

TAX CAPACITY IN POST-CONFLICT POLITIES

by

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Submitted to the Institute of Social Sciences

in partial fulfillment of

the requirements for the degree of

Master of Arts

Sabanci University

July 2018

TAXATION CAPACITY IN POST-CONFLICT POLITIES

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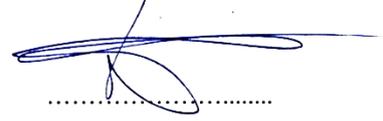
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## ABSTRACT

### TAX CAPACITY IN POST-CONFLICT POLITIES

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M.A. Thesis, July 2018

Thesis Supervisor: Assoc. Prof. Mehmet Emre Hatipoğlu

**Keywords:** Conflict resolution, civil wars, state capacity, taxation capacity, bargaining theory

What is the relationship between civil war, state capacity, and civil war termination? This paper examines the link between types of civil conflict settlements and taxation capacity by probing post-World War II civil wars. In this paper, we construct a bargaining theory of taxation and conduct relevant empirical analyses to capture the effect of the types of civil conflict settlements on taxation capacity recovery speed. Employing survival analysis, empirical results show that rebel victories and negotiated settlements increase the likelihood of tax capacity recovery rate.

## ÖZET

### ÇATIŞMA SONRASI YÖNETİMLERDE VERGİ KAPASİTESİ

Turan KELEŞ

Yüksek Lisans Tezi, Temmuz 2018

Tez danışmanı: Doç. Dr. Mehmet Emre Hatipoğlu

**Anahtar kelimeler:** Çatışma çözümü, iç savaşlar, devlet kapasitesi, vergilendirme kapasitesi, pazarlık kuramı

İç savaş, devlet kapasitesi ve iç savaşların son bulması arasındaki ilişki nedir? Bu çalışma İkinci Dünya savaşı sonrasındaki iç savaşları irdeleyerek iç savaşların son bulma biçimi ile vergi kapasitesini incelemektedir. Bu çalışmada, iç savaşların son bulma biçiminin vergilendirme kapasitesinin telafi hızı üzerindeki etkiyi bulmak için vergilemeye ilişkin bir pazarlık teorisi kuruyor ve uygun ampirik analizleri uyguluyoruz. Sağkalım analizi uygulandığında, ampirik sonuçlar isyancı zaferi ve müzakere yolu ile çözümlerin verginin telafi hızının olasılığını artırdığını gösteriyor.

## ACKNOWLEDGEMENTS

I would like to specifically thank to my thesis supervisor Mehmet Emre Hatipođlu for his great contribution to this thesis and being supportive during the whole process not only for this thesis, but also his humanistic support. This thesis would never be completed without him. I believe that his great knowledge and his academic vision will guide me in my future career.

Kerem Yıldırım has a very special role in the formation of this thesis I constantly troubled him with my unending questions and I greatly benefitted from his knowledge, patience, and wisdom. I am also greatly indebted to Konstantinos Travlos for his comments, reviews, and recommendation.

And to my dearest friend Greta Armonaityte for her kindness and supports.

Special gratitude to my family: Milazım, Sinem, Kamuran, Özal, Serkan, Fatma, Yasemin, Esra, Leyla, Mizgin, Gamze.

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## CHAPTER 1. INTRODUCTION

What is the relationship between civil war, state capacity, and civil war termination? Given the critical role these processes have played in the formation and development of the modern state and domestic politics for several centuries, scholars have generated substantial of theory and concomitant empirical tests (see e.g., Thies 2005, 2006; Tilly 1975; Centeno 2002 Prichard 2010; Besley and Persson 2010) to better understand this phenomenon. There have been, indeed, numerous theoretical and empirical studies examining these concepts, yet they generally have not investigated these concepts mutually. Still, a few studies have rendered a theoretical framework that combines these three concepts. This study presents a causal link between civil war termination and state capacity and conducts systematic tests to gauge the validity of this causal link.

An efficient tax system enables states to raise more taxes, which in turn help a state to conduct the state-society relationship through procurement of basic services such as security, health care and prosperity-oriented policies. The emergence of the modern state has been tightly linked to the formation of the tax system. Levi (1988) states that the history of state revenue is the history of the evolution of the state. The state building function of tax has two facets: on one hand, the state and society conduct a bargaining about the rate or amount of tax. On the other hand, in order to raise more taxes for government policies, states engage institution building (Brautigam 2008). The causal mechanism of state building underlies the fact that both facets of tax enhance the legitimacy of the state and establish a close relationship between the state and its constituents. Schumpeter argues that taxes not only created the state, but also formed it (Swedberg 1991: 108). State formation and the emergence of the parliamentary system date back to early European state formation to the interaction between state rulers and citizens over taxation bargaining. Facing the cost of war, European monarchs had to resort

to increasing taxes through a bargaining process with their citizens which, consequently, led to the development of a parliamentary system and more professional state apparatus. This, along with protection of property rights, rule of law and education for necessary bureaucrats, which are the fundamental elements of a modern state.

## **CHAPTER 2. THEORETICAL FRAMEWORK**

### **2.1 General introduction to the concept of state capacity**

While discussing state capacity, we need to decompose the concept to capture a better notion. Firstly, by referring to the state, I mean the ability to maintain sovereignty over of certain geographical territory by monopolizing coercive power, legal authority, military instruments, and fiscal means. Secondly, capacity means that a state can exert desired policies on its constituents. I suppose in this paper that a state operates its function in line with a Weberian perspective that harbors a rational bureaucracy, openness, and accountability and hires administrative staff based on merit.

A vast literature of political economy of taxation has focused on state-society relations, based on a bargaining process, with a particular link to state extractive capacity. This bargaining process generally came along with interstate or civil wars as an interaction between rulers and citizens to cover war costs in exchange for representation (see e.g., Acemoglu et al. 2001, 2006; Tilly 1975; Tilly and Tilly 1992; Schumpeter 1954; Mann 1980; North 1990). State capacity, defined as the ability of a state to penetrate society to raise taxes and exert desired policies (Lu and Thies 2013), has commonly been investigated as a by-product of wars. Building upon state capacity literature, this study aims to enlarge our understanding of variations in contemporary state-building efforts by globally probing the effects of civil conflict resolution on state taxation capacity. What is the effect, if any, of conflict termination on state capacity? Do the types of conflict settlements have a substantial explanatory power in variations of overall tax intake?

Jean Bodin, first, examined the linkage between state and extraction efforts in early European states, defines financial instruments as the nerves of the state (Braun 1975). Many theories of state capacity are based on the predatory theory approach, which is

derived from historical studies of early state formation in Europe. According to predatory theory, state rulers try to extract as much revenue as possible from their citizens for personal desires, or to implement the necessary policies (Levi 1988). The bellicist or predatory theory of state formation, in particular, has focused on the role wars played on European states' providing public goods, consolidating institutions and increasing state extractive capacity. Facing the cost of war, European monarchs resorted to increasing taxes through a bargaining process with their citizens and, consequently, this led to the emergence of the parliamentary system and more professional state apparatus. Oft-cited, Tilly (1995) explains that state formation in Europe was intertwined with wars. Many other scholars also employ predatory theory to explain war as the chief catalyst for promoting the extractive capacity of states (e.g., Bean, 1973; Mann 1986; Tilly, 1975; Levi 1981; Downing 1993). In this vein, making war has even been considered a *sine qua non* for a strong state as a remedy for some malfunctioning state institutions. To that extent, Herbst's (2000) provocative study in line with Jackson and Rosberg (1982) implies that the weakness of some African states is a result of the lack of external wars those countries encounter. Moreover, scholars attribute interstate war as playing a key role in bolstering efficient government institutions and acting as a stimulus for a strong state (e.g., Acemoglu and Robinson 2006; Ferguson 2002; Tilly 1975, 1992), while other scholars accredit internal wars in places like East Africa and Southeast Asia as having this same kind of general positive effect on the state (Slater 2005; Weinstein 2005).

On the other hand, a different path from the experience of early European state formation took shape in other parts of the world. For example, in Korea under Japanese colonial rule, the rulers established a tax collection system based on forced military and forced labor service. Later, the Japanese built a formal tax collection system with state officials backed by police power (Kohli 2004). In this way, tax officials could penetrate into rural residential areas together with police and intelligence officers. Thanks to this kind of tax take system, the Korean government was able to collect a much higher tax ratio than other countries with similar levels of development (Shafer 1994). The Korean tax increase stands an example of securing sustained tax increases in the absence of war. What is missing in the literature of civil conflict is the impact of conflict settlement on state capacity. De Rouen and Sobek (2004) examine the effect of state capacity on conflict settlement and war duration, but do not examine the causality in reverse direction. In what follows, I bring both pieces of literature on civil conflict settlement and state capacity

together to analyze whether there is a significant relationship between conflict resolution and state capacity. I develop a set of hypotheses on the determination of the potential interaction between civil war conclusion and state capacity by exploring civil war data from Uppsala Conflict Data Program (UCDP).

Tilly (1992) explains the state-making of a country in four steps. Firstly, states eliminate their external rivals. Secondly, they eliminate their internal rivals. Thirdly, they eliminate the threats against their citizens. Finally, they try to extract revenue from their citizens to cover the costs of these three steps. State capacity, in narrow terms, is the ability to exert state policies effectively within the society (Tilly 1990), a state's ability to enforce a set of policies (Besley and Persson, 2009), and the ability of a state to efficiently govern its territory (Skocpol 1985).

The extraction ability of a state depends on the bargaining power of rulers versus constituents in the face of a challenge that is aimed at the state survival over revenues. Interstate wars facilitate this bargaining power in favor of rulers (Cohen, Brown & Organski 1981; North 1981; Tilly 1985; Rasler & Thompson 1985), and the extent to which internal wars affect rulers' bargaining power is not clear (Levi 1988; North 1981). Some studies empirically show that internal wars indeed reduce the rulers' bargaining power and result in a decrease in revenue extraction (for Africa see Thies 2005, 2006, 2007 and for the Middle East see Lu and Thies 2013). On one hand, some scholars argue that internal wars are detrimental (Desch 1996) to state capacity or do not have an effect at all, (Herbst 1990) while others argue that under certain circumstances, internal wars may produce positive contributions to state capacity by enhancing elite solidarity (Rodriguez-Franco 2016). If internal and external wars have a significant effect on state capacity, in line with this logic, termination of these wars might entail some effect on state capacity as well.

One possible causal mechanism is that while dealing with internal conflicts, state rulers might go about alleviating the tax burden of belligerent groups as a part of a negotiation. This type of negotiation is expected to decrease the tax extraction ratio. Another causal mechanism is that the government may not penetrate, for the purpose of extraction, the region in which rebel groups actively operate. On the other hand, following what predatory theory expects, the state rulers might increase tax efforts to defeat the insurgents, which would be expected to thereafter increase tax extraction. Ultimately, the

outcome of these possible causal mechanisms will determine whether a significant change in taxation will occur.

Because the European experience of state building is not a very common phenomenon in the developing world, scholars have shifted their focus towards interstate rivalry and internal rivalry as other explanatory variables for interstate war (e.g. Thies 2005, 2007; Diehl and Goertz 2000; Thompson 2001; Lu and Thies 2013). As a matter of fact, some scholars argue that the current international system is so different from what existed at the time of the European experience, that predatory theory has very little explanatory power in understanding the state extractive capacity in the contemporary developing world (e.g., Desch 1996; Lustick 1997). The conflicts that pop up in the developing world differ from their European counterparts to the extent that they do not target the very existence of the state but aim for a lesser issue (Herbst 1990). The scarcity of interstate war in the period after World War II led to state rulers not being afraid of an invasion by foreign powers; thus, state rulers did not have the motivation to focus on cementing the state and its institutions (Mueller 2004).

The logic of predatory theory, at the very basic level, argues that the revenue extraction from society due to facing external rivals will outweigh the transaction costs of revenue collection and the costs of war. High revenue extraction will, in turn, enhance state capacity and consequently provide security to people against external attacks. The reason for this is straightforward; external wars stimulate a common interest among society, whereas internal wars lead to social cleavage, particularly when considering public good provisions. Moreover, internal wars likely cause division of resources that is constitutive to distortion of the tax base. To examine state capacity, scholars have mostly relied on predatory theory until now. This paper differs from predatory theory in examining state extractive capacity in an approach that examines the state taxation capacity through conflict settlement, enhancing state legitimacy, and extending state presence within borders. The predatory model, and subsequently generalized models of it, locate the state as the main actor of the state-building process through extractive efforts. Unlike predatory theory, this paper enlarges the pool of actors in order to encompass other actors who actively affect tax capacity through bargaining or coercive power. The lack of interstate war in the contemporary developing world (Rasler and Thompson 1999), contrary to early European state formation, forces us to include other actors in order to understand the crucial role they play in conflict settlement, and its impact on taxation

capacity, an area that has been unexploited from a scholarly perspective. Additionally, the definition of state capacity is not constrained to military size or bureaucratic effectiveness, but also encompasses political democracy, coherence and quality of institutions (e.g., DeRouen and Sobek 2004; Hendrix 2010). This amplified definition of state capacity entails another justification for inclusion of civil war outcome as an explanatory variable on state extractive capacity, mainly since the interaction between government and other factions of society have a modifier effect on political institutions. The main developments in the political, economic and societal structure in world history arising from internal turmoil thus are not a mere coincidence. The critical question is whether we can develop a model to examine taxation capacity, which would constitute an alternative to what Centeno (2002) describes the state-building process in Latin America to be as 'blood and debt' or Tilly's (1992) 'capitalized coercion' model. Accordingly, this paper includes the active role of the state in line with De Rouen and Sobek (2004). It contrasts with Collier and Hoeffler's (1999) greed and grievance model that only focuses on the rebel side. Their model explains civil war as a consequence of a lack of political and social rights. This paper explores the link between types of conflict settlement, such as government victory, rebel victory, negotiated settlement and tax raises as indicators of state capacity.

A vast literature has examined the link between state capacity and internal and external wars. As a part of the internal wars of countries, civil war settlement is also expected to contribute to state capacity. Despite its importance in the literature, no one has yet studied this important issue from either qualitative or quantitative methodology. In examining state capacity and civil war termination, De Rouen et. al. (2010) investigate how state capacity affect peace agreement provisions in a case study; however, they do not employ state capacity as I use in this paper. They do not use the tax extraction capabilities of a state as a proxy for state capacity. They employ Composite Index of National Capabilities (CINC) scores, an index of military expenditure, military personnel, energy consumption, iron, and steel production, urban population, and total population (Singer, Bremer and Stuckey 1972) to proxy state capacity instead. Another study by Doyle and Sambanis (2000) ignores the state extractive capability in the aftermath of civil war settlement. Their study does not inspect how peace agreements impact state capacity, a question of central inquiry in this paper. This paper is the first study that examines the possible relationship between conflict settlement and state capacity as measured through tax raises.

While this study is admittedly imperfect and further future studies are certainly needed, I believe that this paper helps to chart a productive path forward in understanding this link.

## **2.2 General introduction to the concept of civil wars**

### **2.2.1 On the onset of civil wars**

The very core rationale of resorting to violence refers to a psychological reasoning mechanism (Gurr 1970; Davies 1962). According to Gurr, if an individual feels a discrepancy between what he deserves and what he actually gets, what Gurr called “relative deprivation”, he becomes furious, which constitutes the first step in violence initiation. Once this sense of dissatisfaction becomes expansive in society, along with other convenient opportunities, it manifests itself in a rebellion. Opposing the grievance approach, greed-based approaches to civil war outbreak argue that grievance motives should be accompanied by material gain incentives for a civil war onset (Collier and Hoeffler 1998). Indeed, Licbach (1990), in dividing rebel actors as rational and non-rational, suggests that inequality would not engender conflict among rational actors. Thus, the cost-benefit analysis of a rational group of people may hinder civil war onset despite the existence of grievance. In a later study, Collier and Hoeffler (2004) empirically show that a greed-based approach possesses more explanatory power than the grievance driven model. DeRoun and Sobek (2004), however, suggest that the greed and grievance models of explaining civil war occurrence are not mutually exclusive, but refer to different motivations of war initiations. In effect, civil wars do not instantly break out following a series of material imbalances among social groups or amidst intense perceived deprivations. The critical driver at play here is the collective action problem impeding rebellion or revolution (Kuran 1989; Olson 1971). All these studies suggest that inequality, perceived deprivation, and religious and ethnic characteristics of a country do not necessitate a violent action per se, but rather, that it is a sophisticated combination of all these determinants increase the odds of civil war. The common point all these approaches neglect to address is the role of state prevention capability, and the potential role of insurgency on civil wars. Focusing merely on the rebel side and not taking the state’s determinative power into account leaves the equation of civil war incomplete. One such criticism comes from DeRouen and Sobek (2004), who say that these rebel-centric

approaches fail to include state capacity as a decisive factor accounting for civil war incidence. They find that state capacity, proxying with bureaucratic effectiveness, weakens rebellion activities. In this study, I also incorporate the state's role as a compelling factor to comprehend and provide a more clear-cut picture of the etiology of civil war insurgency. Accordingly, this study treats the state as an active player in civil wars. A state can essentially face an insurgency with coercive power. Hence, confrontation a strong military will increase the opportunity cost of rebellion and, will reduce the odds of civil war onset. In addition to its coercive power, a high capacity state can provide adequate public policies to its unsatisfied citizens, therefore mollifying their resentment. Apparently, different aspects of state capacity are at work in various parts of the interaction between state and society. Put differently, state capacity should be taken into account for both policy concerns and theoretical inquiries of civil war, whether it is attributed to the grievance model or greed model.

In this paper, I use the definition of civil war explained by Doyle and Sambanis (2000), that it has caused more than 1000 battle-related deaths, involved at least one group of rebels against a state, and broke out within a sovereign state boundary. An alternative definition of civil war is that of the Correlates of War (CoW) (Sarkees 2000). The main difference between these two definitions is that while CoW requires 1000 battle-related deaths for every year, Doyle and Sambanis (2000) find an overall threshold of 1000 deaths sufficient. Secondly, Doyle and Sambanis (2000) consider the relapse of a civil war after two years to be a new conflict.

In the aftermath of World War II, there was a significant decline in interstate wars, and a substantial increase in the numbers of civil conflict (Harbom et.al, 2006; Hegre et.al., 2001). The ubiquitous nature of civil conflict since post-WWII has driven a good deal of academic research into the determinants of civil wars and how civil conflicts are to be resolved (see e.g., Licklider 1995; Doyle and Sambanis 2000; Hegre and Nygard 2014; Kruetz 2010).

The onset and duration of civil wars are essentially ascribed to 'greed vs grievance', the model that explain civil wars based on political, economic, ethnic, and sociological grievances (Collier & Hoeffler 1999; Collier & Hoeffler 2002; de Soysa 2002). Collier and Hoeffler (1998) argue that the rebels will initiate a war if they reckon that the utility they gain will exceed their costs at the end of the war. They found that per capita income

is negatively, and the size of the population is positively related to civil war onset. In a further study, Collier and Hoeffler (2004) found that primary commodity export, the existence of a diaspora, dispersed population, and mountainous terrain are all significant determinants of civil war onset. They also argue that the grievance model, consisting of political rights, ethnic fractionalization, inequality, and religious fractionalization, have less explanatory power than the opportunity and greed model. However, Ross (2004) found no substantial link between primary commodity exports and civil war onset, arguing instead that oil dependency increases the likelihood of civil war onset. Hegre and Sambanis (2006) found that institutional instability, incomplete democracy, and undemocratic neighborhoods are highly significant and increase the risk of civil war onset. Fearon and Laitin (2003) drew attention to the conditions that favor guerilla warfare and insurgency such as a weak state, large population and political instability as catalysts for civil war outbreak. The empirical investigations on the onset of civil war indicate different reasons. Collier and Hoeffler (2002) argue that material opportunity motivations by rebels are more illuminative than political and social deprivations.

The dependency of a group on economic endowments plays a critical role in forming rebel groups, their success, attracting recruits, and effective struggle against the government (Collier et al. 2003). Countries possessing high levels of lootable resources are more likely to experience civil war onset along ethnic lines (Lujala, Gleditsch, and Gilmore 2005). However, not all rebel groups emerge in economically well-off or lootable environments. This is partly because the structure and recruitment processes of different rebel organizations vary based on their ultimate aim. For instance, Sambanis (2001) argues that ethnic and nonethnic wars differ from each other because ethnic rebels make decisions related to ethnic affiliations, not earthly payoffs. In conflict areas that lack economic endowments, rebel leaders delve for means to form sound organizations and attract recruits such as using ethnic solidarity and ideological sentiments (Fearon and Laitin 2000; Sambanis 2001). The presence of economic endowments and identity-driven motivations do not guarantee an immediate formation of a rebel group. A substantial portion of people might still be reluctant to join the insurgency movement. One of the most difficult aspects of rebellion for rebel leaders to circumvent is the collective action problem, that is to convince a sufficient number of individuals to work together for a potential success (Olson 1965). One potential remedy for the collective action problem is to provide selective incentives (Popkin 1980; Lichbach 1994; Olson 1965), that is an

additional benefit of taking part in the rebel organization. Providing selective incentives, to a great extent, is contingent upon the capacity of rebel leaders. The assumption employed here regarding recruitment, in line with my research question, is that rebel leaders seek to recruit individuals for the purpose of capturing and controlling the state. Otherwise, due to adverse selection, a group of bandits or robbers could be recruited (Mueller 2000). Therefore, a strategic interaction process is required to deter any undesirable consequences of recruitment such as enrollment of low committed individuals. Weinstein (2005) develops a theoretical framework on how rebel groups opt for individuals in the presence or absence of economic endowments and asymmetric information, adverse selection and low commitment individuals. He concludes that ideological rebel groups attract more committed rebels compared to materially rich rebel groups.

In any cases of different factors that increase the probability of civil war, three questions are crucial: Given a state's almost universal preference to prevent civil war onset, why does it occasionally fail? Why can states not prevent a civil war in the first place? How is it related to state coercion or accommodative power? The answer to these questions seems to be related to states' power and strategy to defeat insurgency. Societies with inefficient government institutions and few checks and balances, and which consequently are likely inept in enforcing contracts, and therefore, more likely to experience civil wars (e.g., Fearon and Laitin 2003; Eliana La Ferrara and Robert H. Bates 2001; Skaperdas 2008). The pervasive nature of civil conflicts in sub-Saharan Africa is, to some extent, explained through this incapability of state institutions. (Bates 2001, 2008; Jeffrey Herbst 2000). Some scholars see success in the development of some East Asian countries becoming strong fiscal states (Wade 2004 and Kang 2000). On the other hand, some scholars point to Africa wherein some countries remain weak due to the local elites' opposition to fiscal control by the national government (Migdal 1988; Herbst 2000; Bates 2001). These scholars argue that this resistance ultimately hinders any reforms or controls the states might implement, thereby crippling the levels of public investments, as well as any hope for the state to grow stronger. Further, Galor et al. (2009) argue that the concentration of land in the hands of non-state elites leads to lower taxes, which cause underinvestment in education. As a result, certain components of state capacity seem to play an important role in handling civil wars, thereby leading to strong states.

### **2.2.2 On the duration of civil wars**

Once a civil war breaks out, the time interval to completion may depend upon the ultimate aim and decisions of the leaders of both warring parties. The aim of a rebel group might not be an outright decisive victory; rather it could force the government to engage in negotiations (Mason & Fett 1996; Mason, Weingarten & Fett 1999). Thus, the rebels might prefer a long-term horizon at the beginning of the conflict. Collier (1999) and Collier and Hoeffler (1999) argue that rebels try to prolong the fight as long as they find financial backing, and forest and mountain cover. Other structural factors such as lootable resources, forest, and mountain cover, and number of borders would contribute to the length of war by providing survival opportunities to rebels (e.g., Buhaug, Gates & Lujala 2002; Collier 1999). Moreover, as long as the disagreements stemming from grievance (Collier and Hoeffler 1999) are extant, the rebels will recruit zealous volunteers to join the movement which, consequently leads to prolonging the time horizon of the civil war. From the state-centric perspective, a strong and big army can quickly suppress a rebellion before it achieves a profound level of organization. A state with potent bureaucratic means could closely monitor rebellious areas, accordingly patrolling to detect counterattacks beforehand and accommodate citizens with policies that cause them less bellicose (Fearon and Laitin 2003). In any case, the interaction between the state and rebels seem to determine the duration of civil war. To that end, a testable prediction is that state capacity, measured by military strength and bureaucratic effectiveness, should shorten the duration of civil war. On the duration of civil war, Collier et. al., (2004) state that the duration increases based on low capita income, higher levels of inequality and ethnic division, while a decline in the price of primary commodity exports and external military intervention are key factors that shorten the duration of civil war. DeRouen and Sobek (2004) argue that UN intervention lengthens the time span for a victory and shortens the duration of a negotiated settlement. Caverly and Sechser (2017) find that the capabilities of the government army and military technology decrease the duration of civil wars. Cunningham (2006) argues that civil wars that include more veto players, those who approve a settlement, tend to last longer.

Collier (1999) and Collier & Hoeffler (1999) argue that rebel leaders start a civil war and try to retain it as long as they can find a war befitting environment such as mountain terrain, forests, and sufficient financial resources. In this vein, insurgency organizations might not aim for a quick victory but rather to survive for a long-time span, eventually

forcing the government to make concessions. Therefore, the duration of a civil war is, among other factors, a function of the aim of the rebel organization in the first place. Similar factors such as mountain terrain, lootable resources, number of bordering states, and the level of forest areas are also found to be associated with the ability of rebels to lengthen the duration of the civil war (Buhaug, Gates & Lujala 2002; Collier 1999). However, Snyder (2006) critiques the greed and grievance model, arguing that it does not take into account state capacity and the role that the state can play to prevent insurgency. DeRouen and Sobek (2004) fill this gap by probing the effect of state capacity on civil war outbreak and duration. The state's role in conflicts primarily consists of military and bureaucracy. They find that a strong state bureaucracy impairs rebels while a strong government army does not underpin government victory.

### **2.2.3 On the termination of civil wars**

Civil conflicts are more likely to be resolved once the war reaches a point of “mutually hurting stalemate” in which adversaries think that they cannot defeat the other side (Zartman 2001). Civil conflicts tend to terminate in several ways - government victory, rebel victory, negotiated settlement and truce (Modelski 1964; Pillar 1983; and Stedman 1991; Licklider 1995). Civil war studies generally have not studied the impact of different types of civil war outcomes on state capacity. However, keeping some empirical results linking the would-be post-conflict environment to government and rebel interaction in mind (e.g., Licklider 1995; Derouen and Sobek 2004; Walter 2004; Doyle and Sambanis 2000), one should take all forms of civil war outcomes into account, for a better understanding of post-conflict taxation. There are various mechanisms that affect taxation with respect to civil war outcome. For example, Thies and Sobek (2015) find that civil wars that terminate with government victory are likely to increase state capacity, whereas a rebel victory requires more time to end up with an increase in taxation. In the extant literature, there is still no evidence of how negotiation settlement<sup>1</sup> and truce affect state capacity. Adding the effect of negotiated settlement and truce to the analysis of state capacity, thus, will complete the picture of the relationship between civil war outcome and state capacity. Our understanding of civil war outcome and state capacity will be

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<sup>1</sup> Negotiated settlement and peace will be used interchangeably throughout this paper. Peace will be used in empirical analysis for convenience

improved to a greater extent since a more formal, binding and explicit bargaining process will take place between warring sides. State rulers and rebel leaders, indeed, may have particular aims regarding the outcome of a war (Mason, Weingarten and Fett 1999). In fact, the rebels and state rulers might construct their fighting strategy in line with that ultimate aim in their mind. Eventually, the relationship between post-conflict era relations and civil war termination has a bearing on how government policies and structural reforms will be shaped. Even though civil war outbreak was on the rise after the 1950s, substantial numbers of civil war ended after the 1990s (Hegre 2004). Civil conflicts have a lower chance of ending with bargaining, compared to interstate wars. A first glance at the termination of civil wars reveal that military victory outnumbered negotiated settlement or truce. This is because high stakes such as territorial division, resource sharing, and control of government are difficult to compromise (Licklider 1995; Bell 1972; Ikle 1971; Modelski 1964; Pillar 1983; Zartman 1993). Empirical studies evince this fact (e.g., Mason, Weingarten and Jett 1999; DeRouen and Sobek 2004). In settling civil wars, compromise seems particularly arduous because it involves many fickle factors, such as commitment problems, renegeing on issues, and critical survival for either side (Bell 1972; Ikle 1971; Modelski 1964; Pillar 1983; Zartman 1993). Indeed, evidence indicates that only a small portion of civil wars ended with negotiated settlement (Pillar 1993). Armed civil conflicts are inherently high costly, and subject to uncertainty regarding how they will end because too many factors frame the type of their settlement patterns. Assuming that belligerent groups act rationally, it is expected that both sides will prefer a negotiated finale to a catastrophic end. As a matter of fact, not all conflicts wrap up by using violent means. Acemoglu and Robinson (2001, 2006) argue that while elites and poor contest over state control, elites extended suffrage to accommodate the poor that can pose a threat to the rebels. Thus, in cases like this, no armed fighting occurs. However, a significant amount of conflicts fail the bargaining process, primarily due to the irrationality of leaders, the miscalculation of cost of war and the leaders' supposition of the inevitableness of war (Fearon 1995). The conflicts that the UN has engaged in are more likely to end with a truce or treaty (Besley and Reynal-Querol 2014; DeRouen and Sobek 2004). Yet, Besley and Reynal-Querol (2014) also argue that this fact might be an indirect link between states capacity and UN involvement, that states with higher capacity might be more prone to seek UN involvement.

### **CHAPTER 3. THE IMPORTANCE OF STATE CAPACITY IN POST-CONFLICT SOCIETIES**

Migdal (1988) argues that one of the most critical issues facing developing countries is that their state capacity is not high enough to extract taxes to exert desired policies that would help to provide better public services. Preventing conflict relapse after its termination is as vital as bringing a conflict to end, especially considering the fact that civil war termination is plagued with conflict recurrence. UN Security Council Passed Resolution 1244 in the aftermath of NATO's intervention in the violent conflict in Kosovo to establish an interim administration named United Nations Mission in Kosovo (UNMIK) (UNSC Res 1244, 1999). After several years of welcoming the UNMIK (Lemay-Hébert 2009a), the Kosovo Albanian, who consists of the majority ethnic group, grew a dissatisfied sense (UNDP and USAID, 2004). This was a result of a weak local legitimacy (Lemay-Hebert 2009). An important component of state building is both domestic and external legitimacy (Paris and Sisk 2009). In March 2004, this dissatisfaction led to riots, including interethnic violence which resulted in deaths, destruction of buildings, and thousands of displaced people (ICG 2004). In the end, UNMIK failed to generate a sufficient level of legitimacy to govern Kosovo (Doyle and Sambanis 2006). Indeed, one major predicament of civil wars is that they tend to resurface over a short period of time (see e.g., Walter 2004; Mason, Quinn and Gurses 2007; DeRouen and Bercovich 2008). This partly depends on the type of settlement in which the power distribution, annihilation of one side or third-party intervention substantially takes place. For example, Licklider (1995) argues that negotiated settlements tend to be less stable compared to military victory because in a military victory, one side loses its capability to rebel again. Additionally, Mason and Greig (2017) argue that peace agreements significantly increase the duration of peace. On the other hand, Doyle and

Sambanis (2000) point out that peace agreements likely decrease the risk of states plunging back into civil war if they are signed at the end of the war. Hegre and Nygard (2015) demonstrate that good governance reduces the conflict risk after conflict settlement. In their analysis, good governance is defined as a comprehensive term that includes bureaucratic quality, the rule of law, corruption, economic policies, military influence in politics, political exclusion and repression, and formal political institutions that are ingredients of state capacity. Fearon and Laitin (2003) find evidence that state capacity decreases the probability of civil war onset through policing rural areas and providing essential services to citizens. The low level of state capacity permits rebels to exploit resource extraction (Snyder 2006) since the state clumsily monitors and detects rebel movements. Thereupon, the rebels could find the financial opportunity to reorganize themselves. Obviously, state capacity is likely to play an important role in deterring conflict relapse after civil war settlement. In the post-conflict era, state capacity is also an important key factor in peacebuilding efforts in that a high capacity helps peacebuilding strategies to be successful. Walter (2004) argues that countries which provide a higher level of quality of life and a more participatory political system have a low likelihood of experiencing civil war relapse and multiple civil wars regardless of what happened in a previous civil war. On the other hand, some scholars link civil war recurrence to previous wars, arguing that because the political grievances were not resolved, civil wars tend to relapse (see e.g., Licklider 1995; Doyle and Sambanis 2000; Hartzell, Hoddie and Rothchild 2001). In either case, what matters for preventing conflict relapse, lies in the aftermath of conflict termination. Such pertinent factors taken together provide a clear understanding of why post-conflict state capacity is crucial for policy implication. A strong state also matters for purposes of peace agreement implementation. In the case of a settlement, even if an agreement is reached among warring parties, the lack of capacity of the state may put the agreement in jeopardy by giving the rebels an opportunity to renege on the terms. In a case study of 14 conflict experienced states, DeRouen et al. (2010) find that high levels of state capacity enable a more successful peace agreement implementation. Moreover, in this context, Walter (2015) suggests that institutional accountability can reduce the risk of peace failure and Hegre and Nygard (2015) find that “good governance” is associated with a lower risk of peace failure. One substitute for low levels of state capacity might be a third-party intervention which can provide necessary financial, military, and professional guidance aid to warring parties for a successful agreement (Doyle and Sambanis 2000; Arnault 2006). However, Arnault (2006) and

Doyle and Sambanis (2000) also suggest that third-party interventions may only have a superficial effect on the implementation at work. As Arnault (2006) demonstrates, the third-party intervention does not outweigh the negativity of low levels of state capacity in the cases of Burundi and Somalia.

Post-conflict polities tend to have low investment rates and low rates of domestic capital formation. Once the conflict is settled, the capital flight direction can be reversed, leading to an increase in economic activities that consequently affect tax collection. In countries that experience civil wars, governments generally do not enforce protection of property rights regulations which cause some of the economic agents to abandon the economic activities. Tornell and Valesco (1992) argue that low protection of property rights reverberates as low investment ratios. North (1981) explains the governments' motivations to ignore the protection of property rights as the cost of monitoring and collecting taxes decrease the ability of the rulers to raise revenue. That is why governments choose not to apply property rights properly in order to extract high tax revenues. Another reason for the diminishing rate of domestic investment is that lower protection of property rights increases the opportunity cost of investment thereby resulting in lower levels of productivity of capital and capital outflow (Svensson 1997), an argument which implies that the interaction of political instability and investment ratio can be measured through the quality of property rights. Post-conflict societies generally encounter two important risks: The risk of conflict relapse and the further worsening of the economy. Rwanda, in this context, presents a rapid economic recovery mainly due to aid inflows (Ansoms 2005). Burnside and Dollar (2000) argue that aid has no significant impact on growth, but aid can affect economic growth when channeled to good policy settings. Ansoms (2005) argues that Rwanda could benefit from high levels of aid to overcome its war-torn economy, due to its governance quality. The Rwandan government has proven to be an effective government that can implement economic reforms and policies and support private investment (Booth and Golooba-Mutebi 2012).

## **CHAPTER 4. THE RELATIONSHIP BETWEEN STATE CAPACITY AND CIVIL WARS**

Conflicts, especially armed conflicts, deteriorate societies' economic development in several ways. Conflicts undermine economic development by pushing states into what Collier (1999) calls a conflict trap. Additionally, Besley and Persson (2008) show that countries that experienced internal conflict have a 7% lower GDP share of taxes compared to states without internal conflicts. Political institutions are among the most vulnerable state apparatus that are exposed to huge damage during conflicts, which leaves states unstable and lead to protracted civil wars. Another destructive threat to conflict-torn states is the loss of human capital along with overall GDP (Hoeffler and Reynal-Querol 2003; Ghobarah, Huth, and Russett 2003; Carlton-Ford and Boop 2010). Civil wars tend to endanger state capacity in the Middle East (Lu and Thies 2013). The region is plagued by ethnic and religious civil wars. One long-lasting civil war that spread geographically into the region is the Kurdish insurgency. Dispersed among Syria, Turkey, Iran, and Iraq, Kurds play a central role in state-building processes in the region. When these states have a weak central authority, Kurds enjoy significant concessions, but when these states establish strong central governments, they treat the Kurds with massacres, forced migration and tight political controls (Entessar 2010). In short, Kurdish insurgency, though in need of empirical analysis for future studies, might push these states bolstering effective and coercive state apparatus. Yet, other civil wars in the Middle East might have played a detrimental role in shaping the state-building process. For example, the Sudanese civil war (1983-2005) escorted a genocidal aspect and led Arabs into a division in Darfur (Schmidinger 2009), a war that eventually brought forth the secession of South Sudan. Hence, the Sudanese civil war might exemplify a negative impact of civil war on state-capacity. Many Middle Eastern countries rely on oil revenues (Ross 2001). High levels of oil dependence discourage states to extract fewer financial resources from their

societies (Van de Walle 1998). The effect of oil on state-building in the Middle East is controversial among scholars. Some argue that oil is detrimental to state building because it provides an easy-catch rent (Karl 1997), impedes institution building (Shafer 1994), and undermines the economy (Fearon and Laitin 2003). Others point to the ability of oil to augment state capacity, in gaining external support to eliminate local rivalries, the loyalty of constituents is bought through redistribution (Morrison 2009; Smith 2004).

## **CHAPTER 5. A BARGAINING THEORY OF STATE CAPACITY AND POST-CONFLICT TAXATION**

Civil war, as previously mentioned, are plagued with recurrence and many scholars ascribe the reason behind the relapse of civil wars to the characteristics of the previous war such as the outcome of the previous war (Licklider 1995; Mason and Fett 1996), involvement of peacekeeping operations (Doyle and Sambanis 2000; Fortna 2004), and the severity and the duration of previous conflict (Walter 2004; Hartzell and Hoddie 2007). Some scholars, as a remedy, suggest that a high level of state capacity would cure the conflict recurrence. The relapse of civil war finds a central place in the concept of Tilly's (1985) "multiple sovereignty". According to Tilly, several armed groups emerge or remained from the last civil war and gain popular support to challenge the central authority which eventually is conducive to resurface of the civil war. Mason et al. (2011) argue that the extent that the multiple sovereignty is perpetuated in the post-civil war era is a function of the type of civil war settlement, whether the civil war is terminated in rebel victory, government victory, or negotiated settlement. Inasmuch as a significant association has been evinced between state capacity and civil war termination, the time spell of the recovery becomes important for reorganization of rebel groups to reinitiate an insurgency. A long-lasting recovery of state capacity would naturally allow rebel groups enough time to recruit, reach financial sources, establishing intelligence networks, and possibly propagate to gain popular support to wage a war. One crucial question can be centralized as, how fast countries recover their state capacity once the conflict has settled. Put in a more generalized framework, what are the determinants of the speed of state capacity recovery? I postulate in this paper that the types of conflict settlement are significant explanations of capacity restoration. Concomitantly, I develop a theoretical

groundwork based on bargaining theory through which the interaction between civil war actors conditions the duration of state capacity recovery.

The overall effect of a civil war on state capacity can essentially be categorized into two aspects. The first one is that civil wars are quite harmful to the economy, human capital, investments, and infrastructure, thereby eroding the tax base. Civil wars lead to a substantial loss of human life and are further detrimental to remaining human resources in terms of disability, health (Ghobarah et al. 2004), education (Kibris 2015; Shemyakina 2006; Chamarbagwal and Moran 2011) and infant mortality (Davis and Kuritsky 2002). During civil wars, war expenditures dramatically increase, and a huge budget deficit troubles the economy. Because of the already stagnant economy, the tax revenues drop off substantially. Civil wars also decrease institutional quality and legitimacy of taxation, thereby encouraging tax evasion. Overall, tax revenue will most likely diminish as a direct consequence of the war-weary economy. Following this line of rationale, it is reasonable to expect a natural increase in tax revenue once a civil war ends, independently from how it is terminated such as government victory, rebel victory or a peace agreement. As a matter of fact, Gupta et al. (2002) conclude that there is a significant negative association between conflict-affected countries and government revenues in those countries.

Secondly, the interaction between state and society can affect state capacity during a civil war through a rise of social contracts based on taxation bargaining and institutional building that stems from revenue extraction efforts. The revenue collection may follow state building through an increase in accountability of state. Moore (1998) argues that the greater dependence of a state on tax revenue, the more likely it is for a state society relationship to be shaped by accountability, democracy, and responsibility. Therefore, civil wars might reshape the relationship between state rulers and society through a bargaining process regarding the taxation. Ultimately, the interaction of these two aforementioned factors will determine the impact of the civil war on state capacity.

### **5.1 During the conflict**

One tool in the hand of a government to deal with rebellion is that it might provide tax alleviation to mitigate the conflict as a part of conflict resolution. In this bargaining

process, particularly if the conflict is about greed or economic inequality, governments may think that the dissatisfied faction of the society will abate its rage in exchange for a tax cut. In this scenario, we can expect a decrease in taxation capacity. On the other hand, a government, in line with predatory theory, might rely on its constituency for a tax raise which, in turn, secures resources of the state that will fund the effort to quell the rebellion. The taxpayers will consent to pay a higher rate of tax (Downing 1992; Ertman 1997; Tilly 1990) because otherwise in a case of losing the war they might lose their whole property. This increase in tax ratio during war times generally doesn't reverse back in the post-war situation, which can possibly be explained by the "ratchet or displacement effect" (Peacock and Wiseman 1961). According to Peacock and Wiseman, during a national crisis, notably wars or major social turmoil, public resistance against taxation decreases. This reduced resistance is also maintained in the post-crisis period. Civil wars might vary across incidences in terms of their negative effects on economic activities. For instance, the more battle-related deaths that occur, the higher the loss of human capital, which basically means that the production capacity and, consequently, the tax revenue will diminish. Addison et al. (2002) find that conflict has a negative impact on tax-to-GDP and this effect escalates as the conflict becomes more violent.

Several studies refer to ethnic civil wars as being more intractable (Licklider 1995; Kaufmann 1996) and involved in security dilemma (Posen 1993), which further increase the cost of war and impair the economy. The formidable nature of ethnic civil wars is likely to cripple the cooperation and cohabitation of adversary groups even after the war ends. Under such circumstances, I expect a negative relationship between ethnic wars and taxation capacity.

## **5.2 Government victory**

Taxation capacity is a function of the government's ability to create and sustain efficient institutions to collect taxes. In the case of a government victory, first of all, the government will be able to penetrate the regions that previously were under the control of rebel groups. As the government's presence increases in the previously rebel-held regions, the tax raise institutions along with tax extraction will increase (Wimmer 2014). The presence of government also enhances the auditing capacity of the state which ultimately provides an additional push for a tax raise (Kiser and Kane 2001).

*Hypothesis1:* Conflicts ended with government victory are likely to restore the taxation capacity faster than otherwise.

### **5.3 Rebel victory**

A decisive rebel victory, especially if the rebellion's motive is revolutionary, means a substantial change in existing state institutions. The rebellion leaders might insist on a fundamental change of the relationship between the state and society (Sobek and Payne 2010). Once the rebels win the civil war, it might take time to establish and functionally utilize the necessary taxation institutions. Whoever wins a civil war encounters the burdensome onus of restoring the war-torn economy. This task includes the bureaucratic capacity to collect taxes, afford basic public policies, and creation of incentives to put the economy in motion again, in addition to handling the wartime fiscal deficit and getting the economy back on the track. The rebels are particularly likely to have difficulty in fulfilling these crucial steps because, in contrast to the government, they are not experienced in enacting government policies.

*Hypothesis2a:* Rebel victory increases the time spell for a capacity recovery.

Conversely, some rebel groups enjoy military, economic, and administrative aid from external powers during the insurgency, mostly from neighboring countries. The influx of material aid and governance assistance to the rebels is likely to endure in the case of a rebel victory. The aiding country, thus, may want to reshape the new government in line with his economic, political, and ideological interests. It is highly possible that rebels will benefit from their supporters in terms of bureaucratic effectiveness, tax reforms, conflict resolution mechanisms to deal with new challengers to the government, and more of the same. Thus, a rebel group may be able to exert efficient tax policies and raise taxes with support from his allies. Aside from depending on the social structure and commitment of the insurgency group, the rebel group after a victory can integrate into the international system, thus taking advantage of foreign financial aid, foreign direct investment and technology and transfer of knowledge. Most importantly, the new government, due to its commitment to the international system and democracy might be welcomed by foreign countries. In fact, policy makers put serious energy in promoting democratic and economic institutions in the aftermath of civil war termination (Harris and Reilly 1998). A final advantage of a rebel group is that people might welcome the new government due

to frustration towards the old government due to corruption, authoritarian rule, and discrimination in favor of a small fraction of the society. This will causally enhance the legitimacy of the new rebel rule in the eyes of the people (Weinstein 2006) through which tax extraction efforts are facilitated. Put differently, rebel insurgency must create innovative and competent institutions in order to gain legitimacy and amass resources from the public. The Uganda experience exemplifies how a rebel victory may gain broad-based support from the public and build capable institutions, additively taking credit from the World Bank (Toft 2010) following cessation of war. Prior to the end of the civil war, under Idi Amin rule, Uganda experienced harsh economic and political terms. Approximately 1 million displaced people, diplomatic crisis with Britain, low levels of democracy and rule of law, a 25% decrease in GDP, and a 60% decline in exports swept away Uganda's politico-economic sphere (Rugumamu and Gbla 2003; Toft 2010). Yet, Yoweri Museveni along with the National Resistance Movement (NRM), the political organization of rebels, could build institutions, social and political organization networks from cities to urban areas, financial and political organizations, all which enhanced the legitimacy of the new ruling actors (Ofcansky 1996). Furthermore, the NRM expanded its inclusiveness by offering bureaucratic and governmental positions to its ex-rivals (Rugumamu and Gbla 2003). As a result, Uganda's GDP per capita raised to 70% in 1994 of what was at the independence, 80% in 1997, while it was only 58% at the end of civil war in 1987 (Reinikka and Collier 2001).

*Hypothesis2b:* Rebel victories might accelerate taxation capacity recovery contingent upon the rebel group's engagement in the international system.

#### **5.4 Negotiated settlement**

Negotiated settlements, unlike victories, require new rules of conflict management that adversaries jointly agree upon. These rules include a bargaining process that tries to address the interest of all signatories to the agreement. As such, a civil war that ends up with a negotiated settlement is likely to incorporate more citizens into the electoral system through a more representative government. Power-sharing arrangements work as a mechanism which ensures the interests of all people by giving them a share of state power. Power-sharing institutions form a set of more representative political centers that create opportunity for a big majority of constituents to partake in the decision-making process

through which conflicts become mollified (Lijphart 1977; Sisk 1996). Negotiated settlements that include power-sharing institutions are likely to end up building a more representative government. These institutions include veto power, a proportional electoral system, a proportional distribution in administrative appointments, and grand coalition (Lijphart 1977; Sisk 1996; Walter 2002). Snyder and Jervis (1999) consider these power-sharing institutions that manage conflict as they provide a stable balance between warring parties. Consequently, a more diverse body of administration might prompt a deeper sense of belonging to the state, which also would generate a synergistic relationship between state and society, where the state produces security and therefore generates trust and accountability (Fukuyama 2004; Levi 1989, 2006). In return, accountability and transparency of government would increase and enhance taxation capacity as the extraction efforts emanate from a fiscal contract between the state and society (Brautigam 2008; Moore 2008; Prichard 2015). In addition, since negotiated settlements scale down the number of war deaths compared to victories (Licklider 1995), a relatively small number of human capital will be lost, a factor that at least will abate the diminishing of economic activity, *ceteris paribus*. Thus, a reasonable prediction would be an increase in taxation capacity after a negotiated settlement.

Hartzell and Hoddie (2003) categorize power-sharing into four types based on whether the agreement shares power along a political, economic, territorial, and military dimension. Political power-sharing constitutes the electoral proportional representation, administrative proportional representation, and executive proportional representation. The economic dimension of power-sharing is the distribution of economic resources among groups involved in the agreement. Territorial dimension is the division of autonomy between levels of government based on federalism or regional autonomy arrangement. Military dimension defines the distribution of the state's coercive power among the warring parties. Power-sharing agreements facilitate a more peaceful environment and an enduring peace in the long-run between government and rebels (Hartzell and Hoddie 2003; Mukharjee 2006). One important fact that disrupts peace agreements is the credible commitment (Fearon 2004; Walter 1997,2002) because antagonists fear that the other side will crush them out once they become more powerful. However, a credible commitment problem can be addressed in a negotiated settlement which includes power-sharing institutions that solve the security concerns of ex-combatants and distribute political and economic resources among them (Hartzell and

Hoddie 2007). Cardenas and Tuzemen (2010) find that state capacity is higher in more stable and equal countries. Furthermore, given a peaceful and politically more stable environment, growth rates will be positively related to political stability (Barro 1991) and significantly negatively related to political instability (Alesina et al. 1996). Positive economic growth rates will accompany an increase in tax take.

*Hypothesis3a:* Negotiated settlements negatively affect the speed of taxation capacity recovery.

Alternatively, a negotiated settlement that includes excessive power-sharing arrangements among central authority and regional power may leave the central authority weak to enact efficient tax policies. Additionally, a highly dispersed constitutional structure may give rise to local powers, which might inhibit bargaining over tax policy since every group might pursue their own interest. This failure might bring about deadlock in a state when it comes to reaching an efficient tax policy and extraction of taxes. Further to that, each group might follow their own public finances, pension funds or police force which can also worsen the tax policy. In Bosnia, for example, the Dayton Agreement distributed constitutional power among Bosniak Party for Democratic Action, Croat Democratic Union, and the Serbian Democratic Party. An important characteristic of their power was control of the public-sector appointments which, in turn, enabled them to construct a patronage system and finally manipulate public institutions (Cox 2001). Weak public institutions, corruption, and poor public service provisions decrease the legitimacy of the state in the minds of people, inducing constituents to avoid paying taxes.

*Hypothesis3b:* Negotiated settlements result in shortening the time period of the restoration of tax capacity.

### **Dependent variables**

Brewer (1989) explains several channels wherein tax collection might affect state capacity. Firstly, tax administration reforms may end with bringing more merit-based and professional strata, which ultimately enhance tax collection efficiency. Secondly, aiming to increase tax collection might force the government to expand state apparatus to a wider range of locations within the state that, in turn, can reach out to more tax resources. Thirdly, efforts to increase taxation might improve data and related information that are conducive to other government activities, say, economic planning, legislation, or business improvement. State's extractive capacity is commonly operationalized as the tax-to -GDP

ratio. (e.g., Peacock and Wiseman 1961; Organski and Kugler 1980; Prest 1985; Seidman 1986; Webber and Wildavsky 1986; Campbell 1993; Chaudhry 1997; Cheibub 1998; Fauvelle-Aymar 1999; Tsai 1999; Centeno 2002; Thies 2004). Moreover, Fearon and Laitin (2003) measure state capacity with per capita income and Collier and Hoeffler (1998) proxy state capacity with per capita income and the natural resource endowment. Taydas and Peksen (2007) proxy state capacity with the quality of government. Another index of fiscal capacity is the relative political capacity (RPC), an indicator that measures the extractive efficiency relative to other states (Arbetman and Kugler 1997; Johnson and Robinowitz 2005). The political capacity is the ability of a government to extract resources from its society for policy implementation purposes (Organski and Kugler 1980; Arbetman and Kugler 1997). Kugler and Arbetman (1997) and Feng, Kugler, and Zack (2000) measure relative political capacity as the ratio of actual tax revenue to the expected tax revenue. Hendrix (2010) defines three measures of state capacity applied in the literature: military capacity, bureaucratic administrative capacity, and the quality and coherence of state institutions. In the quest for state extractive capacity, bureaucratic administrative capacity and the quality and coherence of state institutions as a measure of state capacity are more prevalent. Hendrix (2010) further suggests that the most theoretically and empirically justified measures of state capacity are bureaucratic administration and tax capacity. Schumpeter (1918) argues that the tax system goes hand in hand with the structure and history of a state. The capability of a state to collect taxes is a function of the consolidation, institutionalization, and projection of power of a state. As a matter of fact, North (1981) conditions the state as having the sole power of levying taxes on its citizens. Herbst (2000) describes the ability of the state to tax as the best measure of its scope. The incapability of states to impose an extensive tax base is an example of the weak state (Migdal, 1988). In this study, I will proxy state capacity with tax ratio (total tax/GDP) since this paper examines the linkage between conflict settlement and state capacity, a concept that requires the understanding of state authority, legitimacy and capability, the operationalization of state capacity with tax ratio will be more consistent with construct validity. Previously, several studies employed tax ratio to gauge state capacity in the examination of the association between civil war and state capacity (Sobek and Thies 2015; Thies 2010,2007,2009; Besley and Persson 2009). Nevertheless, using total taxes/GDP as a proxy for state capacity has a number of drawbacks. One pitfall of using total tax as a percentage of GDP is that it does not demarcate the countries according to through which causal mechanism they retained the total tax ratio. For

example, some countries may have a high ratio of total tax as a percentage of GDP because they have a high state capacity, however, other countries may have high ratios of total tax as a percentage of GDP because they heavily rely on international trade taxes, mining taxes or natural resources taxes. Since foreign trade taxes do not require a high level of administrative capacity, a country with a high tax ratio including a big ratio of foreign trade tax may not indicate a high degree of state capacity. In particular, countries with lower income rates rely heavily on trade taxes while higher income countries rely on income taxes (Besley and Persson 2013). Another shortcoming of proxying tax-to-GDP for state capacity is that it does not make a distinction between the type of taxes (Hendrix 2010). This critique is justified by Kisangani and Pickering (2014) that examining direct taxes, indirect taxes and non-tax revenues have a more explanatory power for understanding state-building efforts. *Government share of consumption* is the amount of resources of a society consumed by the state. Government share indicates the scope and size of a government. Government share is also commonly employed in the literature to gauge state capacity (see e.g., Thies 2010; Ross 2006). *Total revenue as a percentage of GDP* represents a wider definition of government income, including taxes on income, social security contributions, payroll, capital gain, domestic goods, and non-tax revenues. Obviously, total revenue shows the size and scope of the state in many aspects. *Relative political capacity* (RPC) is a measure of strength of a state based on the actual level of tax revenue compared to predicted levels of revenue. States have a higher score of 1 on RPC are extracting more than expected, and vice versa. Studying the relation between the two large pieces of literature on the potential link between civil war settlement and state capacity introduces several challenges to this paper. Firstly, since this link has driven little attention, it poses some constraints on theoretical and empirical justification to draw a basic line for a model. Secondly, as civil war onset affects state capacity (Thies 2010) it is also likely that state capacity has an impact on civil war termination. A strong state in terms of its extractive capacity and bureaucratic efficiency may play a crucial role in bringing a civil conflict to a conclusion. State capacity is mostly measured as the ability of states to collect taxes. However, the reverse causal mechanism is also possible. A government is likely to increase its tax revenue by channeling more funds into administration capabilities and information technology investments. The tax raise can increase the state capacity (Prichard 2010). In studying conflict settlement and tax take, we encounter the endogeneity of state capacity that is built within the model. A strong state can win a quick victory or force rebels into a negotiated settlement. The

bilateral relationship comes with an endogeneity problem which is largely ignored in the civil war literature (Hegre and Sambanis, 2006). Examining the association between civil war and state capacity, Thies (2010) finds that the civil war incidence reduces state capacity. However, several studies show that during conflict, internal wars can also increase state extractive capacity through elite solidarity and construction of social identity (Centeno 2002; Schneider 2012; Thies 2005; Rodríguez-Franco 2016). Taydas, Peksen, and Drury (2007) point out that states with high extraction capacity tend to have a lower risk of civil war outbreak. These findings constitute us another reason to take the endogeneity issue seriously. For instance, a strong state can use its destructive military power to secure a decisive victory or use its accommodative capacities to bring the rebels into a negotiated settlement. The outcome of a civil war, in return, can also affect the power of the state, which is the focus of this paper. DeRouen and Sobek (2004) argue that bureaucratic effectiveness reduces the probability of rebel victory but doesn't have a significant impact on government victory, and the size of the army, measured as military personnel per capita, increases the probability of government victory, rebel victory, truce, and treaty compared to the continuation of war.

### **Explanatory variables**

The primary explanatory variables of concern are a series of binary variables of each conflict settlement type: government victory, rebel victory, negotiated settlement. The dataset for the conflict settlement type is derived from UCDP (Kruetz 2016). The identification of conflict termination types is also from Kruetz (2010). I also employ a set of control variables that are commonly used in civil war studies.

*Ethnic fractionalization:* Since the more ethnically divided a country is, the more significant the free rider problem becomes. The data for ethnic fractionalization comes from Alesina et al. (2003).

*Trade openness:* Relative easiness of collecting foreign trade taxes, because they have to pass through several ports in a country and no complicated administrative capacity is needed (Adsera and Boix 2002), may make it difficult to capture true taxation capacity of a country. Trade openness is operationalized as the natural logarithm of a state's total export and import divided by its GDP.

*Conflict type:* Scholars refer to the difficulties involved in peacebuilding efforts subsequent to civil wars (Collier et al. 2003; Kreutz 2010; Doyle and Sambanis 2006; Chapman and Roeder 2007). Therefore, to account for the impact of ethnic and territorial conflicts on post-conflict taxation capacity I created two dichotomous variables, whether the conflict is ethnic/ideological, or it targets the government/territory.

*Oil:* Oil rents have recently been found in empirical studies to strengthen state capacity (Smith 2004; Morrison 2009; Thies 2010).

**Table 1:** Variables, definitions, and their sources

Dependent Variables	Definition	Data source
Tax ratio	Total revenue minus non-tax revenue and social security contributions/GDP	Thies (2010)
Government share	Government expenditure/GDP	Penn World Tables
Total revenue	Taxes on income, profits, and capital gains, social security contributions, payroll, property, domestic goods, international trade and transactions, and non-tax revenue/GDP	Thies (2010)
Relative political capacity	Actual/predicted level of tax revenue extraction	Arbetman-Rabinowitz et.al. (2011)
Duration 1 year	For each dependent variable; the difference between the first year after conflict that is equal to 1 year before conflict	
Duration 3 year	For each dependent variable; the difference between the first year after conflict that is equal to 3-year average before conflict	
Duration 5 year	For each dependent variable; the difference between the first year after conflict that is equal to 5-year average before conflict	
Censored1	For each dependent variable; post-conflict values catch 1-year pre-conflict value =1, 0 otherwise	
Censored3	For each dependent variable; post-conflict values catch 3-year average pre-conflict value =1, 0 otherwise	
Censored5	For each dependent variable; post-conflict values catch 5-year average pre-conflict value =1, 0 otherwise	

Independent Variable	Operationalization	Data Source
Government Victory	Conflict ends with government victory=1, 0 otherwise	Kreutz (2010)
Rebel Victory	Conflict ends with rebel victory=1, 0 otherwise	Kreutz (2010)
Negotiated Settlement	Conflict ends with negotiated settlement =1, 0 otherwise	Kreutz (2010)
Centralization	Ranges from 1 (centralized/unitary) to 3 (decentralized/fed)	Polity III dataset
Initial real GDP	Real GDP per capita in 1960 or the date of independence	Penn World Tables
Ethnic Fractionalization	Probability that 2 randomly chosen individuals belong to different ethnolinguistic groups	Fearon and Laitin (2003)
Ethnic war	Ethnic conflict=1, 0 otherwise	Kreutz (2010)
Oil	1 = > 1/3 of export revenues from oil, 0 otherwise	Fearon and Laitin (2003)
Africa Dummy	Sub-Saharan African country=1,0 otherwise	
Latin America Dummy	Latin American country=1, 0 otherwise	
Interstate War	Country involved in an international conflict = 1, 0 otherwise	Gleditsch et al. (2002)
Secessionist Conflict	Secessionist conflict=1, 0 otherwise	Kreutz (2010)
Trade Openness	Imports plus exports/GDP	Fearon and Laitin (2003)
Official development assistance	as a percentage of total revenue	Thies (2010)

## CHAPTER 6. RESEARCH DESIGN

The data contains a total number of 203 civil wars from 1960-1999. However, due to missing data, the number of civil wars drops to 138. The dependent variables are the duration of recovery of tax-to-GDP, government share, and relative political capacity. In order to construct these variables, I measured 3- and 5-years average of these variables before the onset of civil war and compared it to the time interval after the onset of the civil war. The duration is recorded as the number of years it took after the conflict broke out for the relevant data to reach the level of pre-conflict data. For instance, if the 3-year average pre-conflict tax-to-GDP reaches its level 7 years after the conflict this variable is recorded as 7. Since I am analyzing duration analysis, in some cases, data never reaches its pre-war levels. In this case, I created a dummy variable and recorded those that did not reach their pre-war levels as 1, if they reached their pre-conflict levels within the availability of data I coded them as 0. This line of coding is created for all four dependent variables along with 3-year and 5-year averages.

To test the hypotheses above, I utilize the Semi-parametric Cox model. There are several advantages in using this model to analyze the data I created. Firstly, the duration time of recovery does not take negative values and the Cox model is the most appropriate one to treat such data. Secondly, some countries never reach the assumed levels of taxation either because of conflicts or because of the data availability. These incomplete cases continue to reveal information about likelihood function rather than being excluded from the model under duration models. In addition, the Cox model does not presuppose any distributional form of unobserved duration data.

Table 2: Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
rebwin	5,269	.0140444	.1176851	0	1
govwin	5,269	.0222054	.1473648	0	1
peace	5,269	.0453597	.2081114	0	1
durgvtshr1	171	2.51462	3.131165	0	22
durgvtshr3	172	2.674419	3.35586	1	18
durgvtshr5	167	2.676647	3.183673	1	17
durrpc5	183	4.972678	6.457325	0	34
durtotalrv5	188	4.010638	5.020801	0	27
durtaxrt5	188	3.946809	5.040726	1	27
gvtshrncsr5	169	.1715976	.3781508	0	1
gvtsharcns~3	172	.1569767	.364841	0	1
gvtshrncncr5	167	.1796407	.3850425	0	1
rpccensrd5	183	.3442623	.4764306	0	1
totalrvcecr5	188	.25	.4341689	0	1
taxrtcncr5	188	.25	.4341689	0	1
lninitial	4,087	7.873954	.9683709	5.991667	11.08081
secessionist	723	.4301521	.49544	0	1
ethnic	5,271	.0853728	.2794622	0	1
centraliza~n	4,379	1.350537	.7019073	1	3
tradeopenn~s	4,878	.6326737	.4313237	.0084711	4.253398
interstate~r	4,379	.0239781	.1529983	0	1
ethfrac	5,269	.4056797	.2886111	.001	.9250348
Africa	5,269	.2877206	.4527432	0	1
Latin	5,269	.1710002	.3765449	0	1
oda	4,976	.050339	.1298392	-.0119537	2.783185
oil	5,262	.1347396	.3414777	0	1

## CHAPTER 7. RESULTS

I investigate the impact of the type of conflict settlements on the recovery speed of state capacity.

Table 3 shows the results of three models of the covariates of only 1-year average ratios of government share values of pre-conflict. In all regressions along the models, I added control variables respectively, for the robustness check purpose. Accordingly, Table 3 provides substantial support for the claim that rebel victory accelerates state capacity. This significant impact remains robust even after adding other various control variables. The hazard ratio coefficients of the negotiated settlement and government victory are greater than 1 throughout the models, showing an accelerative impact on state capacity recovery, however, is not significant. In Table 4, 3-year average ratios of government share values of pre-conflict are employed into survival regression. Of the main explanatory variables, both rebel victory and peace hazard ratio coefficients are greater than 1, and significant at conventional levels of significance. This table gives further support to the claim in Table 3 that rebel victories shorten the time-span of a tax recovery. Additionally, these coefficients are robust once control variables are inserted. Interpretively, rebel victory and negotiated settlement significantly lessen the restoration time spell of state capacity. Providing support for Hypothesis2b, rebel victories might enjoy international economic and political assistance, a more legitimate government than the fallen predecessor, thus, experiencing rapid recovery of state capacity. Table 4 also corroborates Hypothesis3b that negotiated settlements, like rebel victories, shorten the time spell of the restoration of state capacity. This result can be interpreted as previously mentioned, negotiated settlements create an environment that function as a mechanism forming a more representative type of government by incorporating more people into the political system, especially people from the insurgency group. Additionally, peace agreements generally include power-sharing arrangement institutions that form a set of

more representative political centers that create an opportunity for a big majority of constituents to partake in the decision-making process through which conflicts become mollified (Lijphart 1977; Sisk 1996). These institutions include veto power, a proportional electoral system, a proportional distribution in administrative appointments, and grand coalition (Lijphart 1977; Sisk 1996; Walter 2002). This type of a representative, legitimate, and effective government enables tax institutions to reach more taxpayers, become more legitimate in the eyes of people, and pave the way for a proper tax collection. Peace agreement is also significant and greater than 1 with the dependent variable of *total revenue with 5-year average*. This confirms further robustness in our analysis regarding different dependent variables of state capacity. In all models, government victory coefficient is greater than 1, yet not significant, but with a better model, we have reason to believe government victory is good for state capacity.

Another significant and time reducing variable is the natural logarithm of the initial GDP of countries at the beginning of independence. This also remains robust against the addition of other control variables. Countries, as the levels of initial GDP increase, become more advantageous in dealing with decreased state capacity following a civil conflict, regardless of the type of outcome. We also have reason to trace some determinants of state capacity back to the very establishment of the state institutions. These institutions, apparently, preserve their influence on state capacity for a long time. From the analysis of Table 4, we see that a more decentralized formation of government is significantly associated with a lesser time period of capacity recovery. Decentralized governments might allow local bodies of government to engage in tax collection efforts, which reduce the transaction costs of collection, minimize the bureaucratic burden and, in turn, facilitate tax take. Official development assistance seems to prolong the recovery capacity of the state which confirms what is found in the literature, that international aid funds have an inhibitive effect on state capacity by preventing resource mobilization efforts (Snider 1990; Bates 2001). Thereby, international funds become an easy-catch revenue for governments and they do not provide an extra push to extract from their constituencies. More importantly, in the presence of high levels of development aid, the state elites don't necessarily need to engage in a bargaining course with their citizens to raise taxes for public policies. All these factors lead the state elites to not make reforms for a better taxation policy, thus resulting in a more prolonged tax recovery duration. A much-debated variable, oil, which is considered to have a central impact on state capacity

in the literature, finds significant impact on capacity recovery with the dependent variable of *tax ratio 5-year average* in our analysis. Oil, similar to many nontax revenues, has a negative impact on capacity recovery by increasing its duration. Oil, in our analysis, renders a causal link similar to *official development assistance* between state capacity and civil war equation. A government that depends on oil will probably rely engage in a bargaining process with its taxpayers because oil presents an easy catch revenue.

Table 4 shows that countries having engaged in interstate conflicts, in addition to civil wars, have a higher likelihood of recovering their taxation capacity in a short period of time. This lends support to the predatory theory that in order to fund war efforts, countries bargain with their citizens over taxation. As a result of this bargaining process, the state rulers come up with higher extractive capacities (Tilly 1975, 1992). The variable of *interstate war* in Table 6 also finds significance and support the findings in Table 4. This finding also corroborates the argument that state-building efforts through interstate wars are, in line with Tilly's claim, still relevant in contemporary developing countries and in civil wars.

*Trade openness* is significant and lesser than 1 with *relative political capacity 5-year* and *total revenue 5-year averages* dependent variables. This is likely a result of the relative easiness of trade taxes and in, turn, state rulers do not push forward for reforms for a better tax take. Africa dummy seems to be significant and has an accelerative effect on state capacity recovery in several survival analysis output. Although Africa is not homogeneous among its countries with respect to economic development, civil wars, and political affairs it poses a brighter picture regarding the effect of civil wars on state capacity recovery rate, contrasting to many analyses notably Herbst (2000). On the other hand, Herbst might be right when he implies that war may stimulate African countries' efforts to make strong states.

Table 3: Government share with 1-year average

	(1)	(2)	(3)	(4)	(5)
	Govtshar1	govtshar1	govtshar1	govtshar1	govtshar1
rebwin	1.986** (2.58)	2.161* (2.56)	2.123* (2.46)	2.078** (2.70)	2.064** (2.66)
govwin	1.151 (0.30)	1.270 (0.50)	1.358 (0.63)	1.320 (0.57)	1.276 (0.49)
peace	1.258 (0.61)	1.284 (0.67)	1.255 (0.57)	1.288 (0.65)	1.261 (0.59)
lninitial	1.084 (0.68)	1.200 (1.37)	1.256 (1.58)	1.192 (1.27)	1.204 (1.33)
secessio~t	0.814 (-0.83)	0.699 (-1.50)	0.695 (-1.34)	0.705 (-1.33)	0.733 (-1.19)
ethnic	0.996 (-0.02)	1.039 (0.15)	0.995 (-0.02)	1.085 (0.32)	1.079 (0.30)
centrali~n	1.165 (1.17)	1.149 (1.08)	1.204 (1.34)	1.171 (1.12)	1.161 (1.04)
tradeope~s	0.610 (-1.30)	0.583 (-1.45)	0.544 (-1.56)	0.582 (-1.35)	0.597 (-1.27)
intersta~r	0.999 (-0.00)	1.007 (0.02)	1.030 (0.11)	0.939 (-0.23)	0.975 (-0.09)
ethfrac		1.835 (1.50)	1.618 (1.23)	1.233 (0.56)	1.206 (0.49)
Africa			1.125 (0.47)	1.383 (1.31)	1.359 (1.22)
Latin			0.817 (-0.67)	0.814 (-0.67)	0.811 (-0.68)
oda				0.103 (-1.75)	0.0949 (-1.79)
oil					0.863 (-0.55)
N	136	136	136	136	136

Exponentiated coefficients; t statistics in parentheses

\* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 4: Government share with 3-year average

	(1)	(2)	(3)	(4)	(5)
	govtshar3	govtshar3	govtshar3	govtshar3	govtshar3
rebwin	2.318** (3.26)	2.325** (3.18)	2.337** (3.19)	2.291*** (3.69)	2.329*** (3.65)
govwin	1.088 (0.18)	1.097 (0.19)	1.213 (0.40)	1.167 (0.33)	1.148 (0.29)
peace	2.198** (3.10)	2.202** (3.09)	2.135** (2.79)	2.265** (3.18)	2.204** (3.11)
lninitial	1.271 (1.94)	1.282 (1.68)	1.413* (2.26)	1.302 (1.93)	1.349* (2.19)
secessio~t	0.791 (-0.92)	0.780 (-0.97)	0.820 (-0.74)	0.832 (-0.73)	0.885 (-0.49)
ethnic	0.847 (-0.61)	0.851 (-0.60)	0.761 (-1.02)	0.838 (-0.68)	0.819 (-0.77)
centrali~n	1.383** (2.90)	1.380** (2.86)	1.473** (3.14)	1.430** (2.84)	1.402** (2.64)
tradeope~s	0.619 (-1.20)	0.615 (-1.23)	0.542 (-1.48)	0.603 (-1.18)	0.624 (-1.10)
intersta~r	1.645* (1.99)	1.643* (1.98)	1.729* (2.11)	1.551 (1.75)	1.659* (2.06)
ethfrac		1.047 (0.11)	0.924 (-0.18)	0.588 (-1.23)	0.562 (-1.30)
Africa			1.293 (1.10)	1.879** (2.65)	1.809* (2.50)
Latin			0.845 (-0.55)	0.818 (-0.64)	0.776 (-0.82)
oda				0.0217* (-2.22)	0.0182* (-2.27)
oil					0.753 (-1.15)
N	138	138	138	138	138

Exponentiated coefficients; t statistics in parentheses

\* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 5: Government share with 5-year average

	(1)	(2)	(3)	(4)	(5)
	govtshar5	govtshar5	govtshar5	govtshar5	govtshar5
rebwin	1.735 (1.53)	1.844 (1.83)	1.871* (1.96)	1.724 (1.86)	1.828* (2.15)
govwin	1.687 (1.32)	1.804 (1.43)	1.915 (1.53)	1.776 (1.40)	1.677 (1.20)
peace	1.556 (1.47)	1.582 (1.52)	1.570 (1.43)	1.704 (1.72)	1.649 (1.64)
lninitial	1.111 (0.79)	1.177 (1.07)	1.234 (1.32)	1.077 (0.51)	1.103 (0.65)
secessio~t	0.817 (-0.82)	0.728 (-1.26)	0.746 (-1.07)	0.818 (-0.73)	0.879 (-0.49)
ethnic	0.858 (-0.58)	0.887 (-0.47)	0.829 (-0.72)	0.900 (-0.42)	0.884 (-0.49)
centrali~n	1.400** (3.00)	1.383** (2.83)	1.450** (2.95)	1.399* (2.53)	1.372* (2.33)
tradeope~s	0.884 (-0.30)	0.848 (-0.41)	0.806 (-0.53)	0.930 (-0.16)	0.985 (-0.03)
intersta~r	1.121 (0.28)	1.103 (0.24)	1.142 (0.32)	1.027 (0.07)	1.117 (0.29)
ethfrac		1.439 (0.87)	1.268 (0.54)	0.670 (-0.89)	0.643 (-0.98)
Africa			1.151 (0.58)	1.791* (2.21)	1.722* (2.08)
Latin			0.849 (-0.54)	0.883 (-0.40)	0.845 (-0.52)
oda				0.0140* (-2.54)	0.0112** (-2.59)
oil					0.735 (-1.19)
N	136	136	136	136	136

Exponentiated coefficients; t statistics in parentheses

\* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

## CHAPTER 8. CONCLUSION

In this thesis, I examine which civil war outcomes contribute to the recovery of state capacity which deteriorates during the war. Employing survival analysis, I provide empirical support for the hypotheses that rebel victory and negotiated settlements significantly contribute to state capacity recovery. I demonstrate that civil wars terminated with rebel victory and negotiated settlements significantly reduce the time spell for a state capacity recovery considering that state capacity, measured with government share and total revenue of government, decrease during civil wars.

The empirics reveal that, on one hand, Tilly's argument of the predatory theory is supported by data that interstate war is significantly associated with state capacity recovery. However, I argue that different causal mechanisms are also at work in the contemporary developing world other than "states make wars and wars make state". Alongside with war, peace also has a role in facilitating state capacity. The investigation of this paper suggests to include the type of terminations of civil wars into consideration while examining state-society relations during and after civil wars. An interesting result of this paper is that insurgency groups might become an important actor in state formation efforts. This finding, contrary to previous studies, enlarges the pool of civil war actors by including rebellion side into both warfare and negotiation process. In addition, our findings contribute to the extant literature of the impact of civil wars on state capacity by supporting the claim that civil wars generally facilitate state capacity. In short, this paper suggests that the link between war and state formation needs to be further elaborated by disintegration of types of war, adding other actors to the equation such as rebellion and tax payers. While predatory theory might still be relevant in the contemporary world, it needs to be modified for a better understanding of the link between state capacity and war.

Table 4 shows that countries having engaged in interstate conflicts in addition to civil wars have a higher likelihood of recovering their taxation capacity in a short period of time. This gives support to the predatory theory that in order to fund war efforts, countries bargain with their citizens over taxation. As a result of this bargaining process, the state rulers come up with higher extractive capacities (Tilly 1975, 1992). This finding also corroborates the argument that state-building efforts are relevant in contemporary developing countries and in civil wars.

Finally, with respect to future studies, it would be interesting to deconstruct tax ratio, government share, and total revenue to their ingredients to capture a better relationship between these variables and conflict settlement types. As such, for instance, total tax as a percentage of GDP does not demarcate the countries according to through which causal mechanism they retained the total tax ratio. For example, some countries may have a high ratio of total tax as a percentage of GDP because they have a high state capacity however, other countries may have high ratios of total tax as a percentage of GDP because they heavily rely on international trade taxes, mining taxes or natural resources taxes. Another example is that proxying tax-to-GDP for state capacity is that it does not make a distinction among type of taxes (Hendrix 2010). This critique is justified by Kisangani and Pickering (2014) that examining direct taxes, indirect taxes and non-tax revenues have a more explanatory power for understanding state-building efforts. To be brief, employing aforementioned dependent variables by disintegrating their components might yield more adequate results.

Table 6: Relative political capacity 5-year average

	(1) rpc5	(2) rpc5	(3) rpc5	(4) rpc5	(5) rpc5
rebwin	1.206 (0.46)	1.469 (0.95)	1.751 (1.42)	1.663 (1.32)	1.626 (1.23)
govwin	0.889 (-0.32)	1.023 (0.06)	1.062 (0.15)	1.038 (0.09)	1.039 (0.10)
peace	1.073 (0.19)	1.165 (0.42)	1.497 (1.17)	1.522 (1.21)	1.469 (1.07)
lninitial	1.200 (1.09)	1.396 (1.68)	1.550* (2.30)	1.472* (2.10)	1.469* (2.07)
secession~t	1.227 (0.72)	1.021 (0.07)	0.830 (-0.54)	0.837 (-0.54)	0.858 (-0.47)
ethnic	0.741 (-1.01)	0.765 (-0.94)	0.666 (-1.21)	0.695 (-1.13)	0.693 (-1.15)
centrali~n	0.911 (-0.61)	0.890 (-0.75)	0.973 (-0.15)	0.962 (-0.21)	0.945 (-0.30)
tradeope~s	0.349* (-2.34)	0.312* (-2.50)	0.283** (-2.87)	0.294** (-2.77)	0.308* (-2.56)
intersta~r	2.183* (2.47)	2.183** (2.71)	2.017* (2.23)	1.954* (2.18)	2.016* (2.37)
ethfrac		2.089 (1.36)	1.315 (0.49)	1.010 (0.02)	1.016 (0.03)
Africa			0.853 (-0.57)	1.059 (0.19)	1.028 (0.09)
Latin			0.333* (-2.25)	0.333* (-2.25)	0.333* (-2.25)
oda				0.133 (-1.22)	0.124 (-1.25)
oil					0.859 (-0.55)
N	130	130	130	130	130

Exponentiated coefficients; t statistics in parentheses

\* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Table 7: Total revenue 5-year average

	(1)	(2)	(3)	(4)	(5)
	totalrev5	totalrev5	totalrev5	totalrev5	totalrev5
rebwin	0.927 (-0.18)	0.960 (-0.09)	0.998 (-0.00)	1.031 (0.07)	1.035 (0.09)
govwin	1.104 (0.24)	1.324 (0.70)	1.463 (0.91)	1.389 (0.78)	1.371 (0.72)
peace	1.581 (1.28)	1.767 (1.67)	1.984* (2.13)	1.957* (2.06)	1.930* (1.99)
lninitial	1.083 (0.56)	1.248 (1.29)	1.404* (1.96)	1.302 (1.63)	1.300 (1.61)
secession~t	1.225 (0.80)	0.976 (-0.09)	0.990 (-0.03)	1.058 (0.20)	1.072 (0.25)
ethnic	0.843 (-0.67)	0.888 (-0.49)	0.773 (-1.02)	0.833 (-0.75)	0.830 (-0.76)
centrali~n	1.091 (0.59)	1.050 (0.32)	1.161 (0.96)	1.135 (0.79)	1.130 (0.76)
tradeope~s	0.513 (-1.80)	0.458* (-1.99)	0.405* (-2.24)	0.443* (-1.98)	0.452 (-1.87)
intersta~r	1.112 (0.28)	1.093 (0.23)	1.126 (0.30)	1.033 (0.08)	1.062 (0.15)
ethfrac		2.241 (1.80)	1.635 (1.04)	1.176 (0.35)	1.176 (0.35)
Africa			1.240 (0.86)	1.773* (2.22)	1.745* (2.09)
Latin			0.610 (-1.18)	0.638 (-1.06)	0.638 (-1.06)
oda				0.0405 (-1.92)	0.0394 (-1.92)
oil					0.936 (-0.24)
N	135	135	135	135	135

Exponentiated coefficients; t statistics in parentheses

\* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table 8: Tax ratio 5-year average

	(1)	(2)	(3)	(4)	(5)
	taxratio5	taxratio5	taxratio5	taxratio5	taxratio5
rebwin	1.119 (0.32)	1.252 (0.66)	1.417 (0.91)	1.415 (0.99)	1.551 (1.38)
govwin	1.113 (0.24)	1.286 (0.57)	1.328 (0.59)	1.276 (0.51)	1.307 (0.62)
peace	1.065 (0.17)	1.171 (0.43)	1.740 (1.56)	1.699 (1.47)	1.457 (0.98)
lninitial	1.158 (1.11)	1.311 (1.80)	1.439* (2.45)	1.343* (2.07)	1.376* (2.30)
secessio~t	1.065 (0.24)	0.846 (-0.57)	0.571 (-1.60)	0.603 (-1.54)	0.662 (-1.36)
ethnic	0.942 (-0.21)	0.996 (-0.01)	0.986 (-0.04)	1.023 (0.07)	1.015 (0.05)
centrali~n	0.934 (-0.48)	0.911 (-0.64)	0.959 (-0.28)	0.952 (-0.33)	0.872 (-0.84)
tradeope~s	0.659 (-1.00)	0.600 (-1.22)	0.569 (-1.47)	0.600 (-1.29)	0.740 (-0.76)
intersta~r	1.021 (0.06)	1.019 (0.05)	0.863 (-0.40)	0.822 (-0.54)	0.991 (-0.03)
ethfrac		2.035 (1.61)	1.535 (0.95)	1.100 (0.22)	1.171 (0.37)
Africa			0.622 (-1.81)	0.848 (-0.59)	0.734 (-1.15)
Latin			0.293** (-3.14)	0.299** (-3.02)	0.276*** (-3.30)
oda				0.0650 (-1.72)	0.0369 (-1.85)
oil					0.465** (-3.09)
N	136	136	136	136	136

Exponentiated coefficients; t statistics in parentheses

\* p&lt;0.05, \*\* p&lt;0.01, \*\*\* p&lt;0.001

Figure 1: Survival time of rebel victory with government share 1-year average

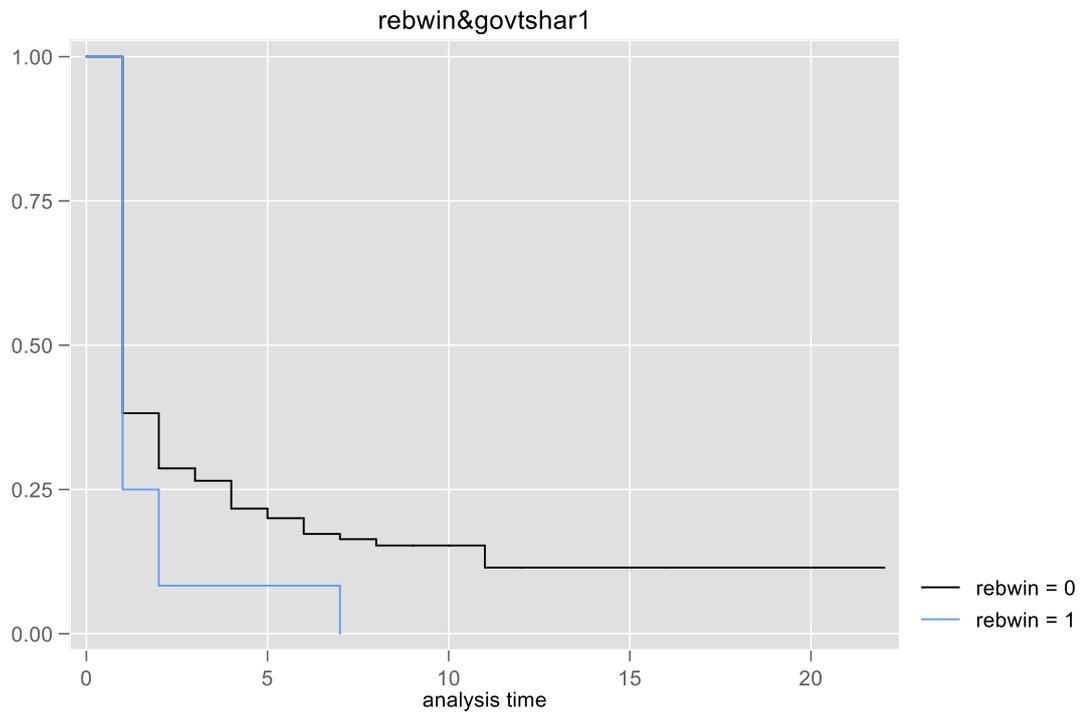


Figure 2: Survival time of rebel victory with government share 3-year average

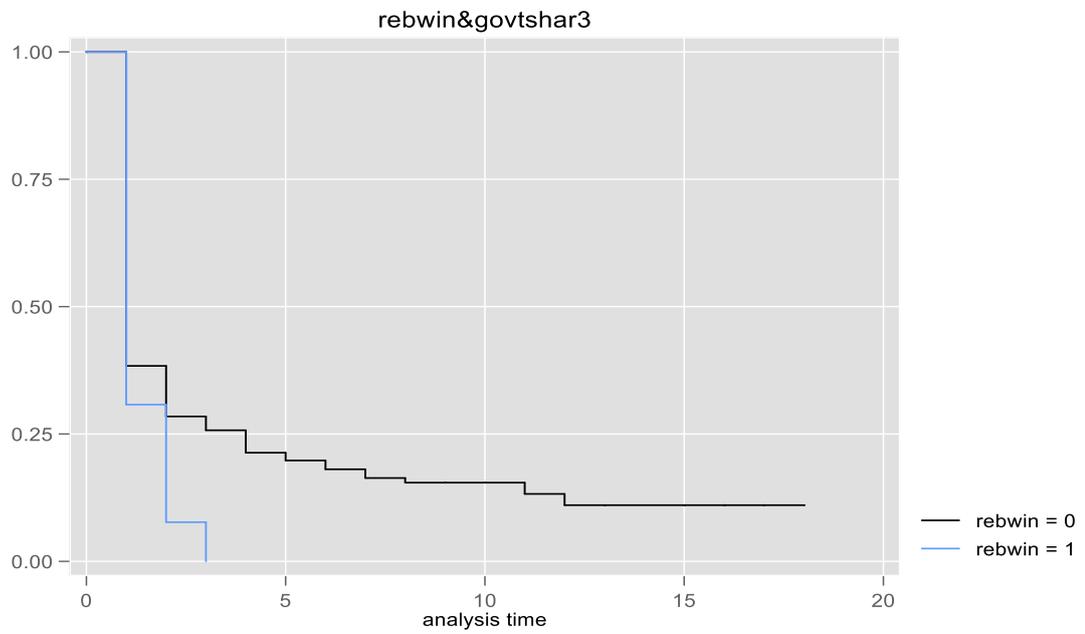
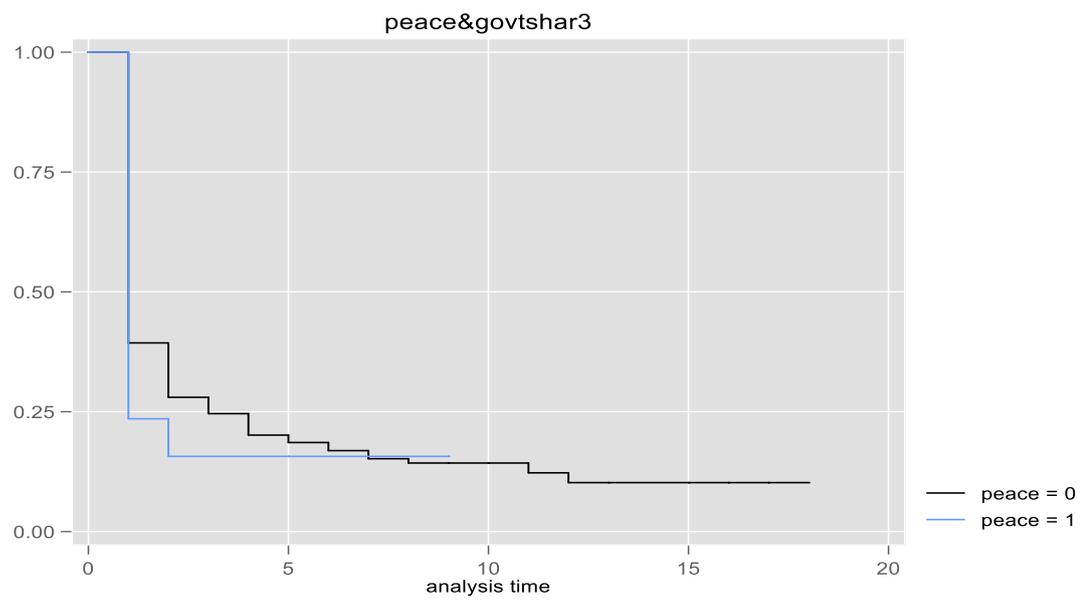


Figure 3: Survival time for peace with government share 3-year average



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