

**Feeding Civil War:
Markets, Resources, and Rebel Organizations**

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ABSTRACT:

To survive, civilians in conflict areas must have access to food and other basic goods and services. Understanding when and how markets function is important for understanding civilian welfare and how it varies both between conflicts and within a particular conflict. I argue that civilian welfare in rebel territory, as measured through market activity, depends on how rebel groups constrain their own opportunistic behavior. When rebel groups depend primarily on *top-down resources*—resources managed directly by the rebel leader—rebel superiors can control their subordinates through monetary incentives and the threat of punishment. This control becomes problematic when rebel groups depend on *bottom-up resources*—i.e. when rebel leaders must generate the revenue needed to sustain the organization from their commanders' territories. Incentive-based control, however, is never perfect. Some degree of opportunistic behavior will occur unless rebel members are socialized into the group. Socialization is important because it creates common knowledge and reputations within the group. Socialization can take a variety of forms, but is determined mostly through training. This theory is supported by narratives of three rebel groups: NPFL and LURD in Liberia, and CNDP in DR Congo.

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1. Introduction: Three Snapshots of Conflict¹

In Kingi, a small town nestled in the hills of eastern Congo, a few men load bicycles with sacks of charcoal. Nearby, a group of women sit on blankets and sell rice, sandals, and *mtobe*, a local banana beer. A small hut sits next to the market, and two rebel soldiers sit inside. For three months Kingi has been under the control of the CNDP rebels, led by General Laurent Nkunda. Each morning, men and women haul charcoal 12km down the hill to the government-controlled town of Sake to exchange for food, and then carry the food back up to the village. The rebels tax this trade: each market seller pays CDF100 (US\$0.20) for a place in the market, and each sack of charcoal is taxed CDF400 (US\$0.80). The civilians have a cordial relationship with the rebel soldiers stationed in the market, and the soldiers often purchase food from the local sellers. Although hundreds of thousands of civilians have been displaced by fighting in the area, those who remain in CNDP territory are able to travel and conduct business relatively freely.

In Liberia, in late 2002, the town of Madina was under the control of the LURD rebels. The rebels systematically looted the town and forced the residents to carry heavy loads to the Sierra Leone border, to be exchanged for food and military supplies. Civilians did not receive any food from the rebels; they survived by foraging in the surrounding jungle. Travel was dangerous and heavily restricted. Civilians who tried to escape were severely punished. Although the rebels occupied the town for nearly two years, the situation never improved; survival was a constant struggle.

Ten years earlier, in 1992, Madina was under the control of Charles Taylor's NPFL rebels. A bustling market existed in town, and civilians were able to sell goods freely. The town chief provided food to the local rebel commander who then distributed it to his soldiers. There

¹ The following descriptions are drawn from interviews and observations in Kingi, Democratic Republic of Congo, 9 November 2007; and Madina, Liberia, 27 July 2007.

was an adequate supply of food for the town's residents, even though there were food shortages in other parts of the country. Civilians were allowed to travel, but it was risky: rebel soldiers often looted goods from civilians on the roads outside of town.

These snapshots of civilian life during civil war raise several questions. Why are civilians in Congo able to travel through rebel territory without fear of being looted? Why were civilians in Madina so much better off under the NPFL rebels than under the LURD rebels? More generally, what explains civilian welfare during conflict?

More than 127 civil wars in 73 different states have occurred since World War II, resulting in the deaths of more than 16.2 million people (Fearon and Laitin 2003). This death toll is astounding, but is ultimately overshadowed by the indirect costs of war—war-induced malnutrition and disease (Ghobarah, Huth, and Russett 2003). A series of mortality surveys in the Democratic Republic of Congo finds that only a fraction of the 4.4 million war-related deaths were caused directly by violence (Coghlan et al. 2006). The international community spends \$15 billion per year on emergency assistance, mostly to alleviate these indirect consequences of war (Fearon forthcoming). These relief efforts, however, are hampered by an inadequate understanding of how civilians cope with conflict and how rebel groups shape the humanitarian situation in their territories (FAO 1996).

Civilian welfare during civil war depends on (1) violence against civilians and (2) market activity in the conflict areas. To survive, civilians in conflict areas must have access to food and other basic goods and services. Although some civilians may be self-sufficient, most people depend on markets and trade to acquire food and other necessities. Understanding when and how markets function is an important step to understanding civilian welfare and how it varies both between conflicts and within a particular conflict. The existing literature on civil war tends to

focus on violence as the dependent variable, but struggles to incorporate violence into a rational-choice framework (Keen 2002). Violence can occur for many reasons. A rebel group may commit violence because of tactical objectives (Laqueur 2004 [1974]), looting opportunities (Keen 1998), ill disciplined and opportunistic members (Weinstein 2007), social or psychological factors (Abdullah 1998; Kaplan 1998; Leon 1969), or simply because of a chance encounter with a government contingent. Market activity offers a conceptual advantage over the study of violence because market activity is more clearly economically motivated. A rebel soldier always has some incentive to acquire food or expropriate goods from the market; a soldier does not necessarily have an incentive to commit violence. Although market activity is affected by violence—markets are not likely to function during periods of intense fighting—the high degree of variation across conflict areas reveals the importance of studying markets during war.

The study of markets and domestic trade also contributes to the burgeoning literature on “war economies” (Pugh and Cooper 2004; Berdal and Malone 2000; Collier et al. 2003; Ballentine and Sherman 2003; Ross 2004; Snyder 2004). The war economy literature focuses almost exclusively on commodity exports and neglects the economic interactions between rebel groups and civilians. Understanding these ground-level economic transactions should be a research priority (Humphreys 2003).

I argue that civilian welfare in rebel territory, as measured through market activity, depends on two factors: 1) the ability of rebel superiors to control their subordinates through monetary incentives and punishment, and 2) the socialization of the rebel members. Although supply and demand are important for explaining market activity, these economic forces are largely shaped by how rebels exercise authority over the market area. When rebel leaders have

incentives to maintain order, market activity depends on the rebel group's ability to constrain its own opportunistic behavior. When rebel groups depend primarily on *top-down resources*—resources managed directly by the rebel leader—rebel superiors can control their subordinates through monetary incentives and the threat of punishment. This control becomes problematic when rebel groups depend on *bottom-up resources*—i.e. when rebel leaders must generate the revenue needed to sustain the organization from their commanders' territories. Even top-down control, however, is never perfect. The uncertainty of the conflict environment often prevents effective monitoring. Some degree of opportunistic behavior will occur in top-down groups unless rebel members are socialized into the group. Socialization decreases opportunistic behavior by creating common knowledge and reputations within the group. Socialization can take a variety of forms, but is determined mostly through training.

This theory applies only to rebel organizations that satisfy three criteria: the rebel organization must be territorially based, have an incentive to protect markets, and not be formed around unusually strong ethnic or ideological affinities. I discuss these scope conditions further in later sections. Despite the restricted universe of cases, the theory applies to a wide range of modern and historical civil wars. The theory implies three predictions of market activity within a conflict area. First, widespread market failure results when rebel leaders cannot control their subordinates through incentives and those subordinates are not socialized. Second, high levels of market activity can occur in towns and other important areas, but not outside of those areas, when rebel leaders can control their subordinates through incentives but the subordinates are not socialized. Third, high levels of market activity can occur throughout a rebel group's territory when the rebel leader can control his subordinates and the subordinates are socialized. A fourth possibility, when rebel leaders cannot control their subordinates through monetary incentives but

the subordinates are nonetheless socialized, will be considered, although the theory does not offer any firm predictions concerning the outcome. These predictions are summarized in Table 1.

{Table 1 about here}

This theory is based on fieldwork in Liberia and the Democratic Republic of Congo.² I focus on three rebel groups—the LURD and NPFL rebels in Liberia, and the CNDP rebels in DR Congo—to consider the effects of resources on incentive-based control, the limits of this control, and the role of socialization in rebel groups.

The paper proceeds as follows. Section 2 discusses market activity in the context of civil war, its relation to rebel governance, and the applicability of existing theories. Section 3 considers incentive-based control through several formal models, and then examines the NPFL and LURD rebels in Liberia. The section demonstrates how differences in resources between the groups led to variation in control, even though the two organizations shared similar incentives. Section 4 discusses socialization and emphasizes the creation of common knowledge and reputations within rebel organizations. The section examines the CNDP rebels in Congo with reference to the NPFL in Liberia to demonstrate how socialization affects market activity between two groups that possess similar resources. Section 5 addresses alternative explanations and considers ways of testing the theory. Section 6 concludes.

² Fieldwork in Liberia was conducted July-August 2007 in 22 study locations, ten of which were randomly selected. Fieldwork in DR Congo was conducted in November 2007. Due to active fighting at the time, my research was restricted to four locations in CNDP territory (Mushake, Kimoka, Kingi, and Bunagana). These fieldsites in DRC are some of the most unstable areas of CNDP control, and therefore present a tough case for market activity.

2. Markets and Rebel Governance

Neoclassical economics focuses on supply and demand as the determining factors of market activity. Markets function whenever suppliers can provide a good at a price consumers are willing to pay. From this perspective, the presence of civil war in a given area simply shapes these market forces. Violence destroys resources and causes people to flee the conflict area, decreasing demand. The instability resulting from the conflict makes it more difficult to transport and sell goods, decreasing the supply. Higher prices and lower quantities of goods are the predictable results. This neoclassical model, however, does not provide much insight into how markets function during conflict because it assumes property rights are perfectly enforced. Property rights cannot be taken for granted, especially in conflict areas (Dixit 2004: 3). The institutional context strongly shapes market outcomes (e.g. North 1990).³

The way in which a rebel group governs its territory determines the level of market activity within that territory. The behavior of the rebel group affects the size of the remaining population (demand), as well as the costs and risks associated with bringing goods to market (supply). Rebel groups, by providing authority, also determine the nature of property rights in their territories. Market activity depends on traders who transport valuable goods across unstable areas, cross roadblocks manned by armed rebel soldiers, and exchange those goods in highly visible, public markets. Avner Greif (2005) argues that market exchange depends on the existence of contract-enforcing and coercion-limiting institutions. During conflict, these institutions depend on the armed group that controls the territory in which market exchange occurs. The extent to which a rebel organization protects and enforces the property rights of

³ This is the main thrust of the “new institutional” economics.

these traders—i.e. the extent to which the rebel organization can enforce contracts and limit its own coercive power—determines the level of market activity in rebel territories.

There are at least two ways of conceptualizing and measuring market activity during conflict. The first method compares the economic activity during the war to the pre-conflict levels. If the quantities and prices of goods traded do not significantly decrease due to the conflict, the level of market activity can be considered high.⁴ This approach is problematic for two reasons. First, sufficient data on local trade—either before or during conflict—do not exist to allow for a robust analysis. Even where data exist, they are likely to be highly inaccurate. The size of the informal economy in a developing, conflict-prone country often overshadows the official trade captured in statistics (e.g. MacGaffey 1991). Second, market activity depends on numerous, interdependent factors that cannot be controlled for. Transportation costs, world commodity prices, shocks to neighboring economies, and other factors all play a role in shaping the quantity and prices of goods for sale in even the most remote markets.

A second way of measuring market activity focuses on the enforcement of property rights. Property rights can be enforced either selectively or impersonally. Selective enforcement of property rights occurs when only traders with personal connections to the rebels can sell goods in rebel areas. In this situation, the rebels may prey on the civilians, but some traders can use their connections with the rebels to protect themselves and their goods. By contrast, impersonal exchange occurs when traders do not need personal connections to sell their goods; property rights are enforced equally for all civilians. Impersonal exchange requires that the rebel group successfully constrain the opportunistic behavior of its members.

⁴ In some cases, more goods may be available for lower prices during certain phases of the conflict than before the conflict. For example, after the LURD rebels captured the Freeport in Monrovia, Liberia, in August 2003, markets in LURD territories were flooded with looted goods for sale at prices below the cost of manufacturing.

Between these two extremes are situations in which traders and civilians do not need personal connections, but must belong to a certain group or ethnicity to engage in market exchange; those who do not belong to the favored group may be targeted for looting, or worse. Most real-world situations combine aspects of all three scenarios. For example, even when traders do not require personal connections to be able to engage in market activity, traders may be able to use their connections to reduce costs and achieve a comparative advantage in the market (Lane 1958: 409-10).

For the purposes of this paper, I will define “high” market activity as a situation in which impersonal exchange can occur, even if a significant amount of trade is based on personal connections. Low market activity occurs when *only* traders with personal connections to the rebels can engage in market exchange. Market failure occurs when civilians must rely on foraging or small-scale smuggling to acquire food. Although this conception of market activity is not as empirically rich as a more quantitative measure of market trade, it allows for easier coding of the dependent variable while still capturing the organizational challenges of rebel governance.

Existing theories add some insight into explaining market activity during conflict. Mancur Olson (1993) argues that an authority with a monopoly on violence will have an “encompassing interest” to promote economic activity and refrain from expropriation, provided that his time horizon is long enough. Even during conflict, the local authority will not expropriate goods in the market unless he lacks stable control over the territory, or does not expect to retain control for much longer. Although Olson’s model is attractive for its simplicity, the theory is problematic because Olson assumes the authority is a unified actor, rather than an organization with competing interests. During conflict, rebel superiors may be unable to prevent their subordinates from acting opportunistically; even if the authority favors economic activity,

markets may not function in his territory. Market activity, therefore, depends on the rebel superior's ability to control his subordinates. And this depends on the hierarchical structure of the rebel organization.

Hierarchy, it is argued, can reduce some of the costs associated with market transactions, especially when there is a risk of opportunism (Klein, Crawford, and Alchian 1978; Williamson 1985). But while some of the challenges of market exchange are addressed, hierarchy creates its own problems. Hierarchical superiors are not able to perfectly monitor their subordinates, who always possess a certain amount of private knowledge and have an incentive to misrepresent this knowledge. This creates two fundamental problems: adverse selection and moral hazard (Moe 1984). In firms, adverse selection occurs because an employer cannot know the "type" of a potential employee, i.e. whether he is a hard worker or a shirker. Moral hazard occurs because an employer cannot directly observe employee behavior at all times, so there is a risk the employee will act opportunistically.

This problem is especially acute in rebel organizations, since rebel groups cannot rely on third-party enforcement of contracts or external judicial systems to punish members who misbehave. Screening, monitoring, and incentive mechanisms can overcome these problems to some extent, but Gary Miller (1992) shows that it is impossible to design a perfect incentive structure. Further, Akerlof and Kranton (2005) argue that monetary rewards and punishments are often ineffective at motivating subordinates; more important is the extent to which subordinates identify with the organization. And Granovetter (1985) argues that interpersonal relations and social obligations within organizations discourage inappropriate behavior separately from the institutional structures. Opportunism therefore can only be minimized where groups can inspire cooperation and the sacrifice of short-term interests in favor of long-term results. The way in

which organizations *socialize* their members explains differences in behavior between two organizations with similar incentive schemes.

Jeremy Weinstein (2007) applies the theories of adverse selection and screening to the study of rebel groups. He argues that the initial resource base of a rebel group influences the type of members it attracts, which then shapes the group's behavior throughout the war. Rebel groups with access to economic resources, such as external financing or diamonds, will attract opportunistic recruits who are more likely to abuse civilians. Rebel groups that lack economic resources rely instead on long-term promises and appeals to shared ideals or identity. These groups attract committed members who are willing to sacrifice short-term benefits for the good of the organization and the local communities. Adverse selection, therefore, explains why some rebel groups fail to constrain the opportunistic behavior of their members, resulting in suboptimal outcomes.

Weinstein's theory is a powerful tool for dividing rebel groups into two categories—ideological or opportunistic—and understanding the general trends of each. The theory is less able to explain variation among rebel groups within each category, variation within a single rebel group's territory, or how different types of resources lead to different outcomes. More generally, adverse selection is only a partial explanation for abusive rebel behavior. Economic models of firms often assume employees are “self-interest seeking with guile,” but nonetheless propose incentive contracts for controlling their behavior (e.g. Williamson 1983: 354). Further, many organizations that suffer from adverse selection, such as police departments and government militaries, can still function effectively and behave with restraint. These organizations overcome the problem of adverse selection through incentives, punishment, and socialization.

Humphreys and Weinstein (2006) focus on the internal cohesion of units within armed groups to explain variations in civilian abuse, specifically looting. Ethnically heterogeneous units that lack mechanisms to discipline internal behavior are more likely to abuse the civilian populations. Homogeneous units composed of members with common goals that set in place disciplinary structures are less abusive towards civilians. This argument demonstrates that organization is the key variable for explaining rebel behavior towards civilians. Ethnic homogeneity, however, only partially explains the presence of disciplinary structures. It is not clear why commanders are unable to control soldiers in heterogeneous units. And although ethnic homogeneity may facilitate group cohesion, commanders can rely on other methods to build trust and identity among their soldiers. The key insight of the paper, however, remains clear: cohesion is important. And group cohesion depends on the socialization of the rebel members.

A critical examination of existing theories suggests that market activity depends on the ability of rebel groups to constrain their own opportunistic behavior. Opportunism is constrained by incentives and punishment, but also depends on socialization within the group. The above discussion assumes, however, that rebel leaders *want* to protect market activity in their territories. Certainly there are incentives to promote market activity: markets supply revenue and food for civilians and rebel soldiers. As one trader in Kolahun, Liberia, explained, “Rebels need to eat.”⁵ Acquiring food from the market is often more efficient than relying on coordinated distribution within the rebel organization.

Some rebel groups, however, may have an incentive to disrupt markets completely, or to disrupt market activity in certain areas or among certain groups. In their study of a failed

⁵ Interview, Kolahun, Liberia, 16 July 2007.

rebellion in Uganda, Hovil and Werker (2005) suggest that large-scale violence and disruption of market activity may be a way for rebel groups to overcome principal-agent problems with their external financiers: widespread disorder is a highly visible signal that the rebels are putting the financier's money to good use. In Sierra Leone, the RUF rebels intentionally disrupted market activity in certain areas, sometimes chopping off farmers' hands during the harvest season (Gberie 2005: 137). The RUF's reasons for undertaking such systematic brutality, however, remain unclear.

The fact that some rebel groups may have an incentive to disrupt market activity poses a challenge for the researcher. Market failure could result either from a lack of control within the rebel organization or from the group's incentives to intentionally disrupt market activity, whether or not the group can control its members. Any analysis that seeks to explain market failure as a sub-optimal outcome must therefore demonstrate that the rebel group would benefit from market activity, or show that the group has attempted and failed to promote market activity in its territory. Groups that do not have compelling incentives to promote market activity fall beyond the scope of this theory. With this challenge in mind, I will now consider how rebel groups establish incentive-based control in uncertain environments, and the role of resources in shaping the limits of this control.

3. Resources, Control, and Uncertainty in Rebel Organizations

Consider a stylized rebel group that consists of three levels of hierarchy: leader, commander, and soldier. A single rebel leader heads the organization, but to govern his territory the leader must delegate control to several rebel commanders. Each commander controls a well-defined area and establishes checkpoints, each of which is manned by several rebel soldiers. Every level of

hierarchy creates a principal-agent problem: the soldiers' incentives are not necessarily compatible with the commanders' incentives, and the commanders' incentives are not necessarily compatible with the leader's incentives. Assume that the rebel leader has an incentive to protect market activity in his territory. Under what conditions will the rebel leader be able to realize his policy objectives?

I argue that a rebel leader can create the incentives necessary to control his subordinates when the rebel leader personally controls a large proportion of the group's resources, what I refer to as *top-down resources*. Top-down resources include contracts with foreign companies for resource extraction, funding from foreign governments, or other sources of revenue that accrue directly to the rebel leader. Purely incentive-based control becomes more difficult when the group depends on *bottom-up* resources. Bottom-up resources include easily exploitable natural resources, looted materials, and some forms of agricultural production; most forms of taxation can also be considered bottom-up resources. In either case, incentive-based control is never perfect, and quickly fails in the face of imperfect information. To illustrate this argument, I will outline a series of simple formal models. I begin with the case of top-down resources.

3.1 Top-Down Resources and Hierarchical Control

Consider a rebel group that depends primarily on top-down resources. The rebel leader has an incentive to promote market activity, but must rely on a commander to enact policies conducive to this market activity. Assume the rebel leader can perfectly monitor his commander and that the commander can perfectly control his soldiers—whatever policy the commander decides will

be perfectly implemented by his troops.⁶ The commander can decide to either Tax (T) or Loot (L) the territory under his control. There is a certain amount, V , of productive capital in the territory. If the commander decides to Tax, the commander receives a percentage τ of the productive capital and also receives a salary, S , from the rebel leader, resulting in a payoff of $\tau V + S$.⁷ If the commander decides to Loot, he captures a percentage α of the productive assets, receiving a payoff of αV . These productive assets are removed from the economy, however, so in the next round the total amount of productive assets is $(1-\alpha)V$. Assume $\alpha > \tau$, so the commander can reap more benefit in each period from looting than through taxation. Future payoffs are discounted by a factor, δ . Figure 1 depicts the commander's payoffs.

{Figure 1 about here}

If the commander chooses to tax in every period, his total payoff is:

$$\sum_{n=0}^N \delta^n (\tau V + S)$$

where N equals the number of rounds.⁸ For large N , this payoff simplifies to:

$$\frac{1}{1-\delta} (\tau V + S)$$

If the commander chooses to Loot in every round, his payoff is:

$$\sum_{n=0}^N \delta^n \alpha (1-\alpha)^n V$$

For large N , this simplifies to:

⁶ A similar model can be used to describe the commander's ability to control his soldiers, which I will discuss below.

⁷ Assume that the rebel leader receives a payoff A if the commander decides to tax, reflecting the leader's preference for market activity. Assume A is strictly greater than S and that the leader will never renege by withholding the salary after observing taxation.

⁸ It is important to keep in mind that these are finite games, although there may be some uncertainty over when the game will end. Assuming N is large allows for simplification that makes the relationships more accessible, without significantly changing the values.

$$\frac{1}{1 - \delta(1 - \alpha)}(\alpha V)$$

The goal of the model is to show that taxation can be sustained in a top-down rebel group. In a one-shot game (i.e. the commander's discount factor equals zero), the commander will choose to tax if $S > (\alpha - \tau)V$. For a sufficiently long time horizon, the expected returns to taxation will exceed the expected returns to looting. Taxation is more profitable than looting when $\delta^* \geq \frac{1 - \tau}{1 - (1 - \alpha)\tau}$. In this situation the commander will choose to tax even if he receives no salary from the rebel leader. For moderate discount factors, $0 < \delta < \frac{1 - \tau}{1 - (1 - \alpha)\tau}$, the salary required to sustain taxation decreases as the commander's time horizon increases. In any finite game, however, the commander will decide to loot in the final rounds unless $S > (\alpha - \tau)V$, the salary required to sustain taxation in a one-shot game. This end-game defection does not imply that the game will unravel through backwards induction;⁹ taxation will remain the dominant choice throughout much of the game.

Given the rebel leader's preference for market activity and his control of sufficient top-down resources, the rebel leader can create incentives to effectively control his commanders, even if the commanders have short time horizons. The situation is significantly different if the rebel leader must extract bottom-up resources from his commanders' territories.

⁹ The commander will begin looting N rounds from the end of the game, where
$$N = \frac{\ln(S) - \ln(\alpha - \tau)V}{\ln(1 - \alpha)}.$$

3.2 Bottom-Up Resources and the Failure of Control

Consider a situation in which the rebel commander makes the same decision as before, between Taxation (T) and Looting (L), but the commander does not receive a salary from the rebel leader. Instead, the rebel leader is the second player in the game¹⁰ and also chooses in each round to Tax (T) or Loot (L). If both the commander and the rebel leader choose to tax, the leader receives an additional non-monetary payoff, A , reflecting his preference for market activity. The rest of the payoffs are similar to the previous game: if either player chooses to loot, the productive capital of the territory is diminished and future payoffs decrease. Figure 2 describes the game:

{Figure 2 about here}

Each player is better off looting in any particular round, since α is greater than τ . The key variables in the model are A and δ . Taxation can be stable if: (1) A is sufficiently large so that the rebel leader always prefers to tax so long as the commander also chooses to tax, and (2) δ is sufficiently large so that the commander can expect more income from taxation than from looting. If either A or δ is not sufficiently large, the players face a commitment problem similar to the Centipede game (Rosenthal 1981; Kreps 1990a; Morrow 1994).

In situations where δ is sufficiently large but A is not,¹¹ the model predicts that both players will choose to loot, even if both players would reap higher payoffs from taxation. In this

¹⁰ I assume the leader delegates responsibility for capturing and administering a territory to the commander, thus the commander is the first mover. The outcome of the game, however, is not changed if the leader is the first mover, or if the leader and commander move simultaneously.

¹¹ If A is constant and doesn't depend at all on the history of looting, then the model predicts that a (Loot, Loot) equilibrium could eventually revert to a (Tax, Tax) equilibrium since the difference in payout between taxation and looting will grow arbitrarily small as the territory's stock of productive capital is depleted. On the one hand, this may be an interesting empirical prediction. On the other hand, it is probably more reasonable to expect A to decrease as the looting progresses, since any non-monetary payoff the leader would receive would probably evaporate as his forces pillage the territory. In this case, the (Loot, Loot) equilibrium would be sustained.

case, the commander will choose to loot because the rebel leader cannot credibly commit to restraining his own opportunistic behavior, and vice versa. Similar to Gary Miller's (1992) argument about incentive compatible contracts in firms, any attempt by the rebel leader to create incentives for his commander to tax simply increases the leader's incentives to loot (p. 154-5). For any finite number of rounds, independent of the discount factor, backwards induction predicts that the game will unravel to a (Loot, Loot) equilibrium, resulting in a suboptimal outcome for everyone involved.

The model raises a key question: how likely is it for a rebel leader to reap a non-monetary payoff, A , so large that he could credibly commit to refrain from looting? Non-monetary payoffs could relate to political aspirations, ethnic ties, or other benefits. A rebel leader, however, faces many day-to-day challenges: he must maintain leadership in the movement and supply the weapons and materiel necessary to wage war against the state. Each of these challenges might encourage the rebel leader to renege in a certain period, choosing to loot in order to receive a higher payout and ensure the survival of the organization. Expecting such behavior, a commander may choose to loot first, thereby maximizing his own payoff. Nevertheless, some groups may form around exceptionally strong ethnic, ideological, or social affiliations. In these cases, taxation and other forms of bottom-up resource extraction can be maintained without risk that subordinates will engage in looting. Such organizations correspond to the "ideological" rebel groups identified by Weinstein (2007) and fall beyond the scope of this theory.

The model can be deepened by allowing the rebel leader and the commander to have different discount factors, δ_L and δ_C . Even if a rebel leader expects to be a "stationary bandit", his commanders may not expect to maintain control over their territories indefinitely. During

war, commanders face a risk of transfer, death, or falling out of favor with the rebel leader. The commander's time horizon, therefore, is likely to be much shorter than the leader's time horizon, thus looting is more likely to be the dominant strategy. Control problems are further exacerbated when soldiers are added to the game. Consider a game that involves soldiers, the commander, and the rebel leader, and each player decides whether to tax or loot. Each player must be able to commit to refrain from looting, either through their non-monetary payoff, A_i , or through their time horizon, δ_i . This condition is less likely to be satisfied as the number of players increases and looting is the probable outcome.

3.3 Uncertainty and Control

Even rebel leaders who depend on top-down resources cannot perfectly control their subordinates when they lack perfect information regarding their activities. Returning to the first model, consider a situation in which the rebel commander can choose to loot, and there is some chance, p , that the rebel leader will not notice the looting and still pay the commander a salary, S . Figure 3 depicts the commander's payoffs:

{Figure 3 about here}

In this situation, the expected utility of looting in the first period is $\alpha V + pS$, while the expected utility of taxation is $\tau V + S$. If the commander does not expect to generate more revenue through taxation than looting,¹² there exists a p^* such that looting is strictly better than taxation, regardless of salary. No matter how much salary the rebel leader pays his subordinates, he cannot control their behavior without effective monitoring. Importantly, the δ in this model applies to the commander's time horizon, not the rebel leader's time horizon. Market activity will collapse

¹² This expectation depends on the commander's discount factor, δ , and the number of rounds, N .

if monitoring is ineffective and commanders cannot maintain a long time horizon through stable control over well-defined areas. This model can also apply to the interaction between a commander and his soldiers. If soldiers are not given stable control over certain well-defined locations—a roadblock, for example—and the commander cannot monitor them effectively, the soldiers will have little incentive to protect the property rights of civilians.

What determines p ? Many factors could influence monitoring within rebel organizations. Geographic distance, active conflict, and ethnic or ideological divisions could all be significant variables that hinder the ability of rebel superiors to monitor their subordinates (Gates 2002). The model implies that remote, rural areas and small villages are more likely to suffer from looting than large towns and other easily monitored areas. Looting is also more likely to occur just after a battle, when the individuals and groups responsible for the looting are less likely to be identified.

3.4 Punishment and Control

The models so far have assumed that rebel organizations are not able to use punishment to control their members. How does punishment affect control? Is it possible for bottom-up rebel groups to overcome control problems through punishment?

The ability to control subordinates through the threat of punishment depends on the subordinate's expectation of future payouts and his reservation utility, i.e. the point at which the subordinate is better off leaving the organization and returning to civilian status. Rebel commanders in top-down rebel groups receive transfers from the rebel leader that significantly increase their income. By definition a large proportion of the resources in a top-down rebel group are controlled by the rebel leader, thus the revenue that rebel commanders can acquire through

taxation and/or looting is comparatively small. Rebel commanders face a large opportunity cost if they leave or are expelled from the organization. Rebel leaders can therefore punish rebel commanders fairly harshly before the expected utility of remaining in the organization falls below their reservation point. Likewise, commanders can punish their soldiers. Punishment is an effective tool in top-down organizations.

Bottom-up rebel organizations face a different challenge. A rebel commander earns his largest possible payout through looting. And because looting decreases the stock of productive capital in the territory, his future expected payouts are diminishing. A rebel leader can inflict some punishment on a rebel commander, but not as much as a leader in a top-down organization. The rebel commander may also act strategically by maximizing his looting in earlier periods to decrease the opportunity cost of leaving the organization later on. In a (Loot, Loot) equilibrium, punishment is not an effective means of control.

3.5 The NPFL: Foreign Contracts, Local Markets, and Imperfect Control

On Christmas Eve, 1989, Charles Taylor led approximately 100 Libyan-trained commandos across the Côte d'Ivoire border into Liberia. The group called itself the National Patriotic Front of Liberia (NPFL), and the success of their invasion was astonishing: the rebels swept across the country, attracting followers and causing government soldiers in many towns to flee without a fight. By June 1990, six months after the start of the war, the NPFL reached the suburbs of Monrovia, Liberia's capital city. By this point, most of the country was under NPFL control.

When the NPFL captured a town in the early period of the war, there was generally no fighting. The commander would gather the residents together in the town make an announcement and introduce himself and his men as "freedom fighters." He would ask for the town's support,

and declare that the town was now “secure.” NPFL soldiers would then go through the crowd, picking out government soldiers and people who appeared to belong to the Mandingo or Krahn ethnic groups. Soldiers were sometimes allowed to join the movement; suspected Mandingo and Krahn were promptly executed. The NPFL commander would then meet with the chief and arrange for food to be provided to his soldiers.¹³ In later periods of the war, after the formation of the ULIMO rebel group, the NPFL often captured a town by force. NPFL soldiers would loot much of the town’s assets, but the situation would calm down after a few days.¹⁴

After the NPFL secured control over a town, civilians could farm their lands and sell their produce in local markets. In larger towns, market sellers were required to pay a daily tax of L\$5 (US\$0.10), a large part of which went to the local NPFL commander.¹⁵ At the entrance to each town, the NPFL constructed “gates”, or roadblocks, that they used to screen civilians and tax the local commerce. Traders were expected to give approximately 50% of the food they carried to soldiers at these gates, although no standardized tax rate was ever specified.¹⁶

Within most towns, civilians enjoyed a considerable degree of protection from looting or expropriation. Traders could openly sell their goods in public markets; when NPFL soldiers acquired goods in the market, they generally paid for them. Both men and women could sell in the towns, even if they lacked any personal connection with the rebels (so long as they were not ethnic Mandingo or Krahn). Occasionally soldiers would loot or harass civilians in the towns. In these situations, civilians would issue a complaint to the NPFL commander, who would then

¹³ Interviews, Sammie-Ta, 15 July 2007; Foya, 16 July 2007; Madina, 27 July 2007; Hansen’s Farm, 9 August 2007; Tubmanburg, 22 August 2007; Vorkor, 24 August 2007.

¹⁴ Interviews, Voinjama, 12 July 2007; Gpalakpalzu, 17 July 2007; Robertsport, 20 August 2007;

¹⁵ Interviews, Kolahun, 16 July 2007; Foya, 16 July 2007; Gbarnga, 8 August 2007; Monrovia, 21 August 2007; Bola, 23 August 2007; Lofa Bridge, 23 August, 2007; Tubmanburg, 24 August 2007; Folibli, 24 August 2007; Bo Waterside, 26 August 2007.

¹⁶ Interviews, Kolahun, 16 July 2007; Foya, 16 July 2007; Zuwulor, 17 July 2007; Zorzor, 18 July 2007.

punish the soldier, often severely.¹⁷ The situation was much different on the roads. Crossing NPFL checkpoints outside of major towns, civilians faced a constant threat of expropriation or arbitrary taxation. Soldiers often looted goods from civilians, and beat them if they resisted.¹⁸ Far from the “law-abiding” commanders, the soldiers who manned the roadblocks had less fear of being caught and punished.¹⁹

Both civilians and the NPFL leadership adopted strategies to deal with the pervasive looting on the roads. Women began to dominate the local economy, since they could pass through NPFL roadblocks with less risk of harassment than men. Many of these women formed personal relationships with NPFL commanders and soldiers, which allowed them to cross roadblocks safely and more cheaply than their competitors. This group of women became known as “soldier’s wives.” This strategy would prove immensely important throughout the various conflicts in Liberia, and especially during the rule of the LURD rebels, discussed below.

For its part, the NPFL created a pass system approximately one year after the war began. Civilians traveling between towns would register with the local commander to receive a pass, which allowed them to cross roadblocks with only a small cash payment to the soldiers. As a woman trader in Voinjama explained, “Soldiers wanted to eat, so they had to give us a chance [to make it to town with our loads].”²⁰ Both institutional innovations—the soldier’s wives and the pass system—served to increase the monitoring capabilities of rebel superiors, and thereby increased the risk of punishment if soldiers looted from those individuals.

¹⁷ Interviews, Zolowo, 21 July 2007; Gbarnga, 6 August 2007, 8 August 2007; Hansen’s Farm, 9 August 2007; Weala, 9 August 2007.

¹⁸ Interviews, Sammie-Ta, 15 July 2007; Zorzor, 18 July 2007; Gbarnga, 6 August 2007, 8 August 2007; Folibli, 24 August 2007.

¹⁹ Interviews, Gbarnga, 6 August 2007; Hansen’s Farm, 9 August 2007.

²⁰ Interview, Voinjama, 12 July 2007.

The control problems of the NPFL extended beyond soldiers looting in the countryside. Some towns, such as Tubmanburg and its surrounding villages, experienced consistent looting and insecurity during NPFL rule. Civilians could not report soldier misconduct to the local commander because the commander was in league with the soldiers' looting activity, and would punish the civilian for filing a complaint.²¹ Towns where these NPFL abuses occurred, however, tended to be highly contested between various rival factions, and thus presented little opportunity for market activity, regardless of the rebels' behavior. Tubmanburg, for example, changed hands often between NPFL and ULIMO control. The "acceptability" of looting in unstable areas is revealed by the NPFL attack on Monrovia in April 1996: the NPFL referred to this offensive as "Operation Pay Yourself" (Ellis 1999: 108).

The NPFL was able to achieve a high level of market activity in most towns in its territory, but failed to secure civilians' property rights in the countryside. What explains this outcome? I argue that the resources controlled by Charles Taylor shaped the ability of NPFL leaders to control their subordinates.

Charles Taylor became the head of the NPFL through his connections with heads of state in Libya, Burkina Faso, and Côte d'Ivoire. Even before the start of the war, Taylor developed relationships with French and Lebanese businessmen in Abidjan. By May 1990, Taylor's forces controlled Buchanan, the second largest port in Liberia, and foreign firms restarted large-scale exports of timber and iron ore. By the end of 1990, Charles Taylor was earning an estimated \$100 million per year through taxes paid by these foreign corporations to various bank accounts in Burkina Faso, Côte d'Ivoire, and Switzerland (Ellis 1999: 69-91, 164-9; Reno 1998: 96).

²¹ Interviews, Tubmanburg, 22 August 2007; Vorkor, 24 August 2007; Folibli, 24 August 2007.

Taylor maintained these massive revenue flows throughout the war, using the money to purchase weapons and to pay salaries to his military commanders and top officials (Ellis 1999: 91). Many commanders did not receive regular salaries but instead received ad hoc payments from Taylor, known as “tokens.” A commander received tokens from Taylor on holidays, as a reward for accomplishing a certain task, or for performing his duties effectively. This system encouraged the commanders to constantly try to “impress” Taylor, in the hope of earning larger and more frequent payments. Commanders were never expected to send money to Taylor; they were allowed to keep any revenue they generated in their territories.²²

Charles Taylor had a strong incentive to promote market activity. Many of Taylor’s contracts with foreign firms depended on a certain level of stability in his territories. As Taylor himself announced, the “[NPFL] government is willing to give maximum protection to expatriate logging companies” (Reno 1998: 95). More importantly, Taylor had a strong incentive to portray himself as the future president of Liberia, which depended on a certain level of stability and governance in his territories. This expectation of future legitimacy was vital for maintaining his contracts with foreign firms. As Will Reno (1998) argues, “Ultimately, Taylor’s ties to larger, more bureaucratized firms were predicated on those firm’s assumption that he would win the war and become ruler of a sovereign state” (p. 102). Becoming ruler of a sovereign state, however, requires more than simply winning the war, especially when foreign peacekeepers and the international community are pressing for a negotiated settlement. To secure international acceptance, Taylor had to create the appearance of order in his territory.

Charles Taylor used his substantial resources to control his subordinates and promote market activity in the areas under his control. Commanders who engaged in looting or failed to

²² Interviews (via telephone), Monrovia, 12 October 2007; Monrovia, 24 October 2007.

control their soldiers were not allowed to govern towns for long; if Taylor heard reports of misconduct, Taylor would send the commander to the frontline (where markets were already disrupted) or would place the commander in jail.²³ Commanders used similar methods to control their soldiers. Soldiers in town were provided food by their commanders and were severely punished for misbehavior. Although these soldiers did not receive a monetary payment, the provision of food was a significant salary in a desperately poor country during war. Soldiers in the countryside did not receive food from their commanders, and rarely received punishment.

Why didn't commanders try to control the soldiers outside of town? There are two plausible reasons. First, the soldiers were posted to remote roadblocks, so the commander would not be able to effectively monitor their behavior. Similar to the model in Figure 3, if soldiers can loot undetected and still receive a salary, looting can become a best option regardless of salary. Second, the misbehavior of these soldiers on the road did not contribute to a lack of order in the towns. If Charles Taylor decided to visit the commander's town, Taylor would be unaware of the soldiers' behavior in the countryside and thus would be unlikely to punish the commander. Commanders, therefore, had little incentive to pay salaries to soldiers posted outside of town; commanders were better off keeping the additional resources for themselves.

This narrative of the NPFL, while highly stylized, fits well with the models presented at the beginning of this section. It is important to keep in mind that market activity does not imply a lack of violence. The NPFL massacred thousands of innocent civilians, often in highly arbitrary and grotesque ways. Despite the horror of the war, however, civilians in much of NPFL territory continued to trade and produce food. I now turn to the LURD rebels to demonstrate how bottom-up resources lead to widespread failures of control and market activity.

²³ Interview with former NPFL official, Monrovia, 21 August 2007.

3.5 The LURD: Looting, Soldiers' Wives, and the Failure of Control

Liberians United for Reconciliation and Democracy (LURD) formed in 1999 out of a large group of mostly ethnic Mandingo and Krahn ex-combatants who were dissatisfied and often targeted by the Charles Taylor government after the 1997 elections. LURD was essentially a reincarnation of ULIMO, a rebel group in the first Liberian civil war, which ended in 1996. The top leadership of ULIMO was excluded from LURD, however, because they were considered “too divisive” and would discourage recruitment and dampen popular support.²⁴ Sekou Conneh, a former car salesman with some experience in government, was chosen to lead the incipient rebel movement, mostly for his connections to the Guinean government: his wife, Ayesha Conneh, was the top spiritual advisor to Guinean President Lansana Conté. This connection allowed LURD to acquire weapons from the Guinean government for its campaign against the Taylor regime. The initial period of the war was marked by highly volatile control over territories in Lofa County, near the border with Guinea. By early 2002, however, LURD was in stable control of a large swath of northern Liberia.²⁵

A high degree of looting and violence against civilians accompanied LURD’s territorial expansion.²⁶ As news of LURD’s behavior spread, it was not uncommon for entire villages to depopulate in anticipation of a LURD advance.²⁷ Once LURD secured control over a town and the initial violence subsided, the rebel movement instituted a system of forced labor for the

²⁴ Interview with former high-ranking LURD official, Voinjama, 14 July 2007. Also see Brabazon (2003).

²⁵ Interviews with former high-ranking LURD officials, Voinjama, 11 July 2007. Also see ICG (2002).

²⁶ Interviews, Kolahun, 16 July 2007; Foya, 16 July 2007; Robertsport, 27 July 2007.

²⁷ Interviews, Mendekoma, 16 July 2007; Gpalakpalzu, 17 July 2007; Zuwulor, 17 July 2007; Hansen’s Farm, 9 August 2007; Robertsport, 20 August 2007; Vorkor, 24 August 2007; Klay, 24 August 2007; Bo Waterside, 26 August 2007.

remaining civilian population. Civilians from surrounding villages were forcibly relocated to the larger towns, and men and women were required to carry loads of looted material to the nearest international border. LURD also forced civilians to collect palm oil for the cross-border trade, and to hunt and gather food to feed the rebel forces. Civilians did not receive food from the rebels; they had to forage for food in the jungle.²⁸

Despite the dire situation in LURD territories, some degree of market activity continued to exist. These markets, however, were entirely controlled by “soldier’s wives”, the girlfriends of various rebel soldiers and commanders. These women carried the looted items their “husbands” had managed to acquire to the border with Guinea and exchanged those items for foodstuffs such as salt, peppers, and seasoning. The soldier’s wives were the only civilians who could travel on the roads with valuable items and sell goods in public without fear of expropriation or abuse. These women earned profits through this trade, which they shared with their rebel husbands. All rebel soldiers, even those without wives, benefited from the soldiers’ wives system because it augmented their diet and ensured a stable food supply. The wives of the soldiers were often local women, but some also traveled with their rebel husbands as they advanced across the country. Civilians who were related or some way connected with these soldiers’ wives could sometimes acquire food from the women, but it was risky.²⁹

The behavior of the LURD forces seems to indicate that the rebel group could benefit more through looting than through a stable system of taxation. The LURD leadership, however, had strong incentives to promote market activity. The LURD, for example, controlled much of

²⁸ Interviews, Voinjama, 12 July 2007; Sammie-Ta, 15 July 2007; Kolahun, 16 July 2007; Foya, 16 July 2007; Madina, 27 July 2007; Bola, 23 August 2007; Vorkor, 24 August 2007; Folibli, 24 August 2007;

²⁹ The “soldiers’ wives” dominated the economy of nearly every town I visited, and were mentioned in nearly every interview. Listing the interview citations would be overwhelming.

the same land as Charles Taylor, ten years before. LURD territory contained abundant rubber plantations, timber, and diamond deposits. In theory, Sekou Conneh could have negotiated lucrative contracts with foreign firms. Sekou Conneh also had similar political incentives as Taylor. A well functioning LURD territory would have strengthened LURD's ability to negotiate during the peace process. And although Sekou Conneh denied any presidential ambitions during the conflict, his desire to obtain political office was revealed by his presidential campaign in the 2005 elections.

The inability of the LURD leadership to organize top-down resource exploitation is revealed by the lack of organized diamond mining and rubber tapping during the conflict. In the case of diamonds, the LURD leadership issued a statement forbidding their commanders from mining diamonds because they feared it would be too divisive for the movement (Brabazon 2003; ICG 2002). Despite this policy, however, the LURD leadership was unable to prevent diamond exploitation by LURD members on an ad hoc, individual basis.³⁰ Similarly, LURD was unable to exploit rubber during the war, even though they controlled several hundred thousand acres of productive rubber forest. In fact, LURD only began selling rubber *after* the peace agreement, when U.N. peacekeepers provided security in the areas surrounding the LURD-controlled plantations.³¹

Perhaps most importantly, LURD attempted to foster market activity during the early period of the war, but failed to achieve any substantive results. In mid-2001, LURD soldiers began to receive a "political education" that stressed the necessity of avoiding civilian casualties. At least one LURD soldier was executed for killing a civilian, and forums for hearing local grievances were created. LURD also changed its tactics, deciding to avoid fighting for the main

³⁰ Interviews, Lofa Bridge, 23 August 2007; Also see Brabazon (2002).

³¹ Interviews, Voinjama, 11 July 2007; Guthrie Rubber Plantation, 13 October 2005.

roads or towns and instead pursued a strategy of infiltration. The goal was to minimize the disruption of trade and infrastructure. Civilians in Lofa County at the time reported that LURD largely ceased human rights violations during this time. This period of restraint was very brief, however, and by the end of 2001 human rights violations were again commonplace (ICG 2002: 9). LURD also instituted a pass system, similar to the one created by the NPFL in its territories. Civilians could register with the local commander to receive a pass, which then authorized them to travel to a particular destination. Even with a pass, however, civilians could not carry valuable items with them on the roads; any goods they possessed would be looted unless the civilians had a personal connection with someone in the rebel movement.³²

Why were LURD superiors unable to control their subordinates? I argue that the way in which LURD's resources flowed through the organization—specifically their reliance on bottom-up resources—made control within the organization impossible. Although the Guinean government supplied some weapons to LURD, it does not appear that LURD received any monetary financing. Although weapons are vital for any rebellion, they cannot be used to pay salaries or feed soldiers. Whenever a new town was captured, the organization needed to extract resources from the town to sustain its operations. Car engines and other high value items were transported under supervision of the rebel leadership to international borders, to be exchanged for weapons and other materiel. As in the model in Figure 2, a LURD commander could never be secure in his ownership over the town's resources; at any moment, a superior might demand that the best loot go to the rebel movement. Faced with this concern, a rebel commander would try to grab whatever loot he could and then sell it on his own. A rebel soldier would do the same.

³² Interviews, Sammie-Ta, 15 July 2007; Kolahun, 16 July 2007; Hansen's Farm, 9 August 2007.

This strategy of every-man-for-himself was perhaps best demonstrated when the LURD forces captured the Freeport outside of Monrovia, in August 2003. The Freeport contained an enormous supply of resources that could have financed the movement for a considerable period of time. Rather than consolidating control over these resources, however, the LURD soldiers and commanders looted the port in a giant free-for-all. Even civilians managed to take part in the looting. The looted items were then sold throughout LURD's territory in an entirely decentralized fashion. The rebel leadership received little profit from this operation.³³ Despite the incentives to promote and tax market activity, the LURD forces were unable to restrain their own opportunistic behavior. The result was widespread market failure.

3.6 Summary

Both the NPFL and the LURD conform to the models presented at the beginning of this section. Although salaries could be used to induce compliance in the NPFL in the towns that it controlled, monitoring problems prevented this control from extending uniformly across its territory. The LURD relied almost entirely on bottom-up resources. Each level of the hierarchy engaged in extreme levels of opportunistic behavior, even though there were strong incentives to promote market activity. In the absence of effective control, markets collapsed throughout LURD's territory.

Is it possible for a rebel group to promote markets and protect civilian property rights throughout its territory? The models imply that this is unlikely. But an additional element makes uniform control possible: the extent to which the rebel members are socialized into the group. I

³³ Interviews, Tubmanburg, 22 August 2007; Bola, 23 August 2007; Lofa Bridge, 23 August 2007; Vorkor, 24 August 2007.

now consider how and why socialization occurs in rebel organizations and its implications for market activity.

4. Market Activity and Socialization in Rebel Organizations

Cristina Bicchieri (1990) defines socialization as “the process through which the newcomer comes to accept an established group’s norm” (p. 840). Socialization creates a set of expectations regarding appropriate behavior in an organization. Conforming to these expectations is not unconditional; whether or not an individual conforms to group norms depends on his expectation that others will also follow those norms (Bicchieri 1990: 840). Socialized individuals share common expectations and earn non-monetary, social rewards for fulfilling those expectations. Individuals are most likely to become socialized when an organization employs collective, formal socialization processes (Van Maanen and Schein 1977; Jones 1986). In a rebel organization, this usually requires formal, group training for new entrants.

Rebel leaders who have an incentive to protect market activity can use socialization to increase their control over subordinates. Socialization helps rebel groups constrain the opportunistic behavior of their members by increasing information transfer and establishing reputations within the group.

4.1 Information Transfer and Reputations

The common expectations and social connections gained through socialization have two major implications. First, common expectations and dense social networks facilitate the transfer of information through organizations (Granovetter 1973; Watts et al 2002). These networks allow rebel superiors to “search” for information regarding the behavior of rebel members, even those

that cannot be directly monitored. Second, common expectations and social connections allow for the formation of reputations, both at the individual and group level. Reputations are easier to monitor than actions (Kreps 1990b), and individuals often have incentives to protect their own reputation, as well as the reputation of their organization.

Reputation can be an intensely motivating factor for individuals within a military unit. Scholars have long considered the apparent paradox of soldiers risking their lives in battle. Rational actors should not risk their lives for the paltry salary that most soldiers receive. Stouffer et al.'s (1949) study of combat soldiers in WWII finds that the soldiers were largely motivated by a desire to live up to the expectations of their combat unit. In a formal analysis, Akerlof and Kranton (2005) examine a model in which identifying with an organization is a substitute for monetary reward, which fits well with the military's stress on "service before self" (17). And Christopher Browning (1992) concludes that an individual's desire to conform and fulfill the collective obligations of a tightly knit group explains how "ordinary men" could commit so many atrocities during the holocaust.

Members of military organizations have never questioned the importance of reputation and peer esteem. The U.S. Army Leadership Field Manual represents the philosophies of highly effective military organizations: "Soldiers draw strength from their own and their units discipline; they know that other members of the team are depending on them" (CAL 2004: 53). Further, "the Army's culture...[is] part of who you are, something you can use to give your soldier's pride in themselves and in what they're doing with their lives" (p. 65). Maintaining this culture and discipline—the reputation of the organization and its members—is "crucial" for cohesive, effective units (p. 52).

Reputation and information transfer reinforce each other and vastly increase a rebel organization's ability to restrain its own opportunistic behavior. In socialized groups, members of the organization have an incentive to report bad behavior that compromises the reputation of the group; this horizontal monitoring greatly increases the monitoring capabilities of rebel superiors.³⁴ Similarly, rebel superiors have a greater incentive to restrain their own opportunistic behavior because their subordinates will hold them to a clear set of expectations.³⁵ The difference between incentive-based and socialized control is detailed in Figure 4. While superiors in incentive-based groups must rely on top-down, individualized monitoring, socialized groups create a dense network of monitoring both within and between each level of the hierarchy.

{Figure 4 about here}

4.2 Socialization and Punishment

If socialized members of a rebel group have a personal incentive to maintain their reputation, will punishment ever be necessary? Perhaps counter-intuitively, punishment is *more* important, and thus more likely to be used, in a socialized rebel group compared to a non-socialized group. Socialization does *not* imply that individuals earn some intrinsic benefit from acting in the interests of the civilians and thus no longer have an incentive to loot or steal. Socialized rebel members will still act opportunistically when they believe they can do so unobserved. Socialized members may also engage in other types of inappropriate behavior, such as soliciting bribes from civilians, even if they have an incentive to maintain the group's reputation.

³⁴ In the context of the model presented in Figure 2, the increase in monitoring capability corresponds to a decrease in p .

³⁵ The effect of clear expectations on the behavior of superiors fits in to Kreps' (1990) theory of corporate culture, as well as theories of "bright line" focal points (e.g. Weingast 1997).

More generally, rebel members have an incentive to free ride on the group's reputation, taking actions that increase their personal gain while causing a marginal decline in the group's status. Without punishment, the reputation of the group will erode and individuals will have little incentive to bear the costs of socialization. The necessity of occasional punishment corresponds to the U.S. Army's recommendation that leaders use rewards and punishment "judiciously" (CAL 2004: 52), and reveals a dynamic similar to Iannaccone's (1992) theory of cults: costly training and punishment can increase individual group members' utility.

4.3 Socialization and Bottom-Up Rebel Organizations

The importance of punishment for maintaining socialization calls into question whether bottom-up rebel groups can protect market activity by socializing their members. Returning to the model presented in Figure 2, the leader of a bottom-up rebel group can commit to refrain from looting only if he receives a large non-monetary payoff from maintaining order. This non-monetary payoff could be achieved in groups composed of members with strong ethnic, cultural, social, or ideological characteristics. In this case, individual members would have a personal preference to refrain from looting, even in the absence of monitoring and punishment. The socialization process in such a group would further strengthen the group's ability to prevent more minor infractions, such as the solicitation of bribes, or immoral behavior. This could explain the behavior of some "classical" guerilla movements, idealized in the writings of Mao, Che Guevara, and others. Resource-poor groups composed of highly committed members fit well with Jeremy Weinstein's (2007) theory of screening and selection in rebel organizations.

In groups without strong private beliefs, socialization is not likely to increase market activity. The Revolutionary United Front (RUF) seemed to employ numerous socialization

methods during the civil war in Sierra Leone. New recruits were often forced to commit atrocities or participate in gang rape. These methods create common expectations and reputations within the group, and could possibly increase the commander's ability to control his troops. Such socialization, however, is not likely to promote market activity across rebel territory.

Socialization at the unit level does not increase a leader's ability to control his subordinates unless he can use top-down resources to control the commanders. In these rebel groups, therefore, socialization leads to market activity only where unit-level commanders have an incentive to protect market activity; markets are not likely to function in most of the territory. This highly variable outcome corresponds with Humphreys and Weinstein's (2006) study of Sierra Leone, which finds that the level of civilian abuse depends on the unit-level cohesion of the armed group that controls the area.

4.4 The Decision to Socialize

If socialization leads to more effective control for rebel superiors, why don't all rebel groups socialize their members? Socialization depends on effective group training, which requires time and expertise on the part of rebel superiors. Rebel organizations whose initial membership are highly skilled and well educated are therefore more likely to socialize their members. Rebel groups composed of former military men or groups with access to foreign training programs, such as the infamous guerrilla training camps that existed in Libya or Afghanistan, can more easily replicate the training procedures and apply them to shape new recruits.

But even when rebel organizations possess the necessary human resources to socialize their recruits, the incentives created by the conflict environment can undermine the formal training programs. Jeremy Weinstein (2007) argues that resource rich environments create

competition between rebel organizations. A rebel group that can mobilize support faster than the other groups gains a comparative advantage at capturing the resources necessary for group survival. Rebel groups therefore have a strong incentive to scrap training programs in order to deploy troops more quickly. This political economy approach has several profound implications. First, rebel groups that exist before the start of active hostilities are likely to contain members that are more socialized than groups that form after the conflict has begun. Second, rebel groups are more likely to socialize their members in the early stages of the war than during the middle or end of the war. Third, rebel groups are more likely to socialize their members during periods of relative calm than during periods of intense fighting or territorial destabilization. Each of these implications can be tested empirically, if the necessary data on training were available.

To assess the importance of socialization, I now turn to the CNDP rebels in DR Congo.

4.5 The CNDP: Top-Down Resources, Socialization, and Effective Control

The *Congrès National pour la Défense du Peuple* (CNDP) formed from a group of dissident members of the RCD rebel group who became disillusioned with the peace process after the 1998-2003 civil war.³⁶ The CNDP is led by Laurent Nkunda, an ethnic Tutsi and former high-ranking RCD commander with links to the Rwandan government. During 2004-2006, Nkunda recruited former RCD soldiers, Congolese refugees, and Rwandan mercenaries,³⁷ and engaged in several battles with the Congolese military. The incipient CNDP briefly captured several important towns, committing indiscriminate violence against civilians before withdrawing to

³⁶ This historical summary comes from ICG (2007) and an interview with MONUC military information officer, Goma, 5 November 2007.

³⁷ Nkunda denies using Rwandan mercenaries, but I interviewed at least two CNDP soldiers of Rwandan descent in Mushake, 14 November 2007. Also, interview with local journalist, Goma, 9 November 2007.

remote areas of North Kivu province. As part of a 2006 peace agreement, Nkunda's troops were integrated into the Congolese military (FARDC) in a process known as *mixage*. But tensions between Nkunda and the Kinshasa military command heightened once again, and in mid-2007 Nkunda withdrew his troops from the mixed brigades. Open fighting ensued and by August 2007 the CNDP rebels controlled significant territory in North Kivu.

Laurent Nkunda and the CNDP claim to be the protectors of Congo's minority Tutsi population. According to the CNDP, Tutsis are preyed upon by the FDLR rebels, a group composed partly of Hutu perpetrators of the Rwandan genocide. Tutsis are also victims of occasional communal violence, although the violence is largely in response to the actions of Nkunda and his predominately Tutsi group.

Hundreds of thousands of civilians have been displaced by fighting since January 2007. Many villages in CNDP territory are completely deserted. The remaining civilian population is overwhelmingly Tutsi and clustered in the Kingi-Kilolirwe-Kichanga area, and in the Bunagana area near the border with Uganda and Rwanda. Markets function on a daily or weekly basis in CNDP territory, and a few shops and restaurants remain open in Bunagana. Civilians in CNDP territory can cross CNDP checkpoints to reach markets in government territory. Civilians also engage in productive activities, producing charcoal, tending cattle, and growing crops such as maize and beans.³⁸

The CNDP taxes civilian trade in its areas. Charcoal traders must pay a tax of US\$0.80 for each bag of charcoal exported to government territory, and market sellers pay \$0.20 each day for a place in the market. Large-scale trade also occurs in CNDP territory. Minibuses and lorries pass through CNDP areas, carrying passengers, lumber, charcoal, and other valuable items.

³⁸ These descriptions are based on observations in Kingi, 9 November 2007; Mushake, 12 November 2007; Masisi-Mushake road, 14 November 2007.

Minibuses are charged a flat fee of \$10; lorries must pay either \$25 or \$100, depending on their destination and cargo.³⁹ In some areas, such as Bunagana, CNDP officials collect household taxes from civilian residents.⁴⁰

CNDP soldiers receive a salary from their commanders,⁴¹ either in the form of food or money to purchase food.⁴² The soldiers are generally well fed and believe that the food provided is sufficient. U.N. peacekeepers monitor civilian complaints against CNDP troops from a base in government-controlled Sake. Although hundreds of civilians cross between government- and CNDP-controlled territories each day, only a handful of complaints have been reported since the conflict began.⁴³

Most CNDP soldiers have previous military experience, either from their brief time in the Congolese army during the *mixage* process, or as members of the RCD rebel group during the civil war. Nevertheless, CNDP soldiers undergo an extensive period of training upon joining the group. Before the start of active conflict, soldiers endured 9 months of training in a remote area of Masisi territory; since the fighting intensified, the training process has been reduced to approximately 3 months.⁴⁴ Many CNDP soldiers have known each other for several years, and many identify themselves as professional soldiers.⁴⁵ Punishment and monitoring are prevalent within the CNDP organization. Soldiers are beaten harshly if they mistreat civilians, and soldiers

³⁹ Interviews Mushake, 12 November 2007, 14 November 2007; Kimoka, 9 November 2007. I have copies of receipts issued by the CNDP to truck drivers for “security” fees.

⁴⁰ Interview with senior CNDP official, Bunagana, 17 November 2007.

⁴¹ The Congolese military and MONUC claim that Nkunda’s soldiers stopped receiving salaries after withdrawing from the FARDC mixed brigades, but these informants do not consider food to be equivalent to salary payments. Interviews with MONUC, Goma, 5 November 2007; Senior FARDC Commander, Goma, 6 November 2007.

⁴² Interviews, Kimoka, 7 November 2007, 9 November 2007; Kingi, 9 November 2007; Road to Bunagana, 17 November 2007; Bunagana, 17 November 2007.

⁴³ Interviews, MONUC, Sake, 7 November 2007.

⁴⁴ Interview with senior CNDP official, Bunagana, 17 November 2007.

⁴⁵ Interviews, Masisi-Mushake road, 14 November 2007; Bunagana, 17 November 2007.

within a unit are expected to report the misbehavior of their comrades.⁴⁶ During my stay in Bunagana, a soldier was beaten for agreeing to pose for a photograph.

Local commanders collect taxes from civilians and trade in their areas, but also submit requests for supplies and funding from the CNDP headquarters in Kichanga.⁴⁷ This top-down financing implies that Nkunda directly controls significant sources of revenue. Nkunda generates the resources needed to sustain his movement in several ways. First, the CNDP receives arms shipments and potentially other forms of support from the Rwandan government.⁴⁸ Second, the Tutsi diaspora in Rwanda and the Tutsi elite in Congo provide an estimated \$20,000-\$30,000 per month to the CNDP leadership.⁴⁹ Third, the CNDP collect import and export duties to the significant volume of international trade that passes through the CNDP-controlled border crossing at Bunagana.⁵⁰

Although Laurent Nkunda does not control nearly as much revenue as Charles Taylor in Liberia, the CNDP uses its top-down resources in a similar way as the NPFL rebels. Commanders receive payments from the leadership, and soldiers receive payments from their commanders. Unlike the NPFL, the CNDP can promote market activity throughout its territory. What explains this difference? I argue that the socialization of the CNDP membership explains the variation in market activity between two groups with similar resources. The rigorous training program of the CNDP contrasts sharply with that of the NPFL. At the start of the Liberian civil war, new NPFL recruits received 3 weeks of training; as the war progressed, this training

⁴⁶ Interview with CNDP commander, Bunagana, 17 November 2007.

⁴⁷ Interview with senior CNDP official, Bunagana, 17 November 2007.

⁴⁸ The nature of Rwandan support will hopefully become more clear after the release of a U.N. panel of experts report.

⁴⁹ Personal correspondence with regional expert, 7 February 2008.

⁵⁰ Some of this revenue is apparently shared with the DRC government in Goma. Interviews, Bunagana, 17 November 2007.

program disappeared.⁵¹ As the NPFL gathered recruits from all over Liberia, the social linkages between their members decreased. Soldiers felt less connected to their comrades and to the group, so there was little incentive to maintain a positive reputation, or to report on the misbehavior of fellow soldiers. Incentives and punishment were the only mechanisms for control.

4.6 Summary

The CNDP in eastern Congo conforms reasonably well to the theory's prediction that market activity should be highest in a top-down, socialized rebel group. CNDP members spend months together in training, and many have known each other for years. Members view themselves as professional soldiers and have an incentive to maintain their reputations as professionals.

Commanders supply their soldiers with adequate food or money, but use harsh discipline to keep their soldiers in line. Commanders collect significant tax revenue from their territories, but also receive money, weapons, and logistical assistance from the CNDP leadership.

Despite this consistent picture, other theories could equally explain the restraint and market activity that characterize CNDP territory. The following section examines several alternative explanations and suggests possible ways of testing the theory.

⁵¹ Interview with former NPFL member, Monrovia, 21 August 2007.

5. Alternative Hypotheses, Testing, and Implications

I argue that top-down resources and socialization are necessary for rebel groups to constrain their own opportunistic behavior and allow markets to function in their territories. Other hypotheses, however, may provide more compelling explanations for the situations observed in the three case studies. This section considers several competing hypotheses in light of the available evidence.

H1: Rebel groups that are ethnically based or that have popular support are more likely to protect market activity in their territories.

All three of the rebel groups considered in this paper—NPFL, LURD, and CNDP—had an ethnic base of support. In the case of LURD, the organization was based in an area where a significant proportion of the civilian population shared the same Mandingo ethnicity as the rebels.

Nevertheless, LURD failed to protect market activity. The NPFL rebels enjoyed reasonably high popular support at the start of the Liberian war, but quickly lost it as NPFL soldiers engaged in indiscriminate violence against civilians. Market activity, however, continued to function in NPFL-controlled towns.

H2: Rebel groups that gain territory without fighting are more likely to protect market activity in their territory.

To some extent, this hypothesis is implied by the theory presented in this paper. Stability facilitates monitoring, which makes market activity more likely in a top-down rebel group. Stability, however, is an incomplete explanation. When the NPFL rebels recaptured Gbarnga from the ULIMO rebels, the once bustling city had been thoroughly looted. But after 2 months of stable NPFL rule, stores and local markets began functioning once again.⁵² Specific characteristics of the rebel organization are important for explaining market activity.

⁵² Interviews, Gbarnga, 8 August 2007.

H3: Rebel groups that expect to maintain control of an area for a long time are more likely to protect market activity.

This hypothesis corresponds to Mancur Olson’s “stationary bandit” theory. The returns to taxation are likely to be larger than the returns to expropriation if the time horizon of the authority is long enough. As the model in Figure 3 demonstrates, however, different levels of the rebel hierarchy may not be able to commit to refrain from looting, regardless of their time horizon, causing a cascade of opportunistic behavior. This corresponds to the situation in Liberia, in which the LURD rebels controlled certain towns for much longer periods than the NPFL, but were nonetheless unable to promote market activity.

H4: Rebel groups that lack external financing and natural resources are more likely to depend on taxation, and therefore protect market activity.

Of the three rebel organizations considered in this paper, only LURD lacked external financing or natural resources. Although LURD received some weapons from Guinea, the evidence does not indicate significant material support. LURD should therefore be a prime candidate for a taxation-based rebel group. Looting, however, proved to be the dominant strategy as the LURD leaders were unable to constrain the opportunistic behavior of their members.

Many groups that have constructed systems of taxation also depend on large amounts of top-down revenue. The Liberation Tigers of Tamil Eelam (LTTE)—Sri Lanka’s infamous Tamil Tigers—have perhaps the most sophisticated system of taxation among any rebel group in the world. Each Tamil family in LTTE territory (and elsewhere) is expected to contribute to the movement. The LTTE leadership, however, also receives millions of dollars of direct diaspora financing each year, as well as money earned through smuggling and other activities (RAND 2001). These resources are inconsistent with the hypothesis.

Despite these contradictions, the hypothesis still holds intuitive appeal. Groups that receive large amounts of external financing may have little incentive to protect market activity, or may even have strong incentives to disrupt markets in their territories. Hovil and Werker (2005) argue that external financing makes these perverse incentives more likely. If the leadership of the rebel group does not have incentives to promote markets in their territory, the theory presented here does not apply. A more sophisticated version of this alternative hypothesis, offered by Jeremy Weinstein (2007), poses a greater challenge to the theory.

H5: Rebel groups with access to economic resources attract opportunistic recruits, while groups without such resources can screen for committed recruits. Groups with committed recruits can protect market activity.

This hypothesis offers selection and screening within the rebel organization as an explanation for market activity in the territory. The theory has difficulty explaining the case of Liberia: both LURD and NPFL were composed of opportunistic recruits, yet market activity was much higher in NPFL-controlled territory than in LURD territory. The different types of resources possessed by these two opportunistic groups can explain the differences in control. Weinstein's theory is silent as to the differential effects of resources, and thus is not discredited by this variation.

Weinstein's hypothesis is more troubling in the case of the CNDP rebels in eastern Congo. Although the war in Congo is often portrayed as the ultimate opportunistic rebellion, it is possible that the CNDP rebels were able to "select" committed recruits. Their ability to control or socialize these recruits is only important insofar as it "screens" out the opportunistic joiners. In some ways, the CNDP supports this argument. Most of the members are professional soldiers who have served in previous armed groups, and most are ethnic Tutsi who are committed to protecting the indigenous Tutsi population. This seems to contradict my argument that

socialization, not selection, is responsible for constraining the opportunistic behavior of the soldiers.

The effect of selection versus socialization is difficult to disaggregate because selection and socialization are predicted to co-vary: a rebel group that rigorously trains its recruits would be expected to attract committed members, and would also have socialized members, once the training is complete. This covariance is also reflected in interview data. A senior member of LURD stressed the difference between “rebels” and “soldiers” within the LURD organization: “rebels” were more likely to abuse civilians, while “soldiers” were more likely to remain disciplined. The informant explained this distinction by focusing on the individual’s level of education or training.⁵³ This corresponds to either a selection or socialization hypothesis.

Despite these causal ambiguities, some evidence suggests that socialization caused by training is a more significant influence on the behavior of rebel members than selection effects, although both may be important. The senior member of LURD who offered the difference between “rebel” and “soldier”—a man who possessed 20 years of experience in the Liberian military before the start of the conflict—boasted, “You give me 1,000 rebels, I will make 1,000 soldiers.” When asked why LURD was composed of so many “rebels” and so few “soldiers,” he explained that it was simply too difficult to train new recruits during the war—the fighting was too heavy, the situation too fluid.⁵⁴

Moreover, the purpose of “boot camp” and military academies in the U.S. armed forces is to transform a civilian into a member of one of the most committed, disciplined fighting forces in the world (Janowitz 1971). This socialization process is not always successful. For example, the U.S. military’s policy of individual rotation of soldiers, which existed from WWI through

⁵³ Interviews, Voinjama, 12 July 2007; 14 July 2007.

⁵⁴ Interview, Voinjama 14 July 2007.

Vietnam, corresponded to lower levels of cohesion and commitment than the subsequent policy of group rotation (Griffith 1988). The rigor of the training program during this period continued to act as a screening device for committed recruits. But because they were individually rotated, the recruits failed to develop social ties and reputations among their comrades. The variation in outcome is best explained by the differences in socialization, not selection. Although the selection hypothesis cannot be completely discredited, socialization exerts an independent effect on the behavior of rebel members.

H6: Rebel groups with social ties to the local communities can protect market activity because members of the community can monitor and report rebel misconduct.

This hypothesis can explain the outcomes observed in the three case studies and challenges to the theory developed in this paper. Both NPFL and CNDP possessed significant ties to the local communities in which they operated. In the early periods of the Liberian war NPFL recruited numerous community leaders and national figures—Charles Taylor even briefly won the support of Ellen Johnson Sirleaf, a prominent critic of the Samuel Doe regime and future president of Liberia. The local and national leaders had deep ties to various communities in Liberia, and these ties allowed for more effective monitoring and punishment of NPFL members. Similarly, CNDP territory is populated almost exclusively by ethnic Tutsis. Although many CNDP fighters are Rwandan mercenaries, kinship and family ties may extend across the border into Congo, creating an environment where local civilians are able to hold rebel soldiers accountable for their actions. The LURD rebels, by contrast, were viewed by many local communities as outsiders. LURD began in Guinea and was primarily composed of ethnic Mandingos, a small and often reviled ethnic group in Liberia.⁵⁵

⁵⁵ I thank Jeremy Weinstein for the insights related to this alternative hypothesis.

This alternative hypothesis explains most of the variation in the case studies. The hypothesis, however, cannot explain how the NPFL managed to protect markets even after the group lost the support of community leaders, during the early period of the war. Even so, I cannot disprove this hypothesis, and it merits further research. The hypothesis' emphasis on monitoring is not entirely inconsistent with the theory presented here, and can potentially be incorporated into a unified framework. I now consider ways of testing the theory and its implications.

5.1 Testing and Implications

The two independent variables of this theory—top-down resources and socialization—can be operationalized in a straightforward manner. Top-down versus bottom-up organizations can be distinguished by the percentage of total revenue that is controlled directly by the rebel leader. Certain types of resources, such as kimberlite diamonds, result in top-down revenue, while other types of resources, such as dispersed alluvial diamonds, result in bottom-up revenue. Some situations are undoubtedly ambiguous. For example, if a rebel group controls only a single alluvial diamond field, the diamonds can be considered a top-down resource because the leader can directly oversee their extraction. This situation is similar to Laurent Nkunda's control over the CNDP's border taxation. By contrast, a rebel leader cannot personally control a large number of geographically dispersed alluvial fields; in this situation, alluvial diamonds are a bottom-up resource.

The second independent variable, socialization, is adequately proxied by the average duration of training within the rebel movement. Groups that train their members for many months are predicted to be more socialized than groups that only train their members for several

weeks; rebel groups who do not train their recruits at all can be considered non-socialized.

Again, some ambiguities can exist. The RUF's induction tactics can be considered a form of socialization, although of dubious training value.

The attempt to systematically test this theory, however, is stymied by a complete lack of data concerning the dependent variable. To my knowledge, no data exist on the functioning of local markets in rebel territory during civil war. A rough coding based on my definition of market activity as a system of universal property rights may be possible for some conflicts, but substantial historical work will be required. One possible way to overcome these empirical difficulties is to gather systematic data on a small number of countries during their conflicts, and then analyze the within-case variation and how it changes over time.

This theory of market activity yields an interesting implication: battle deaths should be positively correlated with market activity. This implies that the bloodier the conflict—the more battles and soldiers killed—the more active the markets should be in the rebel territories. The intuition is as follows. Socialization creates groups of soldiers who care about their reputations within the group. These individuals are therefore willing to take risks to maintain their reputation and status among their comrades. The presence of top-down resources allows for greater control over these soldiers by the rebel leadership. This implies the rebel leadership will be able to order the soldiers into battle, and the soldiers will obey these orders. More frequent battles, and higher casualties are the result. But the violence will occur in a setting where the opportunistic behavior of the rebel group is minimized. During periods of relative stability, markets should be fairly active.

6. Conclusion

Markets function when rebel groups have incentives to promote trade in their territories and can successfully constrain the opportunistic behavior of their members. This control is possible when rebel leaders can buy cooperation through the use of top-down resources, and when rebel groups create social networks, common expectations, and reputations among their members. Control becomes problematic when leaders do not control substantial resources, or when non-socialized rebel soldiers operate in unstable or difficult to monitor areas. In situations of market failure, civilians and rebel organizations devise institutional solutions that provide at least minimal access to food. Trade becomes dominated by “soldiers’ wives” or other civilians with close ties to the rebel organization. In especially dire situations, civilians must forage and scavenge for the food necessary to survive.

Civilian welfare depends both on violence and on market activity. All three of the rebel groups considered in this paper engaged in high levels of civilian abuse; massacres and civilian displacement characterized all three of the conflicts. The disregard for human life demonstrated by these groups reveals that this theory applies only to a well-defined set of rebel groups—groups that are not based around any overarching ideals but that nevertheless control territory and have incentives to promote market activity in that territory. Despite the non-ideological nature of these groups, the cases presented here demonstrate a wide range of market outcomes. For civilians who remain in these conflict areas, this variation is a matter of life and death. Further research offers the potential to better understand how civilians survive civil war, and how the international community can assist them.

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Table 1

Theoretical Predictions

		Socialization	
		No	Yes
Resources	Top-Down	High market activity in towns; low market activity in remote or unstable areas. Ex. NPFL (Liberia)	High market activity throughout rebel territory. Ex. CNDP (DR Congo)
	Bottom-Up	Low market activity throughout rebel territory. Ex. LURD (Liberia)	Variable outcome. Ex. RUF (Sierra Leone)? NRA (Uganda)?

Figure 1

Commander's Payouts in a Top-Down Rebel Group

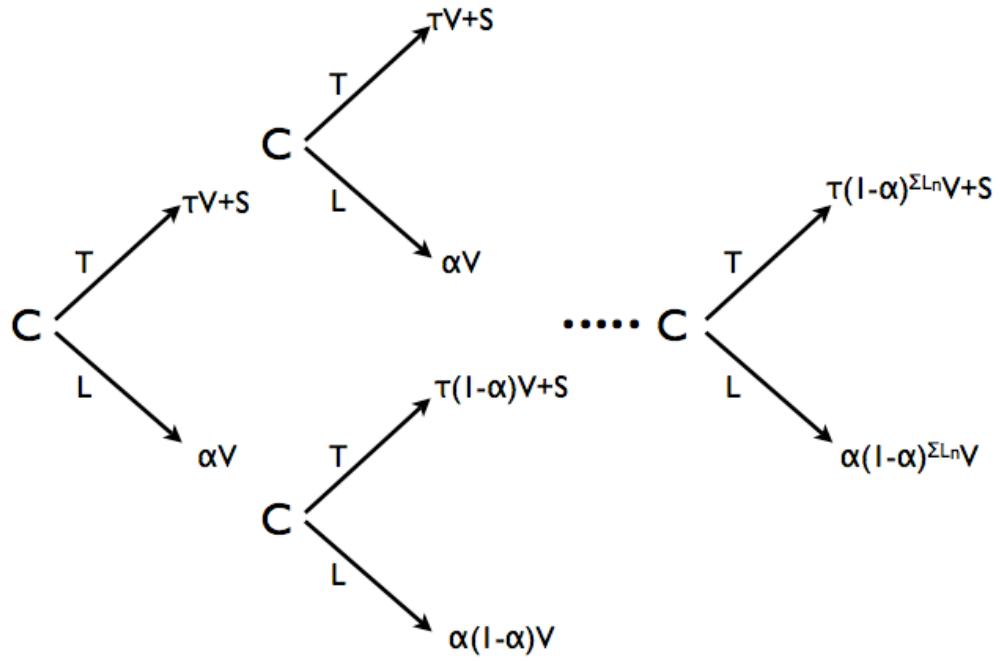


Figure 2

Commander-Leader Game in a Bottom-Up Rebel Group

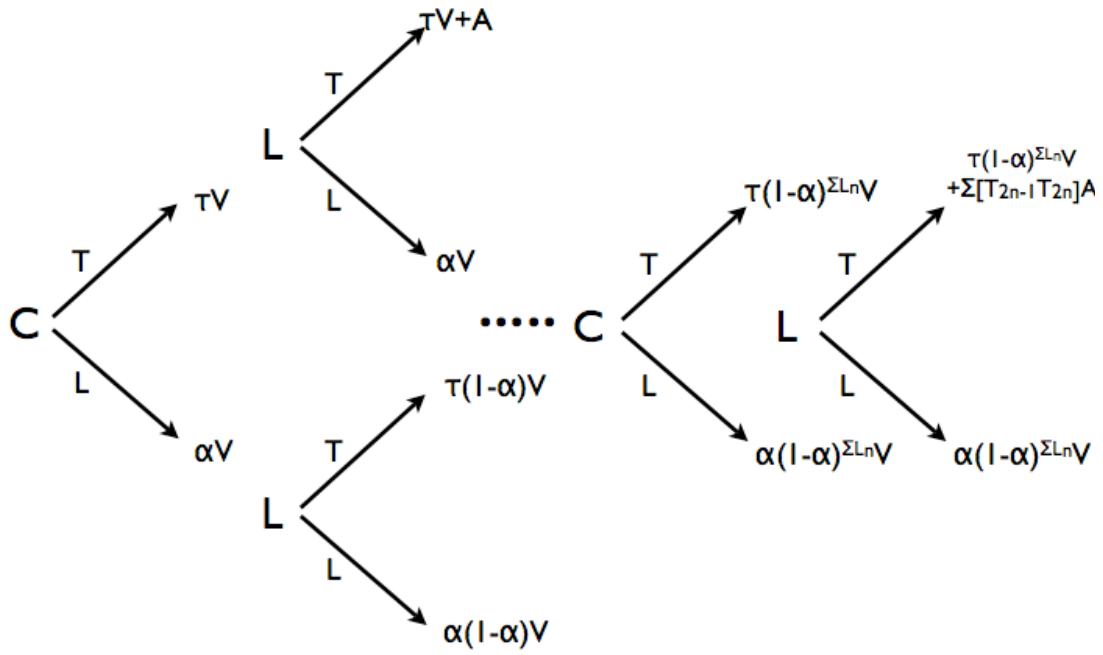


Figure 3

Commander's Payouts in a Top-Down Rebel Group with Imperfect Observability

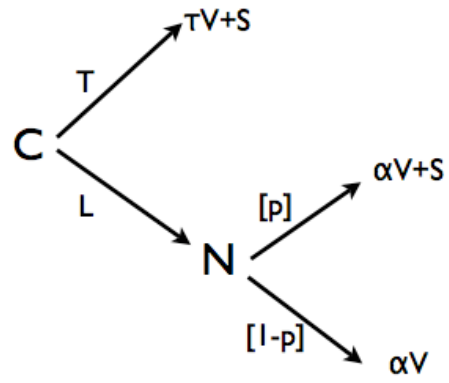
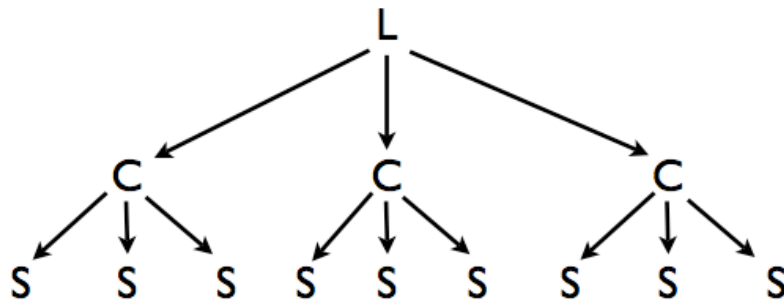


Figure 4

Incentive-Based versus Socialized Control in Rebel Organizations

Incentive-Based Control



Socialized Control

