seem affected by the end of the Cold War, even more so than other intrastate conflict episodes.

Model 3 also include logged GDP per capita and logged population, where only the latter is statistically significant and indicates a longer duration for conflict episodes in populous countries (1.173). Further, the covariates in Model 3 report the same results as in Model 2. SOS2004 conflict episodes seem to last longer during the Cold War, while other conflict episodes seem to last dramatically longer after the end of the Cold War. Since some of the variables may be insignificant due to inflated standard errors because of the interaction term and few observations I test the joint significance of the main parameters which is SOS2004, Post-Cold War and Post-Cold War*SOS. The parameter test confirms that they are jointly highly significant ($p<0.001$). Log likelihood confirms that the latter model fits the data best as the reported number are lowest for the last model, and chi-squared rejects the null hypothesis ($p<0.0001$). Consequently, the analysis confirms hypothesis H4b and H4c: SOS2004 conflict episodes lasted longer during the Cold War than after 1991 and the effect of the Cold War seems to have been larger on termination of SOS wars than other types of intrastate conflicts. Non-SOS conflict episodes seem to last longer after the end of the Cold War. This shows that an activist period of the international community stops those wars identified as longer lasting for special reasons.

These findings are highly contradictory of what the explanation of SOS suggests as Fearon (2004; Fearon and Laitin 2011) do not even include the international community as a plausible actor in the termination of SOS wars. Although, the post-Cold War is only a proxy for the increased intervention it suggests a change in the context or circumstances surrounding the SOS wars, as there is nothing in the nature of SOS wars which would indicate that they change so dramatically after 1991. To ensure that this pattern is not unique for SOS2004, I perform the same survival analysis using dataset 3 but focusing on SOS2011 list of SOS wars.

6.3.3 The Duration of SOS2011 Conflicts After 1991

Table 6.10 displays results using dataset 3. Model 1 includes the SOS2011 variable and the post-Cold War variable, and both coefficients are statistically significant and positive. It shows that SOS conflict episodes last longer than other intrastate conflict episodes (2.242) and civil wars after 1991 last almost four times longer (3.876) than conflict episodes during

the Cold War. Model 2 includes the interaction term, which means that the covariates change in interpretation. The SOS variable decreases considerably and it is not statistically significant. It indicates that SOS conflict episodes during the Cold War last 1.5 times longer than conflict episodes which do not include this attribute. The post-Cold War variable indicates that other conflict episodes last almost four times longer (3.537) after 1991. These results are generally in line with what we found in dataset 1. A test of the 3 parameters jointly reveals that the three variables included in Model 2 are jointly significant (P<0.0001).

Table 6.10. Determinants of Civil War Duration using SOS2011, 1946-2009

	Model 1	Model 2	Model 3
SOS2011	2.242**	1.559	2.264*
	(2.92)	(1.24)	(1.99)
Post-Cold War	3.876***	3.537***	4.023***
	(7.54)	(6.68)	(6.83)
Post-Cold War*SOS2011		2.144	1.097
		(1.38)	(0.16)
Population(logged)			1.171**
			(2.58)
GDP/Capita(logged)			0.995
			(-0.07)
N	245	245	197
Log lik.	-401.4	-400.4	-307.6
Chi-squared	69.12	71.05	78.08
Prob.>chi-squared	0.0000	0.0000	0.0000
N(ended)	208	208	164

Weibull regression with duration in years as the dependent variable.
The coefficients are reported in the estimated multiplicative effect of a one-unit change in the independent variable on mean war duration. T-statistics are in parentheses.
Estimations performed by using Stata 11.0. Exponentiated coefficients; *t* statistics in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Source: Kreutz 2010 and Fearon and Laitin 2011.

Table 6.10 Model 3 includes the GDP per capita and population variables. SOS2011 is statistically significant and indicates a longer duration (2.264) compared to the covariate in Model 2. However, this may be caused by a drop in data points too. Further, the post-Cold War covariate indicates that other conflict episodes last four times longer after the end of the Cold War, while SOS2011 wars after the end of the Cold War have shorter duration. Again, these data too show that other conflict episodes seem to last dramatically longer than SOS2004 and SOS2011 conflict episodes after the end of the Cold War. The results reported for SOS2004 and the comparison to other conflict episodes do not correspond with the

explanation of SOS, which is that SOS wars are not affected by change in the international system. Before I proceed to the discussion I test how well dataset 1 and 3 fit the model.

6.4 Residuals

As econometric studies of civil wars have progressed in their sophistication since the pioneering work of scholars such as Fearon and Laitin (2003) and Collier and Hoeffler (2004), some researchers have proceeded to conduct meta-analyses that test the validity of findings across different definitions of conflict, and different configurations of independent variables (Brown and Langer 2011:188; Hegre and Sambanis 2006). However, most empirical studies in political science tend not to subject their inferences to robustness tests. Studies on civil war onset, duration and termination find little consensus, and without these tests the results are tentative (Hegre and Sambanis 2006:508). As some of the analyses in this thesis have reported contradictory results, I have already controlled for influential outliers. However, as none of the data points seemed to be disproportionally influential, I test how well dataset 1 and dataset 3 fits the model as this could possibly display that one of the datasets fits the models poorly. Further, if both datasets fit the models the differences may be due to coding differences or discrepancies regarding the actual duration of each civil war[76]. Consequently, subjecting the models and results to residual and robustness tests may contribute in establishing which empirical results are more robust, and identify empirical patterns worth explaining.

Residuals from estimated models can be tested differently. For example Cox-Snell and Martingale. These methods help determine the functional form of the covariates to be included in the model (Cleves et al 2004:184). As I want to assess the overall models using dataset 1 and dataset 3, I test the Cox-Snell residuals. If the Cox regression model fits the data, the residuals should have a standard censored exponential distribution with hazard ratio 1. I have verified the model`s fit by calculation based on the Kaplan-Meier estimated survivor function. I use the Cox-Snell test of the residuals in the full models in Table 6.3, 6.4, 6.9 and

[76] There are many cases where the UCDP treats a long-lasting civil war as several conflict episodes due to few battle-deaths or the belligerents cease fighting for a period of time before they resume war, while Fearon has coded it as a continuous war. This is interesting as the UCDP dataset has ¼ of Fearon's battle-death threshold, consequently by following the logic of coding rules civil wars should disappear from Fearon`s dataset before the UCDP.

6.10 which produce fairly straight lines with slope 1. This indicates that both datasets fit the models well[77].

Further, a way of testing the proportional hazards assumption is based on analysis of the residuals. The idea is to retrieve the residuals, fit a smooth function of time to them, and test whether there is a relationship. Stata`s stphtest command does this as the following graphs calculates a Kaplan-Meier curve for each level of the variable. It calculates for each curve the transformation and plots these curves on the x-axis (Cleves et al 2004:181). If the plotted lines are reasonably parallel it supports the assumption that the hazard ratio does not change with time and the proportional-hazards assumption has not been violated (Hamilton 2009:307). Figure 6.7 test the SOS variable in dataset 1, which produces a curve which is less than perfect, and may indicate that the proportional-hazards assumption may been violated or it may also be caused by few data points. Further, I test the residuals for the SOS2004 and SOS2011 variable in dataset 3, which produce reasonably parallel and acceptable lines.

Figure 6.7 for SOS2004 Wars

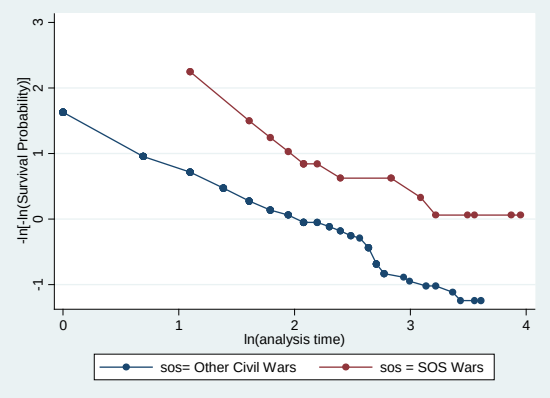
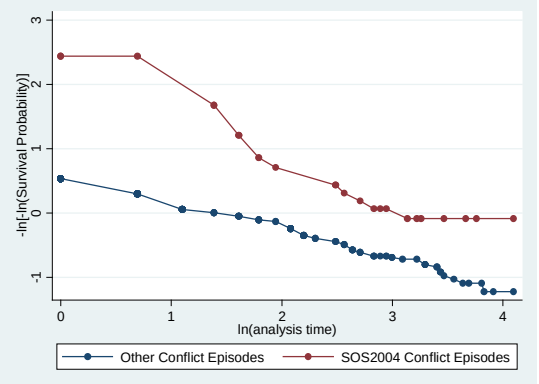
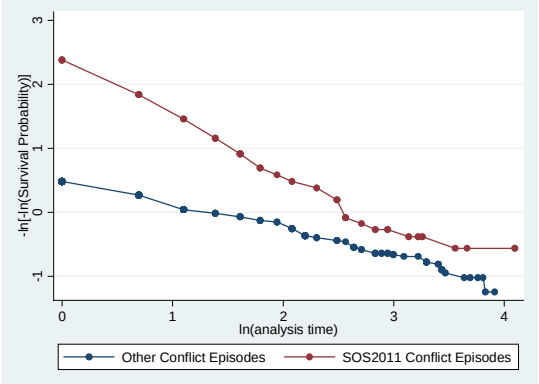


Figure 6.8 and 6.9. Stphplots for SOS2004 and SOS2011 Conflict Episodes

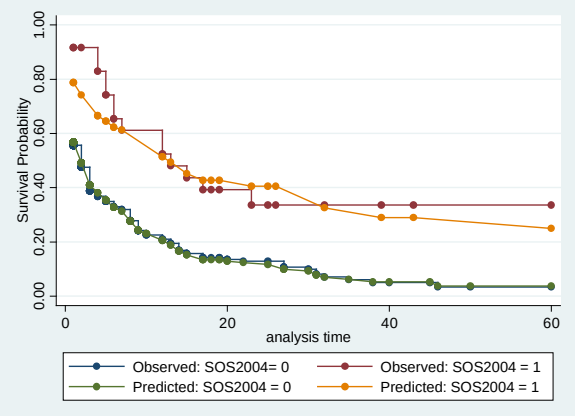


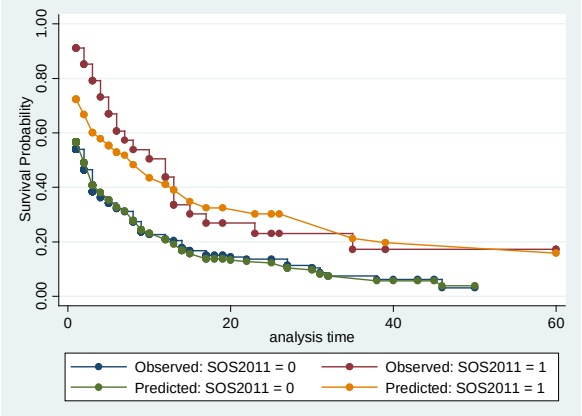


[77] Note that the Cox-Snell graphs are in Appendix D.

Another method for graphically assessing proportional hazards is to evaluate the proportional-hazards assumption by plotting the Kaplan-Meier observed survival curves and compare them with the Cox predicted curves for the same variable. When the predicted and observed curves are close together, the proportional-hazards assumption has not been violated (Cleves et al 2004). Consequently, I tested the observed and predicted survival rate of the SOS2004 and SOS2011 conflict episodes compared to other conflict episodes using dataset 3, to see whether there are large differences in their predicted and observed survival rates in a Kaplan-Meier and Cox survivor function. The following graphs indicate few differences between the survival rates of predicted and observed survival rate of SOS conflict episodes and other conflict episodes. Thus, these graphs show that the datasets fit the model well, and that there are few differences in the predicted and observed survival rate of SOS conflict episodes and other intrastate conflicts episodes.

Figure 6.10 and 6.11. Predicted and Observed Survival Rate for SOS and Other Conflict Episodes





7 Summary and Discussion

This chapter summarizes the results of the analyses and discusses implications. The last section includes a discussion of a few caveats.

7.1 Incompatibility and the Duration of SOS Wars

H_{1a} is one of the simplest hypotheses to reject as Table 6.1 clearly shows that not all of SOS wars were over territory[78]. This has implications for the explanation of SOS because it assumes that a SOS war is caused by ethnic majority in-migration, which causes competition over territory or scarce resources. This factor led the minority ethnic groups to fight for autonomy over their homeland. If the SOS wars are over government and not territory, then where does the story of ethnic in-migration and claims for autonomy fit in?

Further, H_2 may be accepted as dataset 1 and 3 shows that there is a difference in duration between SOS wars/conflict episodes and other civil wars/conflict episodes, and that the former last longer[79]. Moreover, by following the logic of the SOS explanation all SOS wars should be over territory as the sons-of-the-soil are not concerned with political ambitions, but rather concerned with their homeland or the natural resources in their homeland. By definition, SOS wars should not be over government. As descriptive statistics using both datasets show that several of the SOS wars were over government, it became important to separate between the two types of SOS as I want to ensure that the long duration of SOS wars is not driven by the cases of SOS over government.

Dataset 1, Table 6.2 showed that it is the SOS over territory which drives the result as the SOS wars over government had considerably shorter duration. This result corresponds with the explanation of SOS and it also conforms with general literature on civil war, since others too report that civil wars over territory tend to last longer. However, Table 6.3 and 6.4 using dataset 3 showed that SOS2004 and SOS2011 conflict episodes over government last from four to eleven times longer, while SOS2004 and SOS2011 conflict episodes over territory

[78] Note that I have included two complete lists of SOS conflict episodes in Appendix C, which displays country, years of war, whether it was over government or territory, and how it was terminated. The list is based on dataset 3, while table 6.1 is based on dataset 1. Note that I also tested this in my Bachelor thesis where I found the same results (Gaski 2009).

[79] The analyses using dataset 2 in Appendix E does not correspond with these findings as the covariates report that SOS2004 conflict episodes does not last longer than other conflict episodes, while SOS2011 conflict episodes may last slightly longer than other conflict episodes.

tend to be shorter. After controlling for influential outliers the reported covariates drop in power for SOS2004 conflict episodes, while the results for SOS2011 remain. Dfbeta tests for influential outliers indicate that Chad influenced the results disproportionally when using dataset 1 or SOS2004 in dataset 3. Interestingly, Chad does not appear to be a SOS war in Fearon and Laitin's (2011) updated list. However, these findings are problematic in terms of rejecting or accepting the H_{1B} as it is not clear which of the datasets are correct or why they report contradictory results[80]. Thus, dataset 1 argues that SOS wars over territory last longer, while dataset 3 finds that SOS wars over government last dramatically longer than those over territory. The former finding fits better with other empirical studies, as it has been suggested that civil wars over territory and especially those placed in the periphery of a state last longer than other civil wars (Walter 2003; Buhaug et al 2009). Further, it may also contribute in establishing the conditions for when ethnic minorities rebel (Cederman et al 2009: 497) and propose a framework for understanding when in-migration causes conflict (Urdal 2008). However, if the SOS wars over government are the ones which drive the results it must be something with the dynamic of these wars which prolong their duration despite the fact that they are over government.

7.2 Termination of SOS Wars

H_3 concerns the termination of SOS wars as Fearon (2004; Fearon and Laitin 2011) claims that military victory is the most plausible termination mode for these wars since peaceful outcomes are hindered by the commitment problem. This assumption contradicts several empirical studies which suggest that most civil wars tend to end in other outcomes than military victories (Kreutz 2010), although it corresponds with other findings which indicate that civil wars over territory rarely end peacefully (Walter 2003).

[80] Although, it is not included in the analysis I found that an interactive term between GDP per capita and SOS is larger, and jointly significant. This indicates that SOS wars may be more prone to last longer among richer countries, which is an unexpected and contradictory finding to previous empirical findings concerning civil wars. It also contradicts the findings reported by Fearon (2004), who also controls for the effect of GDP per capita, and finds the coefficient to be insignificant. However, this may also be caused by Fearon`s (2004) relatively high battle-death threshold, as the civil war may have started long before 100 battle-death is reached. As we know that civil war has a disastrous effect on a state`s economy it is expected to find a higher probability for civil war in poorer countries when the battle-death threshold only includes the civil war in the dataset midway in the conflict. Although, this cannot be pushed further in this thesis, it certainly promotes further research.

The descriptive statistics in Table 6.5 using dataset 3 showed that there was only 1 SOS2004 conflict episode which ended in military victory which is the United Kingdom against Kenya over Mau Mau in 1952. The UCDP dataset had initially coded this as an anti-colonial war, but it was added from the list of extra state wars as Fearon (2004) considers it a SOS war. The descriptive statistics in Table 6.6 using dataset 3 showed that there were 3 SOS2011 conflict episodes which ended in military victories. In addition to the previously mentioned case of United Kingdom against Kenya, it also includes two cases of China over Tibet. Thus, most of the SOS2004 and SOS2011 cases ended in peace agreements, ceasefires or other outcome, which contradicts the logic of the explanation of SOS, but confirms findings in other empirical studies (Kreutz 2010). Several of the SOS2004 and SOS2011 cases are also coded as ongoing, which corresponds with the explanation of SOS which argues that they last for longer periods of time. The multinomial analysis showed that all other outcomes included in the analysis were more likely termination modes for SOS conflict episodes than military victory, and the reported results were highly statistically significant. Further, Table 6.8 calculated the predicted probabilities of the termination SOS2004 and SOS2011 conflict episodes while holding the control variables at their mean, and reported that military victory was the least likely outcome for these wars. The predicted probability for a military victory in other conflict episodes was far higher, than for SOS conflict episodes, which does not support the SOS explanation.

The descriptive statistics in Table 6.5 and Table 6.6, the multinomial analysis in Table 6.7, and the predicted probabilities in Table 6.8 report the same pattern and rejects H_3 as SOS wars terminate in other outcomes than military victories. Further, a brief summary of the most likely case of Sri Lanka showed that the SOS wars do not necessarily follow the pattern proposed by the SOS explanation. Apparently, SOS wars are quite often terminated peacefully, an issue that needs more explanation than the explanation of SOS currently provides in a very stylized manner.

H_{4a} is related to the previous hypothesis as it focused on the termination of SOS wars after the end of Cold War. It was argued that increased intervention of the international community into intrastate conflicts after the Cold War may ameliorate the commitment problem. The Cold War dynamics may have hindered peaceful terminations of SOS wars (Lacina 2004; Kreutz 2010). Table 6.5 and 6.6 using dataset 3 showed that none of the SOS conflict episodes have ended in military victories after 1991. Consequently, we may confirm H_{4a} as 1

SOS 2004 conflict episode and 3 SOS2011 conflict episodes terminated in military victory during the Cold War, while none of the SOS2004 or SOS2011 conflict episodes have terminated in military victories after 1991. The analyses of the termination of SOS seem to support empirical studies which find a larger degree of intervention after 1991 (Lacina 2004; Kreutz 2010).

7.3 Duration After the End of the Cold War

Both analyses show that other conflict episodes last longer after the end of the Cold War, which is a surprising finding, but it also indicates that we may confirm H_{4c}.The trend of SOS wars seems to confirm other empirical findings concerning the intervention of the international community, although it does not seem to have affected other civil wars to the same extent, consequently the end of the Cold War has had a larger impact on the duration of SOS wars than non-SOS conflict episodes. Why SOS wars should display a change in duration after 1991 is difficult to explain. It may very well be that SOS conflicts were more neglected during the Cold War because they were relatively uninteresting to the superpowers. The duration of SOS wars may not necessarily be caused by SOS dynamics, but rather system failure as these civil wars may have been neglected before 1991. This would confirm the findings in other empirical studies, as it has been suggested that the end of the Cold War may be understood as a turning point for the international community as it seems to intervene to a larger extent for bringing about negotiated settlements (Lacina 2004; Fortna 2004).

7.4 SOS Dynamics or System Failure?

This thesis has carefully tested several aspects of the logic of the SOS explanation. The proposition of SOS wars has become a very important explanation about why some conflicts last long and are hard to end. This thesis has used the UCDP dataset which is a disaggregated dataset separating civil wars into conflict episodes if the fighting ceases for a few years, but it also includes information of how and when the civil wars ended. The UCDP dataset includes more low-intensity civil wars as it`s battle-death threshold is ¼ in the disaggregated dataset compared to Fearon`s (2004) original dataset, which means that low-intensity civil wars should be registered sooner in the former dataset, but also for a longer period of time. I have thus compared SOS conflict episodes to other low-intensity and longer-lasting civil wars, which may have been excluded from Fearon`s dataset. Moreover, the new UCDP dataset

provides vital information of how the civil wars ended, which is a better option than assuming that some types of civil wars only terminate in military victories because they are impossible to affect through peace talks. Thus, this study has tested a vital aspect of the SOS dynamic by examining whether SOS conflict episodes are that different in duration and termination compared to other low-intensity conflict episodes, using the UCDP`s more accepted battle-death threshold. Surprisingly, there is less support for the SOS explanation using the UCDP data.

If we review the findings it is obvious that SOS wars are not necessarily over territory, and it is not clear whether it is the SOS conflicts over government or territory which drives the long duration of this variable. If the long duration of SOS wars are caused by the cases of SOS over government, this undermines the important feature of in-migration and the sons-of-the-soils battle for autonomy of their homeland or their rights to the scarce resources in the area. Moreover, if SOS wars over government are the longest-lasting civil wars it contradicts other findings in civil war literature as it has been suggested that civil wars over territory last dramatically longer than those over government. It may be something about the dynamic of the SOS wars over government which makes them last longer, although it cannot be the SOS dynamic as these wars per definition should not qualify as SOS wars.

The SOS conflicts included in SOS2004 and in the updated SOS2011 end quicker after the end of the Cold War. Why this is so is difficult to assert from the SOS explanation. The most important feature of the SOS explanation is the commitment problem which supposedly hinders any other termination than military victory. However, the analysis showed that the commitment problem rarely hinders SOS wars from ending peacefully, although it may possibly prolong their duration. The civil wars which ended in military victories (China over Tibet), are definitely not completely over, or they are civil wars which others regard as anti-colonial wars (United Kingdom-Kenya over Mau Mau). Fearon (2004) argues that it qualifies as a civil war because it was perceived as an intrastate conflict, and that scholars cannot code based on ex-post assessments of civil wars (Kreutz 2010).

After reviewing the results from the analyses performed in this thesis it is difficult to understand what a true SOS conflict really is, and it seems challenging to argue that these civil wars have not been coded by some kind of ex-post assessment since the only feature they seem to have in common is their duration. Consequently, after testing the incompatibility, duration and termination of SOS wars it is rather challenging to argue that SOS wars stand out

as a homogenous group of civil wars, or that their features are so similar that the SOS explanation may be used to predict their duration and termination. Why they would end sooner after the Cold War is also a challenge for future theorizing.

Another point which is troubling is the coding of duration of some of the SOS cases in dataset 1, as their duration is longer in dataset 1 than in dataset 2 and 3. By following the logic of the coding rules this should not be possible as the battle-death threshold of dataset 2 and 3 is ¼ of the battle-death threshold in dataset 1.All civil wars should be registered first in the two former datasets. This may compromise some of the credibility regarding the duration in dataset 1. However, this thesis cannot assess the validity of the data and the theories simultaneously.

This thesis has shown that the nature of the SOS conflicts is not as homogenous as the SOS explanation assumes. Although, most of these wars are long-lasting it is not clear why they are so long-lasting, and they do not fit in the narrative of the explanation of SOS. Nor does the most likely case of Sri Lanka really fit the SOS explanation. Unless we use the SOS explanation as a category for long-lasting wars after an ex-post assessment, which is not particularly useful for research or policy, it is difficult to argue what a true SOS war is and which features it displays. The analyses performed in this thesis shows that SOS wars are long-lasting civil wars, although their duration after 1991 seems shortened. They occur in the periphery, and they are most often over territory. They occur most often in Asia, in populous countries and are to some degree correlated with ethnicity and natural resources. Many SOS wars lasted longer during the Cold-War, and they have a high probability of ending in peace agreement, ceasefires or they simply fizzle out. Thus, the explanation of SOS offers an intricate proposition for why some civil wars last longer than others by combining factors which have proven vital in explaining civil war, such as territory, ethnicity, natural resources, in-migration and distance to the capital (Buhaug and Gates 2002; Urdal 2002; Walter 2003; Collier and Hoeffler 2009). Although, the rationalist narrative fails to explain the pattern of the SOS wars, it includes features which are assumed to provide ideal conditions for rebel group. Consequently, it may not be the dynamic of SOS which are driving these longer-lasting wars, but rather conditions which make it profitable or feasible for certain groups to rebel.

Several of the findings seem to support other findings within the civil war literature, as it certainly includes all the factors which have proven important for explaining the onset,

duration and termination of civil wars. The SOS explanation suggested that civil wars tend to last for longer periods of time, but as rebel victories are rare it is more likely to reflect benefits during than after the conflict (Collier et al 2009). Consequently, if the rebellion is rationally motivated it is likely to benefit the rebel leaders, rather than provide social justice for a wider group (Collier et al 2009:4). The results here suggest that some aspects of the SOS explanation do not logically fit with the empirical findings. This is not surprising since many of the ingredients of SOS wars, such as ethnicity, territoriality and in-migration are all contested in the civil war literature (Buhaug and Gates 2002; Urdal 2002; Cederman et al 2009; Jakobsen and de Soysa 2009).

This thesis has also demonstrated that military victory is the least likely outcome for SOS wars. It may be relevant to move the focus of the explanation of SOS from the commitment problem to another important feature of these conflicts, which is the importance of the system. Whether, the commitment problem exists or not may be contested, but this thesis has shown that it does not hinder the SOS wars from ending peacefully, particularly after the end of the Cold War. Also, it may be relevant to devote more focus to in-migration issues as it clearly is an important part of the puzzle of SOS wars, and may contribute to establishing under what conditions it holds. Moreover, scholars may also test whether resources scarcity and population pressures are more prevalent in the context of SOS wars, as these factors have not been very robust in more general tests of civil war.

This thesis shows that SOS wars may not be that different from other civil wars in terms of termination. It has also shown that the end of the Cold War has mattered for the duration of SOS wars. Future research might focus especially on why this is so and on unpacking other important features of civil wars that may predict better why some civil wars last so much longer than others. Perhaps all long-lasting civil war share many common traits because they simply have lasted long and not because any one trait explains their onset such as the SOS explanation wants to do.

7.5 A Few Caveats

There are several possible caveats with this thesis. Although, I have argued that the disaggregated dataset reports more accurate information, it may also display misleading results if SOS conflict episodes are divided into more conflict episodes than other civil wars.

Consequently, dataset 2 may be criticized for reporting misleading results. I have tried to correct for that with dataset 3 by collapsing conflict episodes where the fighting ceased for five years or less. Secondly, there is some loss of observations when using the control variables: GDP per capita and population as they only include information from 1950 and also excludes Myanmar which is an important SOS conflict. Future research might correct for these by getting to the bottom of why UCDP coding maybe different to Fearon (2004).

Thirdly, I use a dummy variable "Post-Cold War" as a proxy for increased intervention. Although, it is common to use such dummies to measure possible differences after the end of the Cold War, it is still just a proxy. It would have been better to include data on intervention directly. Such a variable could also indicate whether third party intervention increases the chances of a peaceful outcome among SOS wars. However, such information is not available in the updated version of the UCDP dataset as of yet.

It may also be argued that the standard battle-death thresholds used in empirical studies are insensitive to the differences in countries. Although, the low battle-death threshold used in the UCDP dataset certainly measures low-intensity wars, a more accurate measure of battle-deaths would be relative to total population. As of now most studies rely on a battle-death threshold of 25 killed or 100 killed per year and 1,000 battle-deaths per conflict, and we separate civil wars based on casualties to determine whether they were high-intensity or low-intensity wars with no regard to the total population. However, a civil war which kills 100 people per year in i.e. Sri Lanka should be regarded as a war with higher intensity than 100 battle-deaths in an intrastate conflict in China. Consequently, a battle-death measure relative to the population seems more accurate, especially when an explanation assumes low-intensity. The use of population size as a control takes care of some of this problem, but not when it comes to defining what a SOS war is.

Lastly, I wanted to implement the termination variable from the UCDP dataset into dataset 1, but this proved challenging as they operate with different start and end years for most conflicts. This is not surprising as the criteria differs, especially regarding the battle-death threshold. However, what is more unexpected is that dataset 1 registers some civil wars before and for longer periods of time in dataset 2 and 3. SOS wars such as Angola and Senegal are coded into respectively, 7 and 5 conflict episodes in dataset 2, while the fighting is these wars are coded continuously in dataset 1. This is unexpected as the battle-death threshold in dataset 2 and 3 is ¼ of the battle-death threshold in Fearon`s (2004) dataset. Further, the end date for

many conflicts is often coded in the middle of a conflict or between conflict episodes in the UCDP dataset, which makes it difficult to know which conflict Fearon (2004) refers to. Thus, I found it simply too unreliable to code the outcome of the civil wars into dataset 1 from the UCDP dataset. These small differences, however, will not prove to be decisive.

8 Conclusions

Fearon`s (2004; Fearon and Laitin 2011) explanation of SOS is important for a number of reasons. It is an elegant explanation of why some civil wars last longer than other wars. It is important because it suggests several ways to stop civil wars, particularly by paying attention to a certain dynamic. It focuses on the problem of ethnic relations and the issue of ethnic in-migration. These issues also relate to current discussions on climate change, land issues, resource scarcity and ethnic politics. Thus understanding fully how powerful the SOS explanation is has very important theoretical and practical implications.

This thesis has tested important implications of the explanation of SOS. Since SOS wars last longer because of territory or scarce resources and not over governmental power, this thesis has tested whether all SOS wars are over territory. The analyses showed that there are several SOS wars which according to the UCDP dataset are in fact over government, which suggests that there maybe room for solving ethnic issues short of claims of autonomy.

Since SOS wars simmer at a low intensity level I tested whether SOS wars last longer in a dataset with a lower battle-death threshold, consequently the duration of these civil wars was compared to other civil wars. The SOS wars seem to last longer compared to other long-lasting civil wars, although the SOS wars in the initial list of wars (Fearon 2004) seemed to last longer compared to other intrastate conflicts. The difference in duration of the updated list of SOS wars compared to other intrastate conflicts was smaller. Further, I tested whether SOS wars last longer because of neglect during the Cold War. Consequently, I tested whether they end quicker after the end of the Cold War. The analyses show that they do. Further, the analyses indicated that other conflict episodes seem to last longer after the end of the Cold War compared to SOS wars. Thus, it seems as if other conflicts are harder to end after the end of the Cold War compared to SOS wars, an issue that goes counter to the SOS explanation based on the commitment problem.

The most important test in this thesis was whether SOS wars end in military victories as the explanation of SOS clearly states. Because of the commitment problem SOS wars last longer and they can only end in military victories. However, descriptive statistics, a multinomial analysis and a test of predicted probabilities demonstrated that military victory is the least likely termination mode for SOS wars, and that all other termination modes are more likely for SOS wars. These factors too bring into question the power of Fearon's (2004) explanation

that has come to be regarded as one of the most elegant explanations of why some wars are so slow to end. Since Fearon's (2004) list of SOS wars is a post hoc assessment one might try to unpack whether the SOS dynamic causes long lasting civil wars or whether all long lasting civil wars share some very similar features simply because they have been around for some time.

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Appendix A

Table A.I. SOS Wars by Region from 1945-1999

Region	SOS cases w area/rebel groups
Asia	China 1991 (Xinjiang); India 1952 (NE); Pakistan 1993 (MQM); Bangladesh 1976 (Chittagong); Burma 1948 (Karens); Sri Lanka 1983 (LTTE); Philippines 1968 (MNLF, MILF); Indonesia 1965 (OPM, West Papua), 1976 (East Timor), 1989(GAM I), 1999 (GAM II); Papua New Guinea 1989 (Bougainville).
Eastern Europe	Georgia 1992 (Abkhazia)
LA/Ca	
NA/ME	
SSA	Mali 1989 (Tuaregs); Senegal 1989 (MFDC); Zimbabwe 1972(ZANU, ZAPU); Chad 1994 (Rebels in the South) Sudan 1983 (SPLA, etc). Ethiopia 1992 (Oromo Liberation Front). Angola 1992 (FLEC)
West/ anticolonial wars	UK/Kenya 1952 (Mau Mau).
World	

Source: Fearon 2004

Table A.2. SOS Wars by Region from 1945-2008

Region	SOS cases
Asia	China 1950, 1956 (Tibet), 1990 (Xinjiang); India 1956 (NE); Pakistan 1973, 2004 (Baluchistan), 1993 (MQM); Bangladesh 1976 (Chittagong); Myanmar 1948 (Karens); Sri Lanka 1983; Thailand 2004 (Pattani); Philippines 1970 (Moros); Indonesia 1965 (Papua), 1975 (E. Timor), 1989, 1999 (GAM); PNG 1989 (Bougainville).
Eastern Europe	USSR 1946 (Latvia, Lithuania, Estonia); Russia 1994, 1999 (Chechnya).
LA/Ca	
NA/ME	Iraq 1974 (Kurds); Israel 1949 (Palestinians).
SSA	Mali 1989 (Tuaregs); Senegal 1989 (Casamance); Zimbabwe 1972; Sudan 2003 (Darfur).
West/ Anti-colonial wars	UK/Kenya 1952 (Mau Mau); France/Algeria 1954; Portugal/Angola 1961; Portugal/Mozambique 1964.
World	

Source: Fearon and Laitin 2011

Appendix B

Table B.1. Replication of Fearon`s (2004) Analysis: Determinants of Civil War Duration, 1945-1999".

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Coup/Revolution	0.320***	0.346***	0.335***	0.312***	0.349***	0.309***	0.313***
	(-5.36)	(-4.87)	(-5.08)	(-5.20)	(-4.66)	(-5.30)	(-5.38)
Eastern Europe	0.330***	0.322***	0.375***	0.335***	0.313***	0.335***	0.341***
	(-4.21)	(-4.34)	(-3.32)	(-4.13)	(-4.35)	(-4.01)	(-3.41)
Not contiguous	0.684	0.591*	0.709	0.705	0.644	0.629	0.683
	(-1.62)	(-2.03)	(-1.49)	(-1.41)	(-1.81)	(-0.96)	(-1.60)
Sons of the Soil	3.102***	3.150***	3.016***	3.125***	2.988***	3.472**	2.885***
	(3.86)	(3.94)	(3.81)	(3.89)	(3.69)	(3.10)	(3.47)
Contraband	2.562**	2.568**	2.618**	2.571**	2.709**	2.460*	2.551**
	(2.76)	(2.80)	(2.86)	(2.77)	(2.89)	(2.53)	(2.72)
Ethnic fractionalization		1.546					
		(1.36)					
GDP/capita (lagged in 1000s)			0.914				
			(-1.34)				
Log(Population) (lagged)				0.977			
				(-0.37)			
Ethnic war (1,2,3)					1.126		
					(1.15)		
Democracy (-10 to 10 lagged)						1.012	
						(0.85)	
Log(Deaths/year)							0.952
							(-0.95)
N	128	128	124	128	127	114	122
N (ended)	103	103	99	103	103	89	97

Source: Fearon 2004. Weibull regression with duration in years as the dependent variable. The coefficients are reported in the estimated multiplicative effect of a one-unit change in the independent variable on mean war duration; Estimations performed by using Stata 11.0.Exponentiated coefficients; *t* statistics in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Appendix C

Table C.1. Incompatibility and Termination of SOS2004 Conflict Episodes, 1946-2009

Conflict code	Country	Rebel/Territory	Years of fighting	Incompatibility	Termination
122	Zimbabwe	ZANU, ZAPU	1967-1979	Government	Peace Agreement
113	Sudan	SPLA, etc	1983-2009	Government	Ongoing
209	Pakistan	MQM	1990-1996	Government	Other Outcome
91	Chad	Frolinat, First Liberation Army	1966-2009	Government	Ongoing
197	Georgia	Abkhazia	1992-1993	Territory	Peace Agreement
177	Mali	Tuaregs	1990-2009	Territory	Ongoing
171	Indonesia	GAM II/Aceh	1999-2005	Territory	Peace Agreement
126	Bangladesh	Chittagong Hills	1975-1992	Territory	Ceasefire
23	Myanmar	CPB, Karens, etc	1949-2009	Territory	Ongoing
174	Papua New Guinea	BRA/ Bougainville	1989-1996	Territory	Ceasefire
157	Sri Lanka	LTTE	1984-2009	Territory	Ongoing
44	UK/Kenya	Mau Mau	1952-1956	Territory	Military Victory
180	Senegal	MFDC/Casamance	1990-2003	Territory	Peace Agreement

219	Ethiopia	Oromo Lib. Front	1977-2009	Territory	Ongoing
192	Angola	FLEC/Cabinda	1991-2009	Territory	Ongoing
54	India	North East rebels/Nagaland	1956-1968	Territory	Ceasefire
54	India	North East Rebels/Nagaland	1992-2007	Territory	Other Outcome
112	Philippines	MNLF,MILF	1970-2009	Territory	Ongoing
94	Indonesia	OPM/West Papua	1965-1969	Territory	Other Outcome
94	Indonesia	OPM/West Papua	1976-1981	Territory	Other Outcome
134	Indonesia	East Timor	1975-1998	Territory	Peace Agreement
171	Indonesia	GAMI/Aceh	1990-1991	Territory	Other Outcome
	China	Xinjiang	1991	Missing in UCDP	Missing in UCDP

Source: Fearon 2004 and Kreutz 2010. Based on dataset 3

Table C.2. Incompatibility and Termination of SOS2011 Conflict Episodes, 1946-2009

Country code	Country	Rebel/Territory	Start of conflict	Incompatibility	Termination
122	Zimbabwe	ZANU, ZAPU	1967-1979	Government	Peace Agreement
113	Sudan	SPLM, etc	2003-2009	Government	Ongoing
209	Pakistan	MQM	1990-1996	Government	Other Outcome
39	China	Tibet	1950	Territory	Military Victory
39	China	Tibet	1956-1959	Territory	Military Victory
54	India	North East Rebels/Nagaland	1956-1968	Territory	Ceasefire
54	India	NSCN-IM/Nagaland	1992-2007	Territory	Other Outcome
129	Pakistan	Baluchistan	1974-1977	Territory	Ceasefire
129	Pakistan	Baluchistan	2004-2009	Territory	Ongoing
126	Bangladesh	Chittagong	1975-1992	Territory	Ceasefire
23	Myanmar	Karens	1949-2009	Territory	Ongoing
157	Sri Lanka	LTTE	1984-2009	Territory	Ongoing
248	Thailand	Pattani insurgents	2003-2009	Territory	Ongoing
112	Philippines	MIM, MNFL, MILF	1970-2009	Territory	Ongoing
94	Indonesia	OPM/Papua	1965-1969	Territory	Other

					outcome
94	Indonesia	OPM/Papua	1976-1981	Territory	Other Outcome
134	Indonesia	East Timor	1975-1998	Territory	Peace Agreement
171	Indonesia	GAM I	1990-1991	Territory	Other Outcome
171	Indonesia	GAM II	1999-2005	Territory	Peace Agreement
174	Papua New Guinea	Bougainville	1989-1996	Territory	Ceasefire
12	USSR	LTS(p)A, LNPA/Latvia	1946	Territory	Other Outcome
13	USSR	BDPS/Lithuania	1946-1948	Territory	Other Outcome
11	USSR	Forest Brothers /Estonia	1946-1948	Territory	Other Outcome
206	Russia	Chechnya	1994-2007	Territory	Other Outcome
74	Iraq	Kurds	1961-1996	Territory	Other Outcome
37	Israel	Palestinians	1949	Territory	Ongoing
177	Mali	Tuaregs	1990-2009	Territory	Ongoing
180	Senegal	Casamance	1990-2003	Territory	Peace Agreement
44	United	Kenya/Mau Mau	1952-1956	Territory	Military

	Kingdom				victory
49	France/Algeria	Algeria	1954-1962	Territory	Peace Agreement
66	Portugal	UNITA/Angola	1961-1974	Territory	Peace Agreement
88	Portugal	Frelimo/Mozambique	1964-1974	Territory	Peace Agreement
	China	Xinjiang	1990	Missing	Missing

Source: Fearon and Laitin 2011 and Kreutz 2010. Based in dataset 3

Appendix D

Residuals

Cox-Snell test to measure the overall fit of dataset 1 and dataset 3

Figure D.1. Cox-Snell Graph of Table 6.2, Model 1 using Dataset 1

Figure D.2. Cox-Snell Graph of Table 6.2, Model 5 using Dataset 1

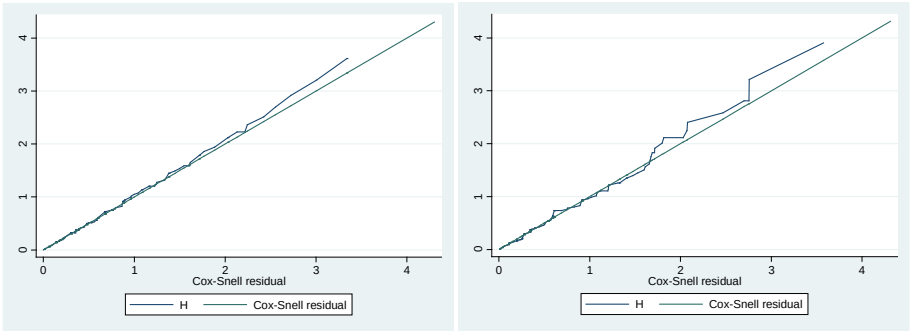


Figure D.3. Cox-Snell Graph of Table 6.3, Model 5 using Dataset 3

Figure D.4. Cox-Snell Graph of Table 6.9, Model 6 using Dataset 3

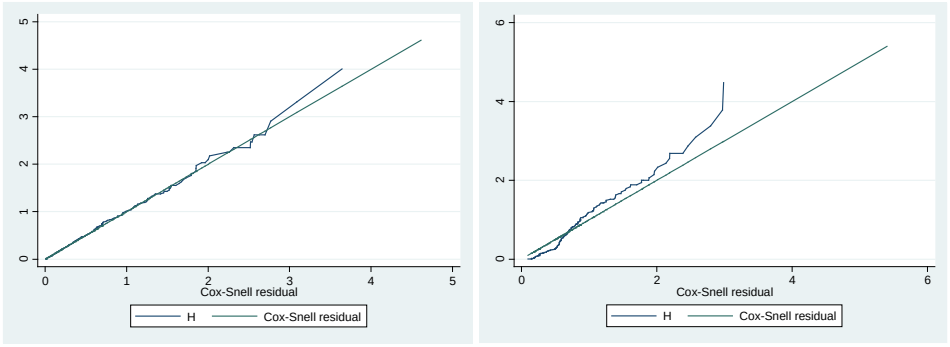
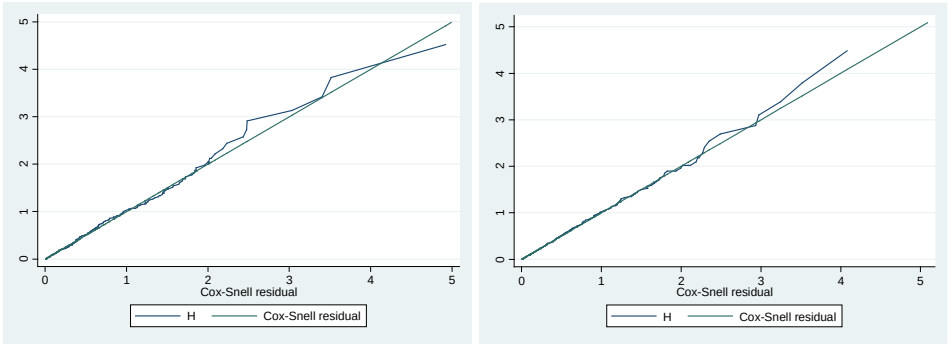


Figure D.5. Cox-Snell Graph of Table 6.4, Model 3 using Dataset 3

Figure D.6. Cox-Snell Graph of Table 6.10, Model 3 using Dataset 3



Appendix E

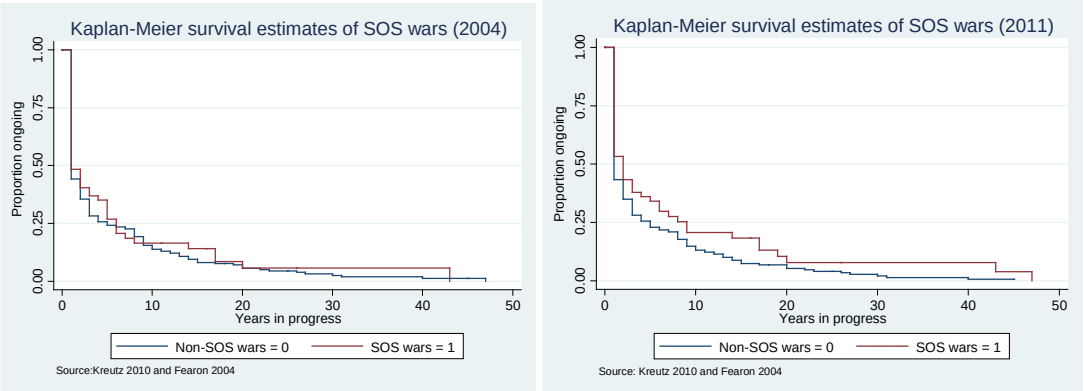
Tests and Analyses performed using dataset 2:

Table E.1. Descriptive Statistics for Dataset 2

Variable	*Observations*	*Mean*	*Std.dev*	*Minimum*	*Maximum*
SOS2004	371	0.16	0.37	0	1
SOS2011	371	0.16	0.37	0	1
Territory	371	0.48	0.50	0	1
Territory*SOS2004	371	0.13	0.34	0	1
Territory*SOS2011	371	0.15	0.35	0	1
Post-Cold War	371	0.53	0.49	0	1
Post-Cold War*SOS2004	371	0.11	0.31	0	1
Post-Cold War*SOS2011	371	0.09	0.29	0	1
GPD/Capita (logged)	305	7.05	1.32	3.49	10.72
Population (logged)	323	9.99	1.76	5.95	13.96
Duration	371	4.25	6.77	1	47
Outcome	371	2.77	1.34	0	4

Figure E.1. Kaplan-Meier Estimates of SOS2004 Conflict Episodes and Other Conflict Episodes

Figure E.2. Kaplan-Meier Estimates of SOS2011 Conflict Episodes and Other Conflict Episodes



The log-rank test for Figure E.1 confirms that the pattern displayed in the graph is not significant (P=0.44), which means that there is no statistically significant difference between non-SOS and SOS wars. The log-rank test of Figure E.2 indicates that the difference between non-SOS wars and SOS2011 wars is statistically significant (P=0.03).

Table E.2. Determinants of Civil War Duration using SOS2004 in Dataset 2, 1946-2009

	Model 1	Model 2	Model 3	Model 4	Model 5
SOS2004	1.173	1.028	1.099	1.884	2.160
	(0.87)	(0.15)	(0.50)	(1.51)	(1.95)
Population(logged)		1.194***			1.219***
		(3.87)			(4.13)
GDP/Capita(logged)		1.236***			1.249***
		(4.02)			(4.20)
Territory			1.229	1.334	1.008
			(1.49)	(1.94)	(0.05)
Territory*SOS2004				0.488	0.363*
				(-1.52)	(-2.25)
N	371	305	371	371	305
Log lik.	-607.5	-478.9	-606.4	-605.1	-475.6
Chi-squared	0.778	36.69	3.003	5.563	43.14
Prob.>chi-squared	0.3777	0.0000	0.2228	0.1349	0.0000
N(ended)	335	273	335	335	273

Weibull regression with duration in years as the dependent variable. The coefficients are reported in the estimated multiplicative effect of a one-unit change in the independent variable on mean war duration. T-statistics are in parentheses. Estimations performed by using Stata 11.0. Exponentiated coefficients; *t* statistics in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Source: Kreutz 2010 and Fearon 2004

Table E.3. Determinants of Civil War Duration using SOS2011 in Dataset 2, 1946-2009

	Model 1	Model 2	Model 3	Model 4	Model 5
SOS2011	1.634**	1.491*	1.566*	2.154	1.967
	(2.71)	(2.15)	(2.30)	(1.25)	(1.18)
GDP/Capita(logged)		1.226***			1.238***
		(3.86)			(4.08)
Population(logged)		1.187***			1.230***
		(3.81)			(4.34)
Territory			1.088	1.111	0.708*
			(0.59)	(0.71)	(-2.02)
Territory*SOS2011				0.698	0.904
				(-0.55)	(-0.16)
N	371	305	371	371	305
Log lik.	-603.9	-476.4	-603.8	-603.6	-474.1
Chi-squared	7.940	41.62	8.286	8.616	46.15
Prob.>chi-squared	0.0048	0.0000	0.0159	0.0349	0.0000
N(ended)	335	273	335	335	273

Weibull regression with duration in years as the dependent variable. The coefficients are reported in the estimated multiplicative effect of a one-unit change in the independent variable on mean war duration. T-statistics are in parentheses. Estimations performed by using Stata 11.0. Exponentiated coefficients; *t* statistics in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Source: Kreutz 2010 and Fearon and Laitin 2011

Table E.4. Termination of SOS2004 and Non-SOS Conflict Episodes using Dataset 2

1946-1990	*SOS Conflict Episodes*	*%*	*Non-SOS Conflict Episodes*	*%*
Ongoing	-	0	-	0
Peace agreement	2	9.5	13	8.5
Ceasefire	2	9.5	5	3.3
Military victory	3	14.3	78	51.3
Other outcome	14	66.7	56	36.8
Total	21	100	152	100
1991-2009				
Ongoing	8	19.5	27	17.2
Peace agreement	4	9.7	26	16.6
Ceasefire	7	17.1	24	15.3
Military victory	-	-	22	14.0
Other outcome	22	53.6	58	36.9
Total	41	100	157	100

Source: Kreutz 2010 and Fearon 2004

Table E.5.Termination of SOS2011 and Non-SOS Conflict Episodes using Dataset 2

1946-1990	*SOS Conflict Episodes*	*%*	*Non-SOS Conflict Episodes*	*%*
Ongoing	-	-	-	-
Peace agreement	6	23.1	9	6.1
Ceasefire	3	11.5	4	2.7
Military victory	3	11.5	78	53.1
Other outcome	14	53.8	56	38.1
Total	26	100	147	100
1991-2009				
Ongoing	8	22.9	27	16.6
Peace agreement	3	8.6	27	16.6
Ceasefire	8	22.9	23	14.1
Military victory	-	-	22	13.5
Other outcome	16	45.7	64	39.3
Total	35	100	163	100

Source: Kreutz 2010 and Fearon and Laitin 2011

Table E.6. Multinomial Analysis of SOS Termination using Dataset 2, 1946-2009

	Model 1	Model 2	Model 3	Model 4
Ongoing				
SOS2004	9.877**	14.90***		
	[7.478]	[10.77]		
GDP/Capita(logged)		3.039***		2.860***
		[0.723]		[0.709]
Population(logged)		1.975***		1.900***
		[0.284]		[0.290]
SOS2011			9.876**	10.81**
			[8.378]	[9.423]
Peace Agreement				
SOS2004	5.128	4.551		
	[4.701]	[4.169]		
GDP/Capita(logged)		1.174		1.200
		[0.219]		[0.221]
Population(logged)		1.033		0.984
		[0.208]		[0.213]
SOS2011			8.333*	11.57**
			[7.105]	[9.375]
Ceasefire				
SOS2004	10.34**	10.23**		
	[9.237]	[8.906]		
GDP/Capita(logged)		1.789**		1.774**
		[0.338]		[0.331]
Population(logged)		1.276		1.206
		[0.260]		[0.259]
SOS2011			13.58**	17.55***
			[11.74]	[14.34]
Other Outcome				
SOS2004	10.53**	11.11***		
	[7.933]	[7.225]		
GDP/Capita(logged)		1.483*		1.444*
		[0.254]		[0.266]
Population(logged)		1.707***		1.658***
		[0.200]		[0.221]
SOS2011			8.333**	7.941*
			[6.717]	[6.414]
N	371	305	371	305
Log lik.	-518.1	-389.6	-519.0	-392.0
Chi-squared	14.30	79.44	9.753	83.26
Prob.>chi-squared	0.0064	0.0000	0.0448	0.0000

Exponentiated coefficients; Standard errors in brackets. Base outcome is military victory
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table E.7. Multinomial Analysis of SOS Termination using Dataset 2, 1946-2009

	Model 1	Model 2	Model 3	Model 4
Ongoing				
SOS2004	9.877**	14.86***		
	[7.478]	[10.74]		
GDP/Capita(logged)		3.058***		2.865***
		[0.721]		[0.706]
Population(logged)		1.963***		1.897***
		[0.281]		[0.288]
SOS2011			9.877**	10.95**
			[8.378]	[9.515]
Peace Agreement				
SOS2004	5.128	4.554		
	[4.701]	[4.175]		
GDP/Capita(logged)		1.174		1.196
		[0.219]		[0.219]
GDP/Capita(logged)		1.032		0.988
		[0.206]		[0.211]
SOS2011			8.333*	11.49**
			[7.105]	[9.313]
Ceasefire				
SOS2004	10.49**	10.83***		
	[7.827]	[7.040]		
GDP/Capita(logged)		1.550**		1.513*
		[0.241]		[0.257]
GDP/Capita(logged)		1.600***		1.552**
		[0.200]		[0.215]
SOS2011			9.297**	9.722**
			[7.337]	[7.501]
N	371	305	371	305
Log lik.	-423.4	-313.5	-425.0	-317.2
Chi-squared	14.19	55.23	8.362	63.75
Prob.>chi-squared	0.0027	0.0000	0.0391	0.0000

Exponentiated coefficients; Standard errors in brackets. Base outcome is military victory. Other outcome is collapsed with ceasefire. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table E.8. Multinomial Analysis of SOS Termination using Dataset 2, 1946-2009

	Model 1	Model 2	Model 3	Model 4
Ongoing				
SOS2004	1.626	2.113		
	[0.638]	[1.141]		
GDP/Capita(logged)		2.322***		2.214***
		[0.382]		[0.361]
Population(logged)		1.322***		1.302***
		[0.0960]		[0.0901]
SOS2011			1.975	1.941
			[0.910]	[1.022]
Peace Agreement				
SOS2004	0.844	0.834		
	[0.384]	[0.422]		
GDP/Capita(logged)		0.926		0.946
		[0.154]		[0.149]
Population(logged)		0.756		0.719*
		[0.110]		[0.115]
SOS2011			1.667	2.444*
			[0.585]	[0.962]
Ceasefire				
SOS2004	1.703	1.710		
	[0.944]	[1.060]		
GDP/Capita(logged)		1.394*		1.386*
		[0.232]		[0.216]
Population(logged)		0.894		0.853
		[0.132]		[0.135]
SOS2011			2.716*	3.469*
			[1.301]	[1.792]
N	371	305	371	305
Log lik.	-359.6	-287.0	-357.3	-284.0
Chi-squared	2.598	54.32	7.704	68.28
Prob.>chi-squared	0.4578	0.0000	0.0525	0.0913

Exponentiated coefficients; Standard errors in brackets. Base outcome is military victory which is collapsed with other outcome. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table E.9. Determinants of Civil War Duration using SOS2004, 1946-2009

	Model 1	Model 2	Model 3
SOS2004	1.101	1.300	1.405
	(0.54)	(0.95)	(1.26)
Post-Cold War	1.968***	2.061***	1.888***
	(5.19)	(5.08)	(3.93)
Post-Cold War*SOS2004		0.746	0.565
		(-0.81)	(-1.61)
Population(logged)			1.163***
			(3.39)
GDP/Capita(logged)			1.154**
			(2.61)
N	371	371	305
Log lik.	-594.6	-594.2	-471.4
Chi-squared	26.71	27.37	51.53
Prob.>chi-squared	0.0000	0.0000	0.0000
N(ended)	335	335	273

Weibull regression with duration in years as the dependent variable. The coefficients are reported in the estimated multiplicative effect of a one-unit change in the independent variable on mean war duration. T-statistics are in parentheses. Estimations performed by using Stata 11.0. Exponentiated coefficients; *t* statistics in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Source: Kreutz 2010 and Fearon 2004

Table E.10. Determinants of Civil War Duration using SOS2011, 1946-2009

	Model 1	Model 2	Model 3
SOS2011	1.573**	1.511	1.968**
	(2.58)	(1.65)	(2.59)
Post-Cold War	1.945***	1.921***	1.887***
	(5.16)	(4.64)	(4.10)
Post-Cold War*SOS2011		1.080	0.663
		(0.22)	(-1.11)
Population(logged)			1.152**
			(3.24)
GDP/Capita(logged)			1.153*
			(2.56)
N	371	371	305
Log lik.	-591.1	-591.1	-468.4
Chi-squared	33.60	33.65	57.63
Prob.>chi-squared	0.0000	0.0000	0.0000
N(ended)	335	335	273

Weibull regression with duration in years as the dependent variable. The coefficients are reported in the estimated multiplicative effect of a one-unit change in the independent variable on mean war duration.T-statistics are in parentheses. Estimations performed by using Stata 11.0. Exponentiated coefficients; *t* statistics in parentheses * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Source: Kreutz 2010 and Fearon and Laitin 2011.

Figure E.3. Stphplot for SOS2004 Conflict Episodes in Dataset 2

Figure E.4 . Stphplots for SOS2011 Conflict Episodes in Dataset 2

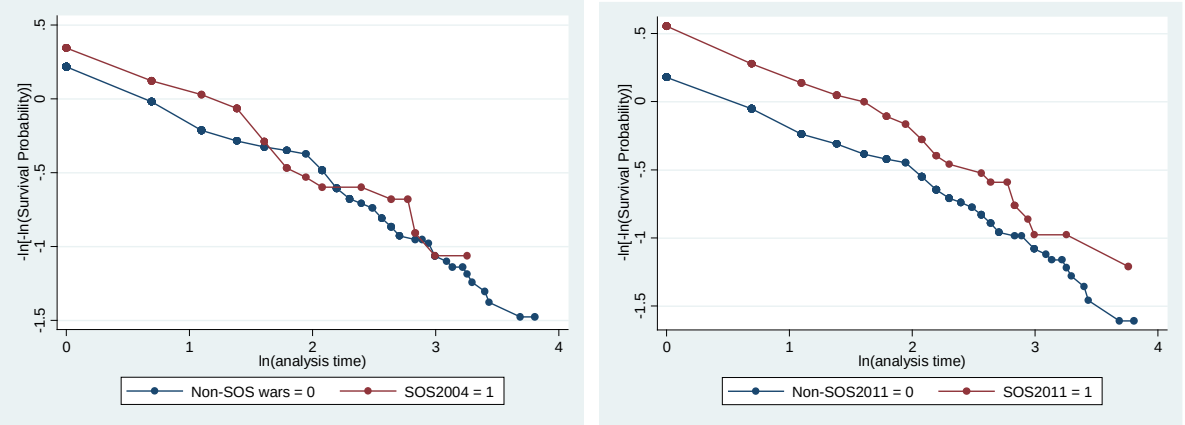
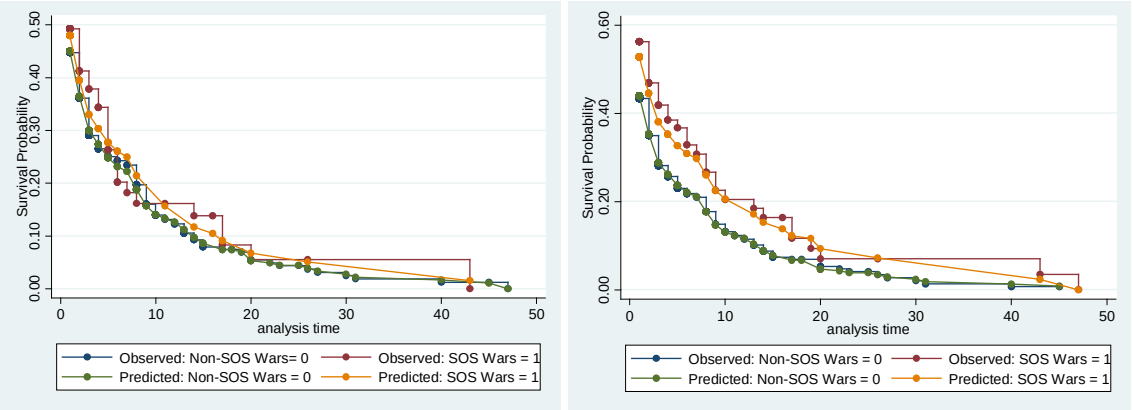


Figure E.5. Predicted and Observed Survival Rate for SOS2004 Conflict Episodes and Other Conflict Episodes using Dataset 2

Figure E.6. Predicted and Observed Survival Rate for SOS2011 Conflict Episodes and Other Conflict Episodes using Dataset 2



Cox-Snell to measure the overall fit of dataset 2

Figure E.7. Cox-Snell Graph of Table E.2, Model 5

Figure E.8. Cox-Snell Graph of Table E.3, Model 5

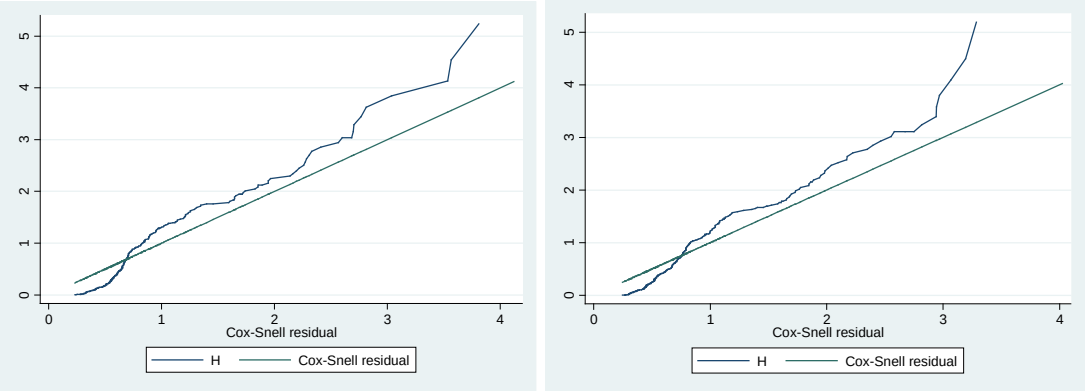


Figure E.9. Cox-Snell Graph of Table E.9, Model 3

Figure E.10. Cox-Snell Graph of Table E.10, Model 3

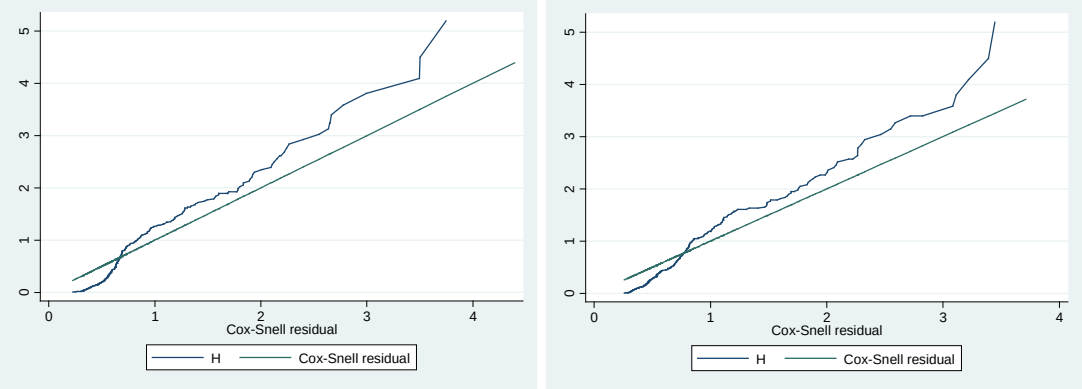
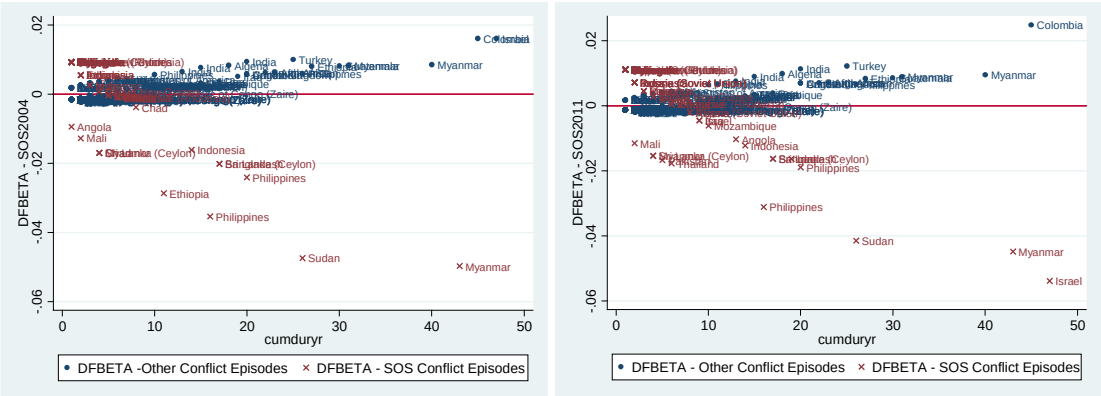


Figure E.11. Influential Outliers in the SOS2004 Variable in Dataset 2

Figure E.12. Influential Outliers in the SOS2011 Variable in Dataset 2



Appendix F

The following display coding of relevant variables, and the commands used to produce most of the analyses in this thesis.

Logging GDP per Capita and Population:

gen lncgdp=ln(cgdp)

gen lnpop=ln(pop)

Interaction term with incompatibility and SOS2004

gen incomp12004 = incomp1*sos2004

Interaction term with incompatibility and SOS2011

gen incomp12011 = incomp1*sos2011

Generate Post-Cold War

gen pcwar =1 if year >1990

replace pcwar =0 if pcwar !=1

Multinomial analysis with military victory as base outcome for SOS2004 and SOS2011 Conflict Episodes

eststo clear

eststo: xi: mlogit outcome1 sos2004, nolog baseoutcome(3) robust cl(country) rrr

eststo: xi: mlogit outcome1 sos2004 lnpop lncgdp, nolog baseoutcome(3) robust cl(country) rrr

eststo: xi: mlogit outcome1 sos2011, nolog baseoutcome(3) robust cl(country) rrr

eststo: xi: mlogit outcome1 sos2011 lnpop lncgdp, nolog baseoutcome(3) robust cl(country) rrr

esttab using "M:\4025\ado_\multinomial.rtf", se brackets nogaps scalars("ll Log lik." "chi2 Chi-squared") eform title(Table 14. Multinomial Analysis of SOS Termination, 1946-2009)replace nonumbers mtitles("Model 1" "Model 2" "Model 3" "Model 4")

//Predicted Probability of SOS2011 Conflict Episodes

prtab sos2011, rest(mean)

Stsetting dataset 3 with my duration variable which counts years of each conflict episode

stset cumduryr, failure(epend)

Kaplan-Meier Graph of SOS2011

sts graph, by(sos2011)

Test of the difference between SOS2011 conflict episodes and other conflict episodes

sts test sos2011

stsum, by (sos2011)

Weibull Analysis of SOS2011 with incompatibility

eststo clear

eststo: xi: streg sos2011, dist(weibull) nolog time tr

eststo: xi: streg sos2011 lnpop lncgdp , dist(weibull) nolog time tr

eststo: xi: streg sos2011 if lncgdp !=., dist(weibull) nolog time tr

eststo: xi: streg sos2011 incomp1, dist(weibull) nolog time tr

eststo: xi: streg sos2011 incomp1 incomp12011, dist(weibull) nolog time tr

eststo: xi: streg sos2011 lnpop lncgdp incomp1 incomp12011 , dist(weibull) nolog time tr

esttab using "M:\4025\ado_\kreutzincomp2011completemodel.rtf", replace scalars("ll Log lik." "chi2 Chi-squared" "N_fail") eform t(2) nogaps compress title(Model II. Determinants of Civil War Duration, 1946-2009)mtitles("Model 1" "Model 2" "Model 3" "Model 4" "Model 5" "Model 6")

Testing joint significance

testparm sos2011 incomp1 incomp12011

Testing the model`s overall fit with Cox-Snell

stcox sos2011 incomp1 incomp12011 lnpop lncgdp , nolog

predict cs, csnell

stset cs, failure(epend)

```
sts generate km= s
generate H = -ln(km)
line H cs cs, sort ytitle("") clstyle(. refline)

//Stratified tests
stphplot, by(sos2011)

//Comparison of Kaplan-Meier and Cox survivor functions.
stcoxkm, by (sos2011)

//DFBETA for SOS2011 variable
stcox sos2011
predict df*, dfbeta
gen obs =_n
twoway (scatter df1 cumduryr if sos2011==0, yline(0) mlabel(country) msymbol(o)) ///
        (scatter df1 cumduryr if sos2011==1, yline(0) mlabel(country) msymbol(X))
```