

# Resources and the Information Problem In Rebel Recruitment

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**Abstract:** A primary challenge in the organization of insurgent groups is the recruitment of participants. This paper explores how the initial conditions facing rebel groups give rise to distinct recruitment patterns that have important consequences for group strategies. Importantly, it approaches recruitment from a new theoretical perspective by exploring how informational asymmetries that characterize the recruitment marketplace shape the provision and delivery of selective incentives. A new theory is explored in the context of data on four rebel groups in Africa.

Every study of civil war, at some point, must return to the same question: what motivates individuals to risk their lives to participate in armed rebellion? Without an underlying theory of the conditions under which men and women take up arms against the state, it is difficult to try and distinguish countries that experience civil war from those that do not; to uncover the factors that affect how long a war lasts; or to make sense of the determinants of war termination.

This question has had a long and distinguished history in political analysis. Three distinct periods of theorizing merit special attention. A first generation identified the peasantry as the engine of rebellion. Peasants rebel because they are aggrieved. Processes of economic transformation in the countryside—the commercialization of agriculture, the shift from a traditional to a market economy, and the weakening of traditional rural communities—create the conditions for violence by threatening the subsistence of peasants<sup>1</sup>, by favoring one region over another<sup>2</sup>, and by pitting social classes against one another within new forms of economic relations.<sup>3</sup> Participation is thus a consequence of peasant grievances. Where one finds tremendous dislocation as a product of economic change, rebellion is likely just around the corner.

A second generation took direct aim at analyses of participation rooted in uncovering grievances. The puzzle was reframed. Instead of looking for patterns in the membership of rebellious movements, the question was turned on its head. Mancur Olson's seminal work, *The Logic of Collective Action*, argued that grievances were neither necessary nor sufficient to motivate rebellion.<sup>4</sup> The nature of the collective action problem confronting social movements put a significant constraint on recruitment. The question became: why would an individual participate at all when she could realize the benefits of success without bearing any of the costs?

Neither approach found significant support in the empirical record. While first generation work predicted that particular groups or classes would rebel at particular points in time, an enduring puzzle bedeviled its supporters. Why did some individuals equally affected by the same processes of economic change choose to participate while others refrained? Collective action theorists found themselves confronted by a similar empirical challenge. Rational individuals ought to free ride on the behavior of others in rebellion, yet history was littered with evidence of social movements, peasant rebellions, and rebel organizations staffed by willing participants.

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<sup>1</sup> James Scott, *The Moral Economy of the Peasant: Rebellion and Subsistence in Southeast Asia* (New Haven: Yale University Press, 1976).

<sup>2</sup> Eric Wolf, *Peasant Wars of the Twentieth Century* (New York: Harper and Row, 1969).

<sup>3</sup> Jeffrey Paige, *Agrarian Revolution: Social Movements and Export Agriculture in the Underdeveloped World* (New York: Free Press, 1975)..

<sup>4</sup> Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups* (Cambridge: Harvard University Press, 1965).

The historical record motivated a third generation of scholarship—one that recognized that some individuals participate, others do not, and the key is to identify the mechanisms that make participation possible. This literature on solutions to the collective action problem is voluminous and includes arguments about the importance of selective incentives, entrepreneurs, a common collective identity, patronage, opportunity costs, and non-material benefits such as agency.<sup>5</sup> These variants all take the collective action problem as a starting point and offer theories about why *rational* people choose to participate.

In this paper, I revisit the selective incentives solution to the collective action problem in light of recent scholarship on the causes of civil war. A prominent finding in the new, quantitative literature on rebellion is that countries highly dependent on the export of primary commodities—agricultural products, oil, and minerals, in particular—are more likely to experience civil war.<sup>6</sup> Collier and Hoeffler argue that this correlation is evidence of a greed-based theory of rebellion, rather than indicative of a theory of grievances. Rebel groups, they suggest, engage in quasi-criminal activity in resource-dependent states, using the wealth generated by resource extraction to finance the organization of armed movements. They find little evidence that economic or political inequality have much of an impact of the likelihood of civil war.

In making this argument, Collier and Hoeffler find their way back to the initial question offered at the start of this paper. What motivates individuals to risk their lives in rebellion? They argue that the opportunity for primary commodity predation is, in effect, the cause of conflict.<sup>7</sup> At the micro-level, Collier and Hoeffler rely on the selective incentives solution to Olson's seminal problem. Natural resource predation enables rebel groups to provide private rewards to motivate participants. The common identities and experiences of peasants (or particular groups) central to first generation explanations of participation have little place in their analysis.

Is this macro-level finding confirmatory evidence of the relative importance of selective material rewards in civil war? Are resource endowments an essential element of the theory of selective incentives in practice? How do rebel groups without access to natural resources resolve collective action problems? What are the costs of relying on the resource-predation solution?

This paper is organized as follows. The next section reviews the selective incentives solution to the collective action problem in the context of rebellion. It raises two key

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<sup>5</sup> For a brief review of this work, see Mark Lichbach, "What Makes Rational Peasants Revolutionary? Dilemma, Paradox, and Irony in Peasant Collective Action," *World Politics* 46, No. 3, 1994, p. 383-418. Samuel Popkin was the first to address this question in the context of rebellion. See Samuel Popkin, *The Rational Peasant: The Political Economy of Rural Society in Vietnam* (Berkeley: University of California Press, 1979). A recent attempt to approach this question from a different theoretical angle is Elisabeth Wood, *Insurgent Collective Action and Civil War in El Salvador* (Cambridge: Cambridge University Press, 2003).

<sup>6</sup> Paul Collier and Anke Hoeffler, "Greed and Grievance in Civil War," *World Bank Policy Research Paper* 2355 (Washington: The World Bank, 2000).

<sup>7</sup> Paul Collier, "How to End Civil Wars?" *Foreign Policy*, May/June 2003.

challenges, one motivated by new findings from the quantitative literature and the second by theories of the economics of information. I then build from those challenges to redefine the problem of rebel recruitment as a game in which rebel leaders must simultaneously overcome collective action problems and address information asymmetries. The empirical implications of this new model of rebel recruitment are then explored in the cases that motivated the model. The paper concludes by briefly testing the model in two out-of-sample rebellions.

### **The Use of Selective Incentives**

Theories of collective action paint a grim picture of the likelihood of organized opposition to the state. Three challenges stand in the way of a rebel leader in the recruitment process. The first is a public goods problem. Rebellion provides collective benefits to the population. No member of the population can be excluded from receiving these benefits and the enjoyment of these benefits by one person does not preclude the access or enjoyment of another. In this context, it is difficult to understand why an individual would pay the costs of joining a rebellion when free riding would produce the same benefits. This situation is made worse when an individual takes into account his or her likelihood of having a critical impact on the outcome of the rebellion. The participation of any one individual is unlikely to make a difference to the outcome of the movement. As a result, there is even more reason for a given peasant to pursue her own interest, rather than participate in the rebellion. Time presents a third challenge to rebel recruiters. Individuals must accept the costs and risks of participation immediately, but the collective rewards will not be realized until the future. There is no guarantee that individuals will be able to enjoy the collective benefits of victory, even if it is achieved.

Mark Lichbach ably summarizes the balance sheet for a prospective rebel.

“On the benefit side (1) a successful outcome of a revolt is a low-probability event and hence rebellion is a risky undertaking; (2) a successful outcome is almost independent of any one peasant’s participation; (3) the benefits of a successful outcome are also independent of any one peasant’s participation. On the cost side (1) rebels face many social causes with which to become involved; (2) rebels have many personal demands on their time that have priority... (3) participation is often quite costly and dangerous.”<sup>8</sup>

The collective action problem is thus a significant constraint on recruitment. Since benefits will be realized independent of participation, and the costs provide every reason not to act, there is no reason rational individuals should rebel.

Providing selective incentives is a feasible solution to the collective action problem and has found both theoretical and empirical support.<sup>9</sup> The mechanism by which selective

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<sup>8</sup> Lichbach (fn. 5), p. 387.

<sup>9</sup> For a more complete exploration of this literature, see Mark Lichbach, *The Rebel’s Dilemma* (Ann Arbor: University of Michigan Press, 1994).

incentives motivate individuals to participate has two components. First, group leaders provide some benefits to individuals as private rewards, apart from the collective benefits that a victory might provide. These benefits are provided immediately, in the short-run, and are in addition to the non-excludable public goods to be realized in the future. Second, private goods are distributed explicitly as a reward for participation. Non-participants do not receive these extra benefits, although they can still take advantage of collective benefits at the end of the rebellion, if it is successful.

The role that selective incentives play in motivating participation is now seen as relatively uncontroversial. Particularistic benefits are a part of everyday life and are often used to complement appeals made on the basis of common goals, interests, and consciousness. They also occupy an increasingly central place in the study of civil war, with analysts viewing rebellion as simply “the continuation of economics by other means.”<sup>10</sup> The profiteering seen as characteristic of many civil wars conflates motivation with the mechanism for overcoming collective action problems, but the role of selective incentives is still at play. Rebel leaders overcome the substantial imbalance on the balance sheet of participation by providing material rewards to potential members.

### **Selective Incentives: Two Challenges**

The selective incentives solution should occupy a central place in any handbook for rebel organizations. But from the perspective of the rebel organizer, it raises two key issues. First, how can rebel leaders identify the resources necessary to provide selective incentives? And what can they do if no resources are available to be translated into selective incentives?

Second, if selective incentives are sufficient to motivate participation, how can leaders distinguish between those they want to participate and those they might wish to keep out of the group? Both questions require more elaboration.

To be effective, rebel organizations must be able to obtain resources, transform them into selective incentives, and distribute them to members. The theory presumes such a basic capacity. But for most scholars, the resource problem is not seen as insurmountable.

Groups employ a variety of strategies. Rebels allow their members to plunder. Rebel leaders redistribute resources from those outside of the movement to those actively inside the movement. Leaders privatize goods or issues that concern members of the group to make benefits excludable and rival. Rebel groups also use political power to provide selective incentives, either by pressuring existing governments or creating new ones. Finally, rebel leaders demand private rewards from the current government and distribute them selectively to their constituents. The long list of potential avenues of resource generation suggests that providing selective incentives is relatively unproblematic.

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<sup>10</sup> David Keen, *The Economic Functions of Violence in Civil Wars*, Adelphi Paper No. 320 (Oxford: Oxford University Press, 1998), p .11.

But whether there is or is not a resource constraint on rebel groups is an empirical question, and it has implications for a group's relative capacity to provide selective incentives. If we maintain a narrowly materialist view of the concept of private rewards, a number of the strategies proposed above might not be available to rebel leaders. Very few resources may exist in the country or region of a group's operation to be redistributed. There may be no resource base or institutions to privatize for the benefit of followers. The current government may be unwilling to accede to any demands of the movement, particularly in the period before it gains significant power and credibility. While the presence of natural resources—agricultural commodities, oil, and minerals—if in the hands of the rebel leadership, makes providing selective incentives possible, the absence of such commodities may leave an organization resource-constrained in the recruitment process.

Plundering is the only strategy that appears possible regardless of the political and economic context in which a rebel group organizes. But looting is also the strategy with the greatest costs, particularly at the early stage of a rebellion. Unleashing bandits into the countryside to enrich themselves in exchange for their labor in the movement is a recipe for a quick defeat, as it is unlikely to build any base of support for the movement. Plundering is undoubtedly a strategy for maintaining an existing movement, but I would argue that it is infeasible as a selective benefit in the first days of a movement.

The distinction between the presence and absence of resources that can be translated into selective incentives is too stark. But it raises some issues that should be incorporated into our understanding of how rebel groups overcome collective action problems. First, there is a continuum of what rebel groups can and cannot provide, with some movements facing severe resource constraints, particularly in the early period of organization. In this sense, initial conditions matter for what strategies are available to help leaders overcome the collective action problem. Second, what groups are able to offer may also be a function of time—even if a country has a resource base, rebel groups may not have access to it at the beginning of the conflict. Third, rebel leaders may have access to different types of resources that not only have different material values, but also that may require different inputs to translate them into selective incentives. Theories of the role of selective incentives, and their link to natural and other resources, must take these distinctions into account.

The selective incentives solution points to a second, more fundamental problem with models of rebel recruitment. It is widely recognized that, to be effective, private rewards must be provided *selectively*. Rebel leaders must ration benefits and provide them only to those who participate in the movement. But the mere offer of selective benefits is likely to attract new participants, particularly when the private rewards outweigh the opportunity cost of participation. In the poor, rural environments in which many rebel groups form, the private rewards that a rebel group offers have the potential to attract large numbers of potential recruits.

In this context, selective benefits must be apportioned not simply across participants and non-participants. Rebel leaders would also like to distribute selective benefits to the

highest quality recruits. Quality might be a function of an individual's productivity in the tasks of rebellion, and reflective of the level of commitment of the potential recruit to the long-term goals of the movement. Attracting high-quality recruits is the optimal strategy for a forward-looking rebel leader looking to build a successful organization.

In order to selectively distribute benefits to high quality recruits—picking them out of the crop of potential participants—rebel leaders need to be able to distinguish one “type” of individual from another. But since such information is not readily apparent, and individuals have strong incentives to hide it from rebel leaders, groups are confronted with a dilemma. Offering selective incentives is an important strategy for overcoming collective problems, but it creates another challenge, adverse selection. Without the capacity to distinguish high from low quality recruits, groups are flooded with low quality recruits. Theories of rebel recruitment, as a consequence, must take into account the informational asymmetries made apparent by the offering of selective incentives as well.

### **Revisiting Rebel Recruitment**

So far, I have questioned two assumptions underlying the selective incentives solution to rebel recruitment. The first is that rebel groups face limited constraints in obtaining resources to translate them into selective incentives. The second is that, for rebel leaders, the recruitment process is most importantly an effort to overcome a collective action problem. This section proposes a different starting point for the analysis of the recruitment problem.

#### *Assumptions*

Rebel leaders are seen as political entrepreneurs seeking to construct an organization with sufficient capacity to compete against the government's military forces. The emergence of a small number of rebel leaders themselves is exogenous to the model. The recruitment problem comes into play when an initial core of leaders seeks to recruit participants for a movement, to build it into a rebel organization.

This transition from a small core of rebel leaders to a movement with recruited participants is a critical moment in the life of an organization. Only after recruiting new members, beyond the founders, are groups able to realize the economies of scale (in recruitment, war fighting, and political administration) that come with increased inputs to the movement.

#### *Different Initial Conditions*

In an important departure from past approaches, I argue that rebel leaders face different sets of initial conditions as they organize a strategy for recruiting new members. There has been an assumption in much of the literature on guerrilla warfare and civil conflict

that rebel groups are dependent on civilian populations for their survival.<sup>11</sup> It is believed that, without civilian support and access to food, labor, information, and shelter, rebel groups cannot be successful.

At the same time, Collier and Hoeffler suggest that, in order to successfully mount a civil war, rebel groups require access to resources with which to mobilize an army.<sup>12</sup> These resources may come from predation on natural resources, or be delivered through the support of an external patron or diaspora population. This approach stands in stark contrast to Mao's famous assertion that guerrillas are like fish, only able to survive in the sea of the civilian population. Access to resources dramatically reduces the dependence of rebel groups on civilian support.

The reality is, of course, somewhere in between. In the initial stages of rebellion, rebel leaders face different sets of initial conditions.

In some contexts, rebel leaders initiate a conflict with access to economic resources. Such financing can be generated internally or externally, through the extraction of natural resources, the taxation of production, criminal business, or from an external patron. The extent to which a group has access to economic endowments will be a function, in part, of the resource endowments of the country, the alignment of external actors, and the productivity of the land—factors largely beyond the control of the rebel organization, especially in the short-term.

Of course, economic endowments vary in the ease with which they can be mobilized and translated into selective incentives. This factor has been termed the “lootability” of a commodity.<sup>13</sup> The extremes are highly visible. Resources generated from external patrons, for example, require little if any civilian labor. They can be easily distributed as selective incentives with few costs incurred. On the other hand, the production of coca leaf requires large numbers of civilians cultivating the crop and picking it for export. Time, labor, and energy are required to translate economic endowments into private rewards.

Regardless of a resource's lootability, however, the key distinction for this simple model is the extent of the resource constraint. At the extreme, one can imagine a situation in which rebel leaders have no access to economic resources with which to finance their armed movements. The country may lack any natural resources or valuable agricultural commodities; the group may be effectively prevented from trading across borders; and the local population, in the region where the movement is being organized, may be

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<sup>11</sup> Mao argued that, “Because guerrilla warfare basically derives from the masses and is supported by them, it can neither exist nor flourish if it separates itself from their sympathies and cooperation.” See Mao-Tse Tung, *On Guerrilla Warfare* (Chicago: University of Illinois Press, 1961), p. 44.

<sup>12</sup> Collier and Hoeffler (fn. 6).

<sup>13</sup> See Phillippe LeBillion, “The Political Ecology of War: Natural Resources and Armed Conflict,” *Political Geography* 20, 2001, p. 561-584; Michael Ross, “Oil, Drugs, and Diamonds: How Do Natural Resources Vary in their Impact on Civil War?” Manuscript, University of California, Los Angeles, June 2002.



uniformly impoverished. In this sense, one can distinguish between groups with access to economic endowments and those that face a stiff resource constraint.

Rebel leaders may also have access to a set of social endowments including shared beliefs, common expectations, norms of behavior, and trust with certain members of the population.<sup>14</sup> These forms of social capital may come from shared identities (ethnic, religious, cultural) or be the result of repeated interactions in political or social settings (including political parties, social movements, educational settings, or tight-knit communities). These pre-existing social endowments provide for “generalized reciprocity” among their members, but are, of course, difficult to create or change in the short-term as leaders embark on the recruitment process.<sup>15</sup>

With the level of economic and social endowments relatively fixed in the short-run, one can imagine rebel leaders facing four different starting points.

(Figure 1.1)

Rebel leaders at points (A) and (C) are in a position to mobilize economic resources in the production of material rewards for participation. Leaders in position (B), however, are unable to channel resources into the provision of short-term materials rewards. The resource constraint is stiff and fixed as they begin the recruitment process. Leaders at point (D), I argue, are unlikely to be able to recruit individuals for their movements. The diagonal line reflects a key property of the production function for rebellion, namely that without a minimum level of economic or social endowments, groups are unable to overcome the *threshold* of rebel organization.

Why do these initial conditions matter for the recruitment process? The selective incentives solution relies on the fact that rebel leaders are in a position to distribute short-term material rewards to potential participants in order to successfully mount a rebellion. But initial conditions fundamentally shape the capacity of groups to offer short-term material rewards.

(Figure 1.2)

Olson’s critique of collective action pointed to the inability of long-term, public benefits to help leaders overcome collection action problems. The result was a shift in theorizing from the upper right to the lower left hand quadrant (1.2) in which short-term, private benefits serve to motivate individual participation.

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<sup>14</sup> Scholars of cooperation point to the importance of social mechanisms for resolving collective action problems. In economics, see Douglass North, *Institutions, Institutional Change, and Economic Performance* (Cambridge: Cambridge University Press, 1990). Robert Putnam, building on the work of James Coleman, presents a theory of social capital that highlights the cooperation-enhancing properties of beliefs and norms. See Putnam, *Making Democracy Work: Civic Traditions in Modern Italy* (Princeton: Princeton University Press, 1993).

<sup>15</sup> Michael Taylor, “Rationality and Revolutionary Collective Action,” in *Rationality and Revolution*, Michael Taylor (ed.) (Cambridge: Cambridge University Press, 1988).

Different starting points, however, illuminate the fact that not all rebel groups can offer material rewards in the short-term. Groups with access to economic resources translate those endowments into selective incentives to overcome collective action problems.

Resource-constrained groups can also utilize selective incentives (in the form of private rewards), but they must be of a different form. Selective incentives can only be offered in the future. Rebel leaders promise private rewards expecting that they will gain access to resources at some point during the conflict, or at its conclusion if they capture the state. Offering such longer-term private rewards requires credibility on the part of the rebel leadership, however. It is the presence of social endowments that makes these promises about future rewards credible.

The take away point is that different initial conditions contribute to variation in the *opportunity* that participation presents to potential rebels. Resource-rich rebel groups offer short-term material rewards to motivate participants. I call these offers *payoffs*. Resource-constrained rebel groups rely on *promises* about the selective benefits that individuals will receive in the future, if they agree to join in the present.

### *The Information Problem*

The second departure from standard models of rebel recruitment is in the specification of the challenge that leaders confront. One piece of the challenge is overcoming the incentive of potential participants to free ride on the actions of others. I maintain that selective incentives are a key strategy for resolving that challenge.

Rebel leaders are equally concerned with attracting the right *type* of potential recruit. Like private firms, leaders wish to attract high-productivity workers rather than those who are likely to shirk from their duties when no one is paying attention. This challenge is particularly acute for rebel organizations because the risks associated with participation are so extreme. At the early stages of rebellion, with few guns, limited resources, and living in hiding, the choice of uncommitted soldiers could irreparably harm a movement and lead to its immediate defeat.

Leaders are forward-looking and conscious that any resources garnered today should be invested in the organization so that it can overcome its power imbalance with the government forces. So rebel leaders wish to recruit high-commitment as opposed to low-commitment individuals. High-commitment individuals are *investors*, dedicated to the cause of the organization and willing to make costly investments today with the promise of receiving rewards in the future. Low-commitment individuals are *consumers*, seeking short-term gains from participation. Low-commitment individuals are thus less productive for the organization as they require a continual expenditure of resources in the short-term. In practical terms, we can think of the level of commitment as a discount rate.

The problem is that, while recruits are aware of their level of commitment to the organization, the rebel leadership is not. A recruit's *type* is private information, and individuals have a strong incentive to misrepresent their level of commitment in order to be chosen as a new recruit.

The selective incentives solution magnifies this challenge for rebel leaders. By offering short-term material rewards that are higher than the opportunity cost of participation, rebel leaders are flooded with potential recruits. In this context, distinguishing between high and low quality recruits is of paramount importance.

Rebel leaders, however, are unable to choose recruits on the basis of an individual's *type*. Without strategic actions on the part of the recruits or the rebel organization, the market suffers from adverse selection.<sup>16</sup> Unable to distribute selective, private rewards linked to the actual productivity of the two types, rebel groups find themselves overwhelmed by low-commitment individuals.

The recruitment process is thus a set of strategic actions by recruits and rebel leaders to overcome the constraint of collective action and avoid the pitfall of adverse selection. The variation in what rebel groups can offer potential recruits plays a critical role in addressing this information asymmetry in the recruitment market.

### The Basic Model

There are two players in the recruitment game: a rebel organization and potential recruits.<sup>17</sup> Potential recruits choose to participate or abstain in order to maximize the economic returns to their labor.<sup>18</sup> This requires that groups offer private, selective benefits to potential rebels in order to attract their participation. However, these benefits need not be available to the organization immediately. Group may use short-term *payoffs* to attract individuals, or may make *promises* about the private benefits to be provided down the line.

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<sup>16</sup> This challenge of industrial organization is covered in most economics textbooks. The seminal paper developing the concept was by Michael Spence, "Job Market Signaling," *The Quarterly Journal of Economics* 87, No. 3, August 1973, p. 355-374.

<sup>17</sup> Although they do not figure directly in the model, government forces undeniably shape the choices of potential rebel soldiers. In particular, strong military forces substantially reduce the probability of a rebel victory. As a consequence, recruits further discount a group's promise of future benefits in making their participation decision. However, in the moment when choices are made, this probability is fixed for those making choices. We treat it as such in the model. Government military forces can also limit the access of rebel groups to sources of wealth that fund immediate payoffs to recruits. In particular, government forces can be deployed to reassert control over areas in which natural resources are located—thereby reducing a rebel group's capacity to generate wealth. Alternatively, the military can seek to cut off border access as a way of limiting the inflow of external assistance to the insurgents. While recognizing that a group's access to resources may change over time, we treat it as fixed to examine the dynamics of the model.

<sup>18</sup> I should make it clear that abstaining from participation means only choosing not to be a soldier. Of course, potential recruits may choose to participate as guides, local militia, or general supporters. In addition, one could think of the utility function including a range of non-economic components; however, for the purposes of this analysis, I assume that individuals are interested in maximizing their wealth.

### *Signaling Commitment*

In the first stage, groups, in effect, offer a contract to potential soldiers. The offer takes the form of a set of private rewards from rebellion to be provided in the short-term or in the future. To bring recruits on board, this offer must exceed the value of what each recruit could earn if they did not participate in the movement.

(Figure 1.3)

Payoffs provided in the short-term are not uncertain. However, three factors lessen the real value of benefits promised down the road. The first is the probability of a rebel victory. Clearly, where government forces are strong relative to the rebel movement, the value of promises (in expectation) is very low. Second, there is the probability that rebel soldiers will actually receive the promised rewards from the rebel commanders if they win. I call this the probability of distribution. It is a reflection of the credibility of future promises made by a rebel group. Finally, an individual's discount rate plays into the equation. Future benefits are worth less to those recruits who heavily discount the future.

What groups offer depends a great deal on the social and economic endowments they have at their disposal in the earliest days of the organization. Some rebel organizations begin with an extensive supply of economic resources, making it possible to offer payoffs to recruits in the near term. Others, while sharing identities or beliefs with the local population, may not have access to economic resources. For these groups, the weight of the offer will lie in promises.<sup>19</sup> However, these promises are more credible when recruits share the same identity, belief-system, or community with the rebel leaders.<sup>20</sup>

This commitment to provide private rewards resolves the problem of collective action but does little to help rebel organizations avoid adverse selection. Since the offers rebel organizations make are relatively fixed by their endowments, potential recruits must take strategic actions to signal their level of commitment to rebel leaders. In particular, high commitment individuals signal their quality by accepting promises rather than payoffs.<sup>21</sup>

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<sup>19</sup> As I mention earlier, it would be possible for a group to offer immediate payoffs to recruits by allowing its soldiers to loot as soon as they join. However, groups that choose this strategy rarely if ever manage to generate combat sufficient for a civil war; instead, they remain as bandit and criminal groups. As a result, I assume that rebel groups can only offer payoffs in the near-term that come from a taxing capacity, resource extraction, or external support.

<sup>20</sup> Ethnic and religious linkages help make contracts enforceable because members tend to come from groups in which interaction is repeated and reputation matters. Where ideology provides the social bond across individuals, tight groups are also created but they do not tend to pre-date the conflict itself. In this context, ideology often serves to make the leaders appear trustworthy to the combatants. Ideology specifies goals, objectives, and codes of behavior against which leaders can be measured. It also leads recruits to think that success is more likely (because "history is on our side") and that, as insiders, they are the most likely to benefit from success.

<sup>21</sup> It is important to emphasize that physical markers including indicators of ethnic identity, on their own, do not provide sufficient information about the level of commitment of potential recruits. Rebel organizations recruiting only among their ethnic kin still face the difficult task of separating out opportunists from committed members. In addition, education, which serves as the archetypal signal in labor markets, doesn't come into play in the contexts under study here. Opportunities for education are far

(Figure 1.4)

Why does a willingness to defer rewards into the future function as a credible signal? The key assumption here is that it is relatively more costly for low commitment individuals to accept deferred benefits. Their high discount rates make the same offer of future benefits worth less in real terms to them than it would be to high commitment individuals. As a result, rebel organizations can infer that an individual's willingness to accept larger amounts (and often all) of her payoff in the form of promises is a signal of her level of commitment to the organization.<sup>22</sup> Importantly, this is a costly process. High commitment individuals would be better off if they did not have to bear the costs of the signal to distinguish themselves from the rest of the bunch. But for committed individuals, it is a cost worth bearing to protect their organizations from a flood of opportunistic joiners.

(Figure 1.5)

Recruitment thus separates high commitment and low commitment individuals.<sup>23</sup> Potential recruits signal their commitment to the rebel organization by accepting offers from groups that are only able to provide benefits in the future. Spurning these groups, because the real value of their offers is too low, low commitment individuals join rebel organizations offering immediate payoffs or no group at all. The result is that resource-rich rebel groups are overwhelmed by opportunistic joiners, while those waging war with limited economic endowments attract committed soldiers to their movements, by making credible promises about what they can deliver in the future.

### *Reducing the Informational Asymmetry*

Importantly, the informational mechanism that signaling provides helps groups to distinguish between those individuals likely to be most committed to their cause and those interested in joining for the short-term benefits that participation can provide. However, it is not sufficient on its own to weed out opportunists.

In practice, there is a continuum of commitment, rather than the two extremes assumed in the simplified model. The opportunities that rebel groups provide, even when they emphasize promises over payoffs, are likely to attract some of the wrong type of individual. Accordingly, in the recruitment process, groups also take strategic actions to reduce their informational disadvantage.

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too limited in poor countries. As such, groups of individuals with low levels of education would include both those with short time horizons and those with long time horizons but without access to the educational system.

<sup>22</sup> An important implication of this structure is that rebel groups should give disproportionate rewards to those who join early, even if they are not the most deserving on the basis of battlefield performance. Joining early, and facing the highest risks, is a credible signal of commitment that separates activists from opportunists.

<sup>23</sup> In an appendix to this paper, I outline an example of this equilibrium in more detail.

The key to any such strategy is its *selectivity*. Rebel organizations develop recruitment methods that attempt to identify and exclude potential recruits who might be joining with little interest in the group's overall objectives. In practice, such individuals are those with a reputation for dishonesty, past patterns of illegal behavior, and those who demonstrate irresponsibility when it comes to work.<sup>24</sup>

Three key strategies enable rebel groups to overcome their informational handicap. The first requires that rebel organizations actively *gather information* about the past behavior of interested individuals. Previous practice is a strong indication of the likely performance of potential recruits within the rebel movement. However, to gather such information, two conditions must be present. First, rebel groups must have or establish links within the communities in which they operate that enable them to collect information about potential members. Community leaders are likely to have information about the reliability and trustworthiness of community members that pre-dates the rebel opportunity. Using these links requires that trust exists in both directions—a situation far more likely to transpire where rebel organizations share identities, beliefs, or social networks with their supporting communities.

The second condition is equally important. For information gathering to provide useful signals about a recruit's level of commitment, reputation must matter. Embedded in a context of repeated interaction (such as a local community, an ethnic network, or a political group), potential members care about the value of their reputation. In trying to join, recruits make assertions about their level of commitment. Groups with access to information gathering networks have the capacity to authenticate these pledges. Where reputation matters and groups are able to gather information, those recruits with a demonstrated incapacity for honest and committed behavior will avoid the movement, or when they try to join, will be stopped at the door.

A second strategy also requires that reputation matters. However, instead of looking to actors outside of the movement to authenticate the pledges of new recruits, it relies on the credibility and commitment of current members. I call this screening mechanism: *vouching*. Potential members must be invited to join by current rebel soldiers. And in the process of becoming a rebel, the current soldier must vouch for the honesty and commitment of the new member. If a new recruit fails to live up to his pledge, both the recruit and the current soldier bear the costs of his failure. As long as rebel soldiers seek to protect their reputations within the organization, vouching is an effective strategy for screening out opportunists. Since the private benefits that are used to overcome collective action problems can be withheld, rebel soldiers will seek to protect their own positions within the organization as long as they remain a part of it.

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<sup>24</sup> Analysts of civil war are undoubtedly aware that screening mechanisms such as those described here can be used to select for psychopaths, criminals and drug addicts, instead of the most committed individuals. Depending on the motivations of the rebel leadership, groups can use selective recruitment to produce very different results. A good example of this is described by John Mueller, "The Banality of Ethnic War," *International Security* 25, No. 1, p. 42-70.

The final method used to screen recruits is called *costly induction*. Rebel organizations set in place processes for evaluating the level of commitment of potential recruits. In order to be effective, these processes must be costly to the individual, creating a disincentive for low commitment recruits to join. Costly induction operates much like the signaling mechanism described earlier. The key difference is that it is applied as individuals join or in the first period of their participation. In a sense, it is an ex-post screening mechanism.

Two key examples of costly induction demonstrate how it works. The first is a required period of political indoctrination for new recruits to the rebel movement. This process might include the sustained study of the ideology and political messages of the rebel group followed by oral or written examinations testing the individual's capacity. As a screening mechanism, the process introduces a number of additional costs: the time delay in access to a gun and the authority of being a rebel, the time wasted in study for disinterested recruits, and the reputational costs likely to accrue when the recruit fails his examinations.

A second example is a required period of rebel apprenticeship in which recruits participate actively in attacks without the use of a gun. Often, such an approach is necessitated by the shortage of guns in small rebel movements. However, it could also be required by movements with a surplus of guns in order to evaluate an individual's commitment to the group. This method clearly elevates the level of risk involved to an almost unmanageable level for low commitment individuals. Rebel organizations are able to exercise creativity in developing methods of costly induction that are locally and culturally appropriate to the contexts in which they operate. The only key requirement is that the costs applied to potential members are more burdensome for those with low levels of commitment than for those likely to make sustained investments in the movement.

### *Probing the Model*

A number of obvious questions follow from the analysis above. First, why don't resource-rich groups simply hold onto their wealth, invest it in the organization, and offer only promises to potential recruits? This would be the ideal situation. Resources ought to enable rebel organizations to more quickly overcome their power asymmetry with government forces. Instead, resources are often squandered because groups are unable to credibly commit those resources to the long-term goals of the organization.

Promises to recruits are only credible when they believe that they will actually receive their share of the wealth when the war comes to an end. As such, the probability of distribution is key. Shared ethnic or religious identities, ideological beliefs, or tight social networks raise this probability, increasing the value of future commitments. These social endowments enable organizations to overcome the time inconsistency problem. However, where rebellions emerge in resource-rich contexts, they often lack the social endowments required to credibly recruit on the basis of promises. In part, this is because the rebellions we observe reduce the costs of organization by drawing entirely on

economic resources from the very beginning.<sup>25</sup> Were a rebel group to emerge with substantial economic and social endowments, it might be possible to preserve resources for the long-term and recruit on the basis of promises alone.

Second, why don't low commitment individuals pretend that they are highly committed to the rebel's cause? This becomes a critical issue where rebel groups are not competing against one another for recruits. Where there is no competition, the promise of future benefits could, in expectation, still exceed the best available alternative opportunity. One major reason emerges. Low commitment individuals know that they are likely to shirk, and that their defection will be met with punishment or expulsion from the group.<sup>26</sup> Given their own private information about how they are likely to perform, individuals know in advance that they are unlikely to realize economic returns in the future and therefore choose not to join.

## Testing the Model

### *Empirical Implications*

Ideally, to test the model, we would reveal the true "types" of the recruits attracted to the various rebel groups. Groups that offer payoffs should have significantly higher proportions of low commitment individuals. However, the same problem that bedevils the rebel organization makes it difficult to run a clean empirical test. The level of individual commitment is private information and it cannot be discerned directly from outward markers.

However, the model suggests a number of other patterns to look for across rebel organizations.

First, I argue that only groups able to make *credible* promises to deliver future benefits are able to recruit high-commitment individuals. Credibility comes a set of social endowments: shared ethnic or religious identity, shared political beliefs and ideology, or tight social networks. Groups making promises thus should exhibit one of these sources of credibility inside their organization. A base in a particular social identity group is a necessary condition for recruitment on the basis of promises alone. The converse also follows from the model. Groups that emerge in resource-rich contexts and recruit by offering short-term payoffs should exhibit heterogeneity of identities or beliefs within their membership.

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<sup>25</sup> Analytically, this is similar to the "Dutch Disease" problem in which natural resource booms cause a collapse of manufacturing industries. Because rebel groups are able to organize financially (where resources are available), collective action rooted in identities or beliefs never takes hold. Such action is too costly in a resource-rich context and is crowded out. For a description of the "Dutch Disease" problem in development economics, see J.R. Lewis, "Natural Resources and Development," in H. Chenery and T.R. Srinivasan, *Handbook of Development Economics* (Amsterdam, NY: North Holland, 1989).

<sup>26</sup> Defection could simply mean avoiding battle in the context of conflict. More seriously, low commitment individuals might take advantage of their weapon to loot from the civilian population in order to realize some immediate returns.



*H<sub>1</sub>: Rebel groups that emerge in resource-constrained environments will tend to exhibit homogeneity in the social identities of their membership. Rebel groups in resource-rich environments will tend to exhibit heterogeneity in the social identities of their membership.*

Second, I argue that the key signal of commitment that potential recruits use is their willingness to defer private rewards into the future. I suggest that this is a function of their discount rate. Although educational opportunities tend to be limited in many of the developing countries that experience civil war, a small percentage of citizens manage to receive places in the national university system. While education is too restricted in its supply to serve as an accurate signal of commitment across all individuals, the level of education is likely to be negatively correlated with an individual's discount rate. People who value future payoffs almost as much as those today are far more likely to absorb the costs of investing in education today so as to earn greater rewards in the future. As a result, we can expect that the level of advanced education in groups recruiting by promises alone should be significantly higher than in groups that recruit with immediate payoffs.

*H<sub>2</sub>: Rebel groups that emerge in resource-constrained environments will tend to have a higher proportion of educated individuals among their membership than their counterparts in resource-rich environments.*

A final empirical implication of this analysis is that strategies of information gathering, vouching, and costly induction are more likely to be used by rebel organizations that are identity-based or ideological at their founding. Information gathering requires that groups be embedded in particular communities from which the rebel leadership can obtain reliable information about the quality of potential recruits. Rebel organizations that emerge from ethnic or religious communities, build ideological movements at the local levels, or base themselves in tight-knit social networks have a far greater capacity to access quality information.

Vouching is only as effective as the members that have already joined the group. High commitment individuals protect their reputations by inviting only other committed recruits to join. Low commitment rebels face no such incentive to recruit the highly committed. Moreover, their networks probably include a much greater proportion of those who are likely to shirk and defect. To the extent that material-based groups already recruit low commitment individuals by virtue of the signaling mechanism, vouching does not evolve as a possible strategy.

Finally, costly induction generally necessitates the presence of clear political beliefs or ideological leanings. To set in place a costly period of political indoctrination, a group requires an infrastructure of political education including: a set of beliefs, a rationale for those beliefs, material and evidence to corroborate the agenda, a set of trainers able to share those beliefs, and a mechanism for evaluating an individual's knowledge of the political doctrine of the movement. The necessary political agenda could emerge in an

ideological movement or it could also be generated in a group characterized by tight linkages of ethnic, religious, or regional identity.

A period of rebel apprenticeship does not, on the surface, seem out of reach to resource-rich groups. Why couldn't a group recruiting on the basis of short-term payoffs require individuals to fight for the first month without a gun? One needs to follow the logic through to demonstrate why it cannot happen. A costly apprenticeship significantly raises the costs of joining for a new rebel recruit, decreasing the value of whatever private rewards have been offered. High commitment individuals bear this cost as a necessary one in order to signal their quality to the rebel organizations. Low commitment individuals, on the other hand, could immediately be priced out of the market by the additional costs of joining. The only solution would be to increase the private rewards offered to potential members. But, to the extent that those rewards are offered in the future (as the present budget of the group is strained), they will be only be credible where groups are rooted in particular social identities.

*H<sub>3</sub>: Rebel groups that emerge in resource-constrained environments will tend to practice strategies of information-gathering, vouching, and costly induction. Rebel groups in resource-rich environments will not tend to practice these strategies for sorting new recruits.*

### *Two Illustrative Examples*

This model linking resource endowments and the recruitment problem emerged from a structured comparison of the strategies of four rebel groups: the National Resistance Army (Uganda), Renamo (Mozambique), Sendero Luminoso (Peru), and a faction of the Shining Path, the Regional Committee for the Upper Huallaga Valley (Peru).<sup>27</sup> These carefully selected case studies enabled me to generate a set of theoretical claims and the underlying causal mechanisms outlined above.

Systematic field research, including interviews with hundreds of ex-combatants and civilians in rebel-held zones, reinforced a central starting point of the recruitment model. Rebel groups differ dramatically in their capacity to offer short-term material rewards at their inception as part of the recruitment process. These *variations in opportunity*, I argue, fundamentally shape the outcomes of recruitment, when both collective action problems and informational asymmetries are taken into account. In what follows, I illustrate the linkages between group resource endowments and recruitment outcomes using two cases that motivated the model.

The starting point for this brief comparison is to identify a core of rebel leaders plotting an insurgency with access to significant economic resources with which to fund their movement. Founded in 1976, with the financial support of and an external base provided by the Rhodesian government, Renamo, which challenged the Mozambican government, is a good example of a resource-rich rebel group. The National Resistance Army (NRA),

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<sup>27</sup> For a fuller treatment of the four cases, see Jeremy Weinstein, *Inside Rebellion: The Political Economy of Rebel Organization* (Ph.D. Dissertation, Harvard University, 2003).

by contrast, launched its insurgency in 1981 from an internal base in a highly impoverished region of Uganda. The NRA had only limited access to external support (a small shipment of guns from Libya) and no local, economic resources with which to organize its movement, beyond the collection (for consumption) of agricultural products.

The model implies that differences in what rebel groups can offer potential recruits—payoffs versus promises—shape the *type* of individual that is attracted to join, with groups in resource-rich environments flooded by opportunistic joiners. Assuming that the National Resistance Army and Renamo are similar in other characteristics likely to impact group membership, the model suggests that the National Resistance Army, in contrast to Renamo, is likely to exhibit homogeneity of social identity in its membership, a more educated cadre of members, and the use of strategies for reducing informational asymmetries.<sup>28</sup> Let us examine these motivating cases to follow the logic of the model.

### *Variation in Opportunity*

Potential recruits to the NRA faced daunting challenges if they decided to join.<sup>29</sup> Operating in the Luwero Triangle, less than 90 kilometers from the capital, Kampala, the NRA was in a highly unstable situation. Their first attack on the Kabamba Army Barracks had been unsuccessful. As a consequence, the NRA lacked a significant number of guns to arm its growing membership. The rebel movement had a few civilian contacts that supplied food to the rebel camp, but resources were scarce. There was no money for basic supplies or salaries. Everything had to be donated by the local population or come from contacts in Kampala. The main agricultural product in their areas of operation was *matooke*, a staple crop, which provided no source of income for the movement. The leadership talked to potential recruits about the economic opportunities and political positions they would have if the NRA succeeded in its campaign, but the risks were enormous.

Potential members of Renamo encountered a more favorable situation.<sup>30</sup> New recruits were based at a guerrilla camp across the Mozambican border in Rhodesia. Former Rhodesian soldiers served as military instructors, preparing new recruits for internal operations in Mozambique. Renamo was well supplied by its external patron—with

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<sup>28</sup> In Weinstein (2003), I argue that the National Resistance Army and Renamo, along with the two factions of Sendero Luminoso, share a number of other characteristics making a structured comparison possible. In particular, the contexts that gave rise to rebellion in all three countries were very similar. All four groups emerged when the political opportunity structure favored rebellion. In each country, the government was politically weak and had failed to deliver basic services and economic growth to the groups' regions of origin. Each of the rebel groups emerged in rural, impoverished areas, where few opportunities existed for economic advancement; faced an asymmetry of power with the government and its military forces; and sought to capture control of the state and its resources. See Chapter 2.

<sup>29</sup> Depictions of life in the NRA are based on more than seventy interviews of former NRA combatants conducted in Uganda in 2000-01. See also Pascal Ngoga, *Guerrilla Insurgency and Conflict Resolution in Africa: A Case Study of Uganda* (Ph.D. Thesis, Lancaster University, 1997); Ondoga Ori Ama za, *Museveni's Long March from Guerrilla to Statesman* (Kampala: Fountain Publishers, 1998).

<sup>30</sup> These observations are also based on more than seventy interviews with former Renamo combatants in Mozambique in 2001. On the organization of Renamo, see also William Minter, *Apartheid's Contras: An Inquiry into the Roots of War in Angola and Mozambique* (London: Zed Books, 1995).

weapons, uniforms, food rations, shelter, and regular salaries offered to all new recruits. Risks to participation were much lower, as combatants stayed across the border, and Renamo's operations in Mozambique were often supported by air power from the Rhodesians.

Participation in the NRA offered the promise of private rewards should the insurgency be victorious. Joining Renamo was a ticket to a better life, even in its earliest days.

### *Variation in Identity*

Despite this variation in the capacity of the two rebel groups to provide short-term material rewards, both recruited large numbers of participants and grew substantially in their first years of operation. Within two years the NRA had grown from 27 initial members, to nearly 4000. Renamo also grew at a substantial pace, increasing its membership from less than one hundred to nearly 3000.

What was the profile of their respective memberships? A recruit in the NRA's guerrilla camp found himself surrounded by people just like himself.<sup>31</sup> The vast majority of his rebel comrades were Banyankole, members of an ethnic group from Western Uganda. Many had grown up in the same villages, attended the same schools, and their families had been close to Yoweri Museveni, the guerrilla leader. A significant percentage also came from families of born-again Christians—products of the balokole movement that had swept through Western Uganda nearly fifty years earlier. They had attended church together, been raised in families that eschewed alcohol and embraced education, and been channeled into professional careers as a way of improving the economic and social conditions of their communities. Many recruits had abandoned their studies at university to go underground and join the NRA's struggle.

Although we do not have data on the ethnic and religious makeup of the NRA during the war, a quick look at the membership of the National Resistance Council (NRC) at the moment of the NRA's victory in 1985, lends credence to the observations of former NRA combatants. The NRC was the political wing of the NRA and included most of the senior NRA leaders and their civilian collaborators. Looking only at the historical members—those that joined during the bush war—the predominance of the Banyankole is evident. In addition, balokole made up 15% of the leadership core, including the leader of the movement, the head of the rebel army, and senior members of the political and military establishment.

(Table 1.1)

The situation was substantially different in Renamo. With the early Renamo leadership and the Rhodesian government actively recruiting from among the discontented exiles outside of Mozambique, the population of recruits was quite diverse. Many Mozambican exiles were from the center or northern parts of Mozambique—regions that feared

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<sup>31</sup> The early characteristics of NRA recruits follow from interviews with senior NRA commanders in Kampala on October 20, November 2, November 6, 2000; January 24, July 15, 2001.

persecution from the new Frelimo government—but they came from a large number of ethnic groups and lacked a coherent political ideology. Despite their shared regional ties, it wasn't until the mid-1980s, nearly ten years after its founding, that Renamo presented a clear ideology making the case for a coordinated movement against the political and economic dominance of ethnic groups in southern Mozambique.

(Table 1.2)

While data on the makeup of Renamo's early military forces is difficult to find, one can get a rough idea of the diversity of Renamo's social base by looking at its first National Council, established in 1981 and largely composed of the early joiners.<sup>32</sup> The leadership structure encompassed a broad range of ethnic groups including the Macua-Lomwe, the largest group in the country, but also members of the Ndau, Manyika, Sena, Shangaan, Chope, Yao, and Ronga tribes. While many of the key leaders were from the center of the country, it would be difficult to argue that the shared regional affiliation provided the close-knit ties that ethnic identity or a shared language bring.<sup>33</sup> The majority of members had no education beyond primary school, and few preexisting ties linked members to one another.

#### *Variation in Strategy*

While the NRA's recruitment strategy initially targeted individuals with close ethnic and religious links to the group leadership, that approach was insufficient to meet the recruitment targets for the growing movement. It was incredibly difficult and risky to recruit and move Banyankole from Western Uganda and Kampala to the Luwero Triangle. As a result, within the first year of the conflict, the NRA began to look to the Baganda, an ethnic group based in Luwero, for potential recruits.

Museveni initially relied on local contacts in the triangle—Baganda with whom he had built relationships before the struggle began.<sup>34</sup> These contacts provided the initial cadres of the NRA with food, shelter, and local guides to help them through the unfamiliar terrain. But, in order to begin recruiting Baganda for the movement, Museveni needed a broader network of civilian supporters.

Operating from hidden rebel camps in the triangle, the NRA began to build networks of civilian contacts. These networks often grew from existing contacts.<sup>35</sup> The NRA would

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<sup>32</sup> See João Cabrita, *Mozambique: The Torturous Road to Democracy* (London: Palgrave, 2000), p. 184.

<sup>33</sup> The bias in the senior leadership toward people from the center is the result of a number of coinciding factors. Elsewhere, I have argued that groups in the center and north felt excluded from the Mozambican government, Frelimo, which had a clear southern bias. In addition, the Portuguese army recruited quite heavily in the center and north during the independence struggle, since Frelimo sought to make incursions in these regions. The Portuguese invested their resources in training Mozambicans for special forces operations and selected individuals who knew the areas and spoke the local languages. As a result, a large percentage of former indigenous soldiers in the Portuguese army were from the center and north. When Frelimo took power, many of these former collaborators fled to Rhodesia. Weinstein (fn. 26).

<sup>34</sup> See Yoweri Museveni, *Sowing the Mustard Seed* (London: MacMillan, 1997), p. 128.

<sup>35</sup> Interviews with civilian collaborators, Semuto, November 14, 15, 16, 2000.

ask local supporters to select others from the village to form small clandestine committees to provide the NRA with food, guides, information, and recruits. The NRA also approached people it did not know. In these situations, the NRA would seek out respected elders within the village, as well as those who were relatively wealthy.<sup>36</sup> The *bataka*, as these village elders were called, were approached by senior members of the NRA. The rebels would explain their political cause, emphasize their desire to defeat the Obote regime, and promise to end ethnic tribalism in Uganda.<sup>37</sup> In eliciting their support, Museveni and the rebel leadership would make promises about the future, the shape of the new regime they would install, the benefits that would come to Buganda, and the compensation that those who contribute to the rebellion would receive.<sup>38</sup>

These local networks were the basis for recruitment over much of the next two years. Members of the clandestine committees were asked to deliver “disciplined” recruits to the NRA camps.<sup>39</sup> In particular, Museveni encouraged the *bataka* to volunteer their sons for the cause.<sup>40</sup> Even after these young men were brought into the military units, Museveni remained in close contact with the *bataka*. These new recruits had to protect their reputations with the NRA and with their families.

The recruitment process, however, did not stop there. New recruits were quickly shifted into a period of military and political training. Although it varied in length, particularly at the beginning of the struggle when the movement was so weak, the training program always dedicated half of the time to political education. Political commissars, appointed within the rebel force, were responsible for the training. Lectures included topics from the history of Uganda, to political economy, and strategies of guerrilla warfare. Where possible, recruits were encouraged to read the books the NRA had on hand including works by Mao and Fanon.<sup>41</sup> Before passing the training, recruits were required to understand and digest the political aims of the movement as well as the strategies of guerrilla warfare the NRA sought to use.

While the NRA expanded beyond its narrow ethnic base through the use of information gathering and costly induction, Renamo turned to coercion to meet its recruitment targets.

In 1979, Rhodesia collapsed, leaving Renamo without a source of economic and logistical support. South Africa stepped forward to continue military support for Renamo, given their interest in combating the African National Congress, which had bases in southern Mozambique. Importantly, South Africa’s commitment to Renamo included logistical support, military supplies, and training.<sup>42</sup> But the flow of salaries and food that kept Renamo comfortable in Rhodesia and translated seamlessly into selective incentives came to an end.

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<sup>36</sup> Interviews with civilian collaborators, Semuto, November 18, November 22, 2000.

<sup>37</sup> I will return to issues of political mobilization and civilian organization in more detail in Chapter 5.

<sup>38</sup> Interview with civilian collaborators, Semuto, November 15, 17, 2000.

<sup>39</sup> Interviews with NRA commanders, Kampala, September 27, October 22, 2000. Interviews with civilian collaborators, Semuto, November 15, 17, 2000.

<sup>40</sup> Interviews with civilian collaborators, Semuto, November 15, 16, 22, 2000.

<sup>41</sup> Interviews with senior NRA commanders, Kampala, October 22, 24, 25.

<sup>42</sup> See Alex Vines, *Renamo: Terrorism in Mozambique* (London: James Currey, 1991), p. 17.

From 1979 straight through until the end of the war, Renamo recruited heavily by force. Children were abducted on their way to school; homes were raided and young men taken away; villages were destroyed and those fleeing were corralled by Renamo troops and taken to rebel bases.<sup>43</sup> Forceful abduction was used *even* in the areas where Renamo's cause was the most popular.<sup>44</sup> While some of the Renamo rank-and-file in the 1980s joined voluntarily, it is generally estimated that close to 90% were recruited by force.<sup>45</sup>

Coercive recruitment yielded a rebel movement that lacked any coherent social bonds. Operating throughout Mozambique by the mid-1980s, the practice of abduction meant that rebel recruits represented the entire diversity of Mozambique's ethnic and religious population. Little effort was made to politicize new recruits and no investment was made to screen out opportunistic joiners.<sup>46</sup> However, with this approach, Renamo did manage to grow. By 1985, the rebel group had more than 20,000 soldiers under arms.<sup>47</sup>

(Table 1.3)

Table 1.3 provides one demonstration of the makeup of Renamo's growing force. Over 40% of Renamo's recruits were below the age of eighteen—clearly abducted before they could achieve advanced education. Qualitative investigation, combined with the observations of seasoned observers, further confirms the impression that Renamo lacked an educated core of members. Data on the population of demobilized soldiers, including both government soldiers and rebels, indicates that less than 3% had an education of high school and above.<sup>48</sup>

Why then did Renamo turn to coercive recruitment? And what kept these abducted recruits in Renamo's force? When salaries disappeared and the comfort of life in Rhodesia was replaced with the reality of poverty as an internal guerrilla movement, what Renamo could offer to potential recruits changed dramatically. South Africa provided only guns and communications equipment, strengthening the rebel movement but giving them little in the way of resources with which to recruit new soldiers. However, because its initial members were brought together by opportunity rather than conviction, they lacked the social resources to recruit voluntarily in Mozambique. Not based in any particular ethnic group, Renamo had no home base in which to organize. Still lacking a coherent political agenda, Renamo was hard-pressed to credibly promise rewards to civilians who preferred to stay on the sidelines. This situation was made even worse as

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<sup>43</sup> Interviews with former Renamo combatants and civilian supporters, Nampula, March 30, April 1, 3, 4, 2001; Maringue, May 18, 24, 2001.

<sup>44</sup> Supportive *regulos* who were working with Renamo in the areas they controlled were not even asked to volunteer members of their communities for military service. Interview, Maringue, May 21, 2001.

<sup>45</sup> See William Minter, *The Mozambican National Resistance as Described by Ex-Participants* (Washington: Report Submitted to the Ford Foundation, 1989), p. 5.

<sup>46</sup> Interview, Maringue, May 19, 2001.

<sup>47</sup> See Vines (fn. 41).

<sup>48</sup> See Ton Pardoel, *Socio-economic profile of demobilized soldiers in Mozambique* (Maputo: UNDP, 1994).

the government's counter-insurgency campaign began and civilians were herded into communal villages to prevent their interaction with the rebels.

Yet, new recruits, by and large, stayed in the movement. With over 20,000 members dispersed throughout the country, coercion is not the entire story. With sufficient capacity to control territory, Renamo began to develop alternative sources of revenue to replace the flow of resources from Rhodesia. Payoffs resumed as Renamo permitted its soldiers to loot public and private property as part of their attacks on civilian areas.<sup>49</sup> Looting was a direct mechanism through which soldiers could improve their personal economic situations.<sup>50</sup> Because of the dramatic wartime shortage of consumer goods, looted items could be traded in areas of Renamo-control for almost anything.<sup>51</sup> In addition, Renamo became involved in the cross-border trade of ivory, which yielded \$13 million (US\$) alone in 1988.<sup>52</sup> Renamo also obtained funds through the extortion of multinational corporations in exchange for security guarantees.<sup>53</sup> It is important to emphasize that these revenue streams were not used to maintain the organization. Weapons, communications equipment, and other supplies were consistently provided by South Africa almost throughout the conflict.

In the end, coercion was a feasible strategy because the payoffs to participation returned. As a result, the movement grew and prospered. Importantly, though, it was a movement that lacked social or political connections linking members, operated without an educated leadership core, and survived by continuing the stream of payoffs to its members.

### **Looking Outside of the Sample**

The illustrative cases of the NRA and Renamo help to spell out the logic of the model in particular contexts. Renamo channeled the resources garnered from its external patron into the provision of selective incentives for its recruits. While the NRA lacked any economic resources around which to organize, its leadership substituted payoffs for promises, using ethnic and political ties to make credible promises about what the rebellion would deliver to its supporters.

These *variations in opportunity* had important consequences for the type of individual attracted to the various movements. The NRA attracted high-commitment individuals, tied together by their social identities, and willing to bear the costs of participation in the hope of realizing future gains. Renamo, by contrast, was flooded with opportunistic joiners, committed only as long as the flow of short-term rewards continued. When the flow of rewards stopped temporarily, the movement was forced to turn to coercion, as it

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<sup>49</sup> Interview, Maringue, May 18, 2001.

<sup>50</sup> A former combatant described how the commander distributed the "loot" to the rebel soldiers after the attack. Interview, Nampula, April 4, 2001; Maringue, May 21, 2001.

<sup>51</sup> Interview, Nampula, April 4, 2001; Maringue, May 21, 2001.

<sup>52</sup> Vines (fn. 41) reports that government raids on Renamo bases in 1988 produced over 19,700 elephant tusks.

<sup>53</sup> See Alex Vines, "The Business of Peace: 'Tiny Rowland,' Financial Incentives, and the Mozambican Settlement," *The Mozambican Peace Process in Perspective* (Accord, 1998).



lacked an ethnic, regional, or political agenda that would give it the credibility to attract new participants.

Of course, since the dynamics of these cases helped to motivate the development of the model, we must look outside of the sample to new cases to more systematically test the implications of the analysis. I explore two other rebel groups briefly before concluding.

The Eritrean People's Liberation Front (EPLF), a guerrilla army that, between 1972 and 1991, grew to over 78,000 fighters, successfully challenged and then defeated the Ethiopian government in its bid for Eritrean secession. It faced a powerful Ethiopian army, supported by the Soviet Union and Cuba. The EPLF emerged in an environment of dramatic religious and linguistic fragmentation—with Eritrea divided geographically between Sunni Muslims and Orthodox Coptic Christians, Tigrinya and Tigre speakers (along with Arabic), and a whole variety of tribes and clans within each religious group. This fragmentation was reinforced in the Eritrean Liberation Front (ELF), a precursor movement to the EPLF, which organized on the basis of external financial support into ethnically and religiously distinct regional groupings. The EPLF broke off from the ELF in 1972, abandoning its sources of foreign support, rejecting its fragmented ethnic and religious structure, and launching an internal civil war (between Eritrean groups) that coincided with the broader struggle against the Ethiopian regime.

The Revolutionary United Front (RUF) launched its insurgency in 1991 in an effort to unseat the ruling single-party state of the All People's Congress (APC), which had overseen Sierra Leone for 23 years. The RUF challenged an increasingly bankrupt state that was seeking to maintain networks of patronage through its manipulation of the diamond industry. The weakening of the APC's "shadow state" in the 1980s gave rise to a political movement of young students on the campus of Freetown's Fourah Bay College (FBC) that began to mobilize in opposition to APC rule. The students linked up with Libya, which was actively engaged in supporting African revolutionary causes, before the APC used its state security services to flush the intellectual movement out of the FBC campus. As the student movement melted away in response to repression from the state, the revolutionary fervor shifted to a much different population of potential insurgents—the unemployed, urban youth of Freetown, known for their anti-social behavior (including marijuana smoking, petty thefts and violence) and thuggery, at times, on behalf of the ruling party.

Both the EPLF and the RUF launched insurgent movements in poor, rural areas; challenged personalistic dictatorships that increasingly lacked popular legitimacy; and faced an asymmetry of power with the government forces, with the APC backed by the resources of the diamond industry and the Ethiopian government the beneficiary of external support. Where the two movements differed most substantially at their founding was with respect to what *participation* in insurgency meant for potential recruits. This variation in opportunity had important implications for the recruitment process that each group undertook.

### *Variation in Opportunity*

The EPLF grew out of an internal challenge to the strategy and structure of the ELF, the first secessionist movement for Eritrean independence. Critics within the ELF rejected the powerful influence of its external, financial patrons and the highly fragmented structure of the movement, in which zonal groupings reinforced long-standing ethnic, tribal, and religious animosities.<sup>54</sup> By mounting an internal challenge to the ELF, membership in the EPLF entailed substantial risk. New recruits to the EPLF faced a civil war within Eritrea, for hegemony as the rightful challenger to the Ethiopian regime, and a civil war within the Ethiopian federation, for the sovereignty of an Eritrean state.

These risks were magnified as the EPLF abandoned the external support provided to the ELF in favor of self-reliance. The insurgents organized on the basis of their own resources and sought to capture weapons purely from government forces. While the People's Democratic Republic of Yemen and an increasingly mobilized diaspora population provided limited external support, the vast majority of EPLF resources came from the government itself. EPLF attacks on Ethiopian forces were the single most important source of weapons and ammunition to maintain the insurgency.<sup>55</sup>

Moreover, recruits to the EPLF abandoned personal property at the moment they joined. Members centralized all personal property in EPLF stores, in effect, making contributions to the perpetuation of the movement itself. This commitment to self-reliance, in the face of enormous risks to potential participants, meant that joining was a risky venture that was likely to yield few short-term rewards. The EPLF could only make promises about what victory would bring to its many members.

While the EPLF committed itself to self-reliance, the RUF embraced wholeheartedly the support and resources provided by Charles Taylor in neighboring Liberia. The leadership of the RUF purportedly struck a deal in 1989 with Taylor pledging to help him liberate Liberia, in exchange for providing an external base and assistance with which to launch an internal struggle in Sierra Leone.<sup>56</sup> While a small number of the initial RUF cadres received training in Libya in 1987/88, the bulk of the organization and preparation took place in Liberia, before the 1991 launch.

In the shared vision of Foday Sankoh, the RUF leader, and Charles Taylor, participation in the RUF offered recruits an opportunity to partake of new patronage networks, since many were increasingly excluded from the benefits of government largesse in the capitals of Freetown and Monrovia. Both Sankoh and Taylor were emblematic of the emergence of "warlord rulers" in West Africa who use the "extortion of aid organizations, manipulation of drug and diamond trades, profit from forced labor, official looting

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<sup>54</sup> David Pool, "The Eritrean People's Liberation Front," in *African Guerrillas*, Christopher Clapham (ed.) (Oxford: James Currey, 1998), p. 20-25.

<sup>55</sup> T.M. Woldemikael, "Political Mobilization and Nationalist Movements: The Case of the Eritrean People's Liberation Front," *Africa Today* 38, No. 2, 1991.

<sup>56</sup> Ibrahim Abdullah, "Bush path to destruction: the origin and character of the Revolutionary United Front/Sierra Leone," *The Journal of Modern African Studies* 36, No. 2, 1998, p. 221.

operations, and control of markets through alliances with foreign commercial partners” to reward their supporters and build a base of political power.<sup>57</sup>

For potential recruits to the RUF, the opportunity to rebel was associated with short-term rewards. The RUF was envisioned as an instrument of personal enrichment. With Sierra Leone’s dramatic diamond and mineral wealth, so easily extracted by small numbers of illicit miners, government and rebel patronage were difficult to distinguish from one another. The RUF simply sought to take advantage of the government’s weak bureaucratic institutions to establish a monopoly for itself over the diamond areas of the East.

### *Variation in Identity*

Participation in the EPLF and the RUF entailed a different set of benefits and costs. The EPLF was in no position to offer short-term material rewards. Without external assistance or an internal resource base, the EPLF offered potential recruits a high-risk opportunity with the prospect of real, long-term rewards. The RUF, by contrast, explicitly embraced the narrow view of selective incentives. With a target of capturing control of Sierra Leone’s diamond resources in the first days of the insurgency and monopolizing control of trade across the Liberian border, recruits were, in effect, offered an opportunity to join a new network of patronage outside of formal government channels.

Different opportunities yielded substantively different pools of recruits. The EPLF leadership, by and large, hailed from urban areas, lower or middle-class backgrounds, and had left secondary school or university settings in order to join the movement.<sup>58</sup> Initial recruits typically gained access through networks of classmates, recruiting on behalf of the EPLF. Its membership incorporated large numbers of “educated, skilled, and technically trained workers,” putting their skills to use in the context of the insurgency.<sup>59</sup> The movement’s commitment to literacy training, and the large population of educated cadres in its leadership, made it possible for the EPLF to attract what an outside analyst referred to as “markedly superior” recruits (to those in the Ethiopian army)—a reference to quality explicitly reminiscent of the implications of the model.<sup>60</sup>

Explicit efforts were also made to recruit from both Christian and Muslim backgrounds, and from the full range of ethnic, linguistic, and familial groupings in Eritrea. These group differences were overcome by the EPLF’s sustained commitment to building a common identity for its recruits, a nationalist identity, that superseded tribal and familial loyalties.<sup>61</sup> While the membership was heterogeneous with respect to preexisting ethnic, religious, and linguistic categories, it was homogenous in the sense that members shared

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<sup>57</sup> William Reno, “War, Markets, and the Reconfiguration of West Africa’s Weak States,” *Comparative Politics* 29, No. 4, July 1997, p. 497.

<sup>58</sup> See Pool (fn. 53), p. 28.

<sup>59</sup> See Pool (fn. 53), p. 34.

<sup>60</sup> *Ibid.*

<sup>61</sup> Woldemikael (fn. 54), p. 4.

a collective identity—one forged through six months of mandatory political training, mobilization, and shared work effort. I will return to this recruitment strategy in the subsequent section.

The RUF, on the other hand, attracted a population of potential recruits referred to by one of the original student leaders as the “wrong kind individuals.”<sup>62</sup> As the original FBC student movement disintegrated under pressure from the APC government, a small number of non-student revolutionaries began to mobilize the population of *lumpen* youth, the so-called “rarray boys” in Freetown.<sup>63</sup> These youths were mostly unlettered, second-generation residents of Freetown (with roots all over the country) without access to employment. They were known first and foremost as thugs, drug-users, and tools of the political elite when dirty work was required. After Sankoh and his colleagues returned from training in Libya, they turned to lumpen youth as a source of recruits. Sankoh and his colleagues lacked any networks among the educated classes and had slim community ties in rural areas because of their marginal existence in urban and peri-urban areas. So they turned to the population of unemployed young men, first in Freetown, and later in the hinterland, near the Liberian border.<sup>64</sup>

When the RUF launched its insurgency in 1991, it was composed of two small forces, 100-150 soldiers in all. Two major populations can be distinguished. A group of Sierra Leonean lumpen youth, recruited and trained in Liberia in preparation for the war. The second group was composed of hard-core fighters from the NPFL, on loan from Taylor to the RUF. Taylor’s NPFL fighters, much like the uneducated youth in Sierra Leone, had joined to access patron-client networks from which they had traditionally been excluded. One fighter commented, “Eating in the bush is better than starving in Monrovia.”<sup>65</sup> Taylor gave his fighters the right to inflict violence, loot, and profit from the control of trade in areas that they controlled. Under Sankoh’s leadership, the lumpen youth and the NPFL fighters shared a common commitment to maintaining the flow of material rewards, instead of to a political ideology, ethnicity, religion, or social identity.

### *Variation in Strategy*

Different initial conditions also gave rise to different strategies of recruitment. While the EPLF relied on networks of classmates from secondary school and university to identify potential participants, a mandatory six-month political training was the essential element of the recruitment process. This program of socialization, developed by EPLF leaders as a consequence of their experience in the ELF, sought to forge a common identity for

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<sup>62</sup> Alie Kabba quoted in Ibrahim Abdullah, “The Revolutionary United Front of Sierra Leone,” in *African Guerrillas*, Christopher Clapham (ed.) (Oxford: James Currey, 1998), p. 177.

<sup>63</sup> Abdullah (fn. 61), p. 172-73.

<sup>64</sup> Abdullah (fn. 61), p. 179. Abdullah’s work rejects the argument advanced by Paul Richards that an excluded intellectual group was at the core of the RUF. Only systematic survey work and ethnographic research in Sierra Leone will be able to shed light on this question in more detail. Humphreys and Weinstein have undertaken a survey of 1000 ex-combatants to further explore the origins of the RUF and other combatant groups. See Paul Richard, *Fighting for the Rain Forest: War, Youth, and Resources in Sierra Leone* (Oxford: James Currey, 1996).

<sup>65</sup> Quoted in Reno (fn. 56), p. 499.

recruited fighters—shaping their consciousness of history and society, the political purpose and message of the movement, and their understanding of the structure and strategy of the EPLF.<sup>66</sup> Participation in the People’s Assemblies of the EPLF, community groups not mobilized for military service, also required participation and success in the program of political education. This strategy—a form of costly induction—used a coherent political message to form a common identity out of representatives of a fragmented society.

What made it work, however, is that advancement in the EPLF depended on success in political education. The secret party within the EPLF was recruited from the most active and ideologically sound members of the guerrilla army. Selection for the cadre school, which trained EPLF members for positions of authority in the movement, depended on literacy, commitment, and hard work, along with success in previous periods of political education. Costly induction was not a one-time effort in the EPLF. One needed to demonstrate consistent dedication, sacrifice, and belief in the common identity holding members together in order to be promoted, and to, in effect, be eligible for the private rewards that were likely to follow an EPLF victory.

While selectivity was structurally determined and strategically implemented in the EPLF, RUF strategies provide further evidence of the insurgencies inability to escape its reliance on short-term material rewards. Its initial membership was diverse, representing two countries, multiple ethnic groups, a shallow set of political beliefs, and sharing, only, a commitment to reap the rewards of political power. With an initial force of 150 soldiers, the RUF was sufficiently large to quickly gain authority in Kailahun and Pujehun Districts. But even in these environments, long opposed to the APC regime, the looting, destruction, and violence wrought by the first RUF attackers did little to capture the sympathy or support of “natural” opponents to the Sierra Leone government.

As a consequence, like Renamo, the RUF turned to a combination of forced recruitment and material bribes to maintain and expand its force. Young people, girls and boys, with little schooling, were particular targets in RUF recruitment efforts. They were molded quickly, not to share a political belief or ideology, but instead to participate in the resource extraction characteristic of the RUF’s regime in the East: the extraction and trade of diamonds, the monitoring and taxing of trade across the border, and the looting of household property. Initially, looting was rationalized as a reward for the Liberian supporters of Sierra Leone’s “political” movement. The population came to realize quickly, however, that short-term material rewards were the name of the game, and were used to maintain the insurgent force.

Recruiting on the basis of bribes and abduction did little to harmonize a set of beliefs, strategies, principles, or identities among the members of the RUF. No real attempts were made to distinguish between members who might be willing to sacrifice for the long-term interests of the movement, and those who wanted to take advantage of the war for personal gain. In this resource-rich environment, the leaders took advantage of the

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<sup>66</sup> See Pool (fn. 53), p. 20.

opportunity to organize around short-term rewards. With members increasingly hungry for more benefits, it was too difficult to turn back.

## **Conclusion**

This paper has revisited the rebel's recruitment dilemma in light of new research that demonstrates a link between the presence of natural resources (or, as some argue, particular types of natural resources) and the likelihood of civil war.

The mechanism postulated that explains this correlation brings us squarely back to the question of the relative importance of selective incentives. The argument goes that conditions amenable to rebellion include those in which rebel groups have access to the financial resources necessary to organize a military and recruit an army. This theory relies in important ways on the selective incentives solution to the collective action problem.

However, the selective incentives solution to organizing rebellion merits a second look in light of this new empirical evidence and raises two new questions. Since rebel groups vary in their access to the resources with which to finance selective incentives, what role does access (or non-access) play in shaping rebel group strategies? And because the offer of selective incentives makes participation rational for all individuals whose other options are less attractive, how are rebel groups to distinguish between committed and uncommitted potential recruits?

These two questions motivate a new exploration of the rebel leader's recruitment problem—one that takes into account the challenge of recruiting individuals and identifying the best individuals to participate in the rebellion. The model thus incorporates two empirical elements of civil war previously excluded from the analysis: (1) the differing initial conditions confronting rebel leaders and; (2) the information asymmetry that characterizes the recruitment marketplace.

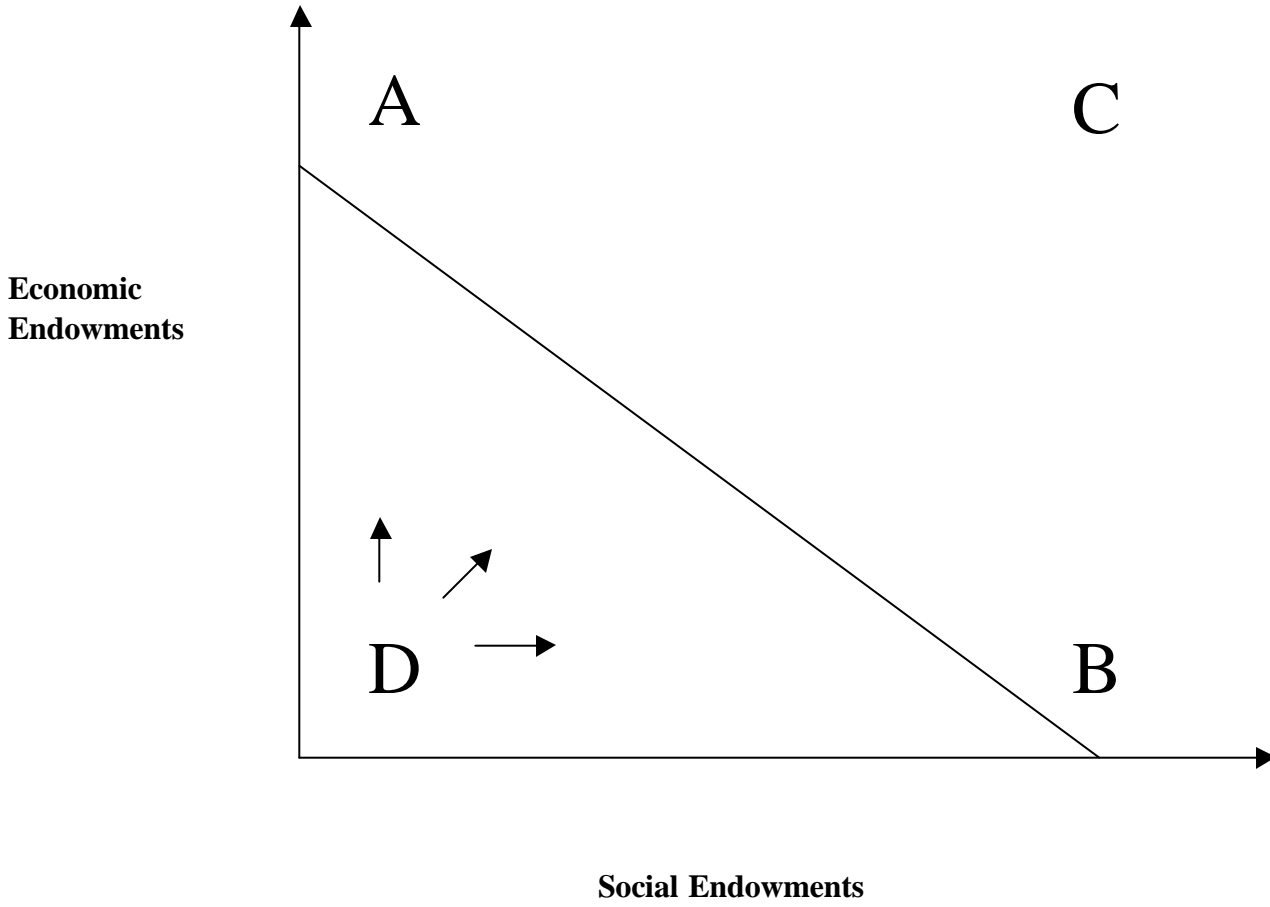
The analysis reveals that, while the presence of natural resources (or other sources of financial support) makes it possible for leaders to provide short-term material rewards, such a strategy brings with it substantial challenges. In particular, groups constructed around short-term benefits, tend to attract opportunistic joiners that exhibit little commitment to the long-term goals of the organization. These *consumers* are unwilling to make investments of time, energy, and resources without receiving the materials rewards they have been promised.

The absence of natural resources, however, is not an absolute constraint on the organization of rebellion. It simply makes it more difficult. In this context, where rebel leaders are successful in mounting an army, they do so by making *credible* promises about the selective incentives they can provide to participants in the future. Individuals signal their commitment to the group by accepting promises rather than payoffs, realizing that opportunistic joiners will be kept out of the struggle as a result. These sacrifices are a form of investment, with future rewards made credible by ties of social identity. They

are a necessary cost of organizing a movement where the barriers to organization are much higher.

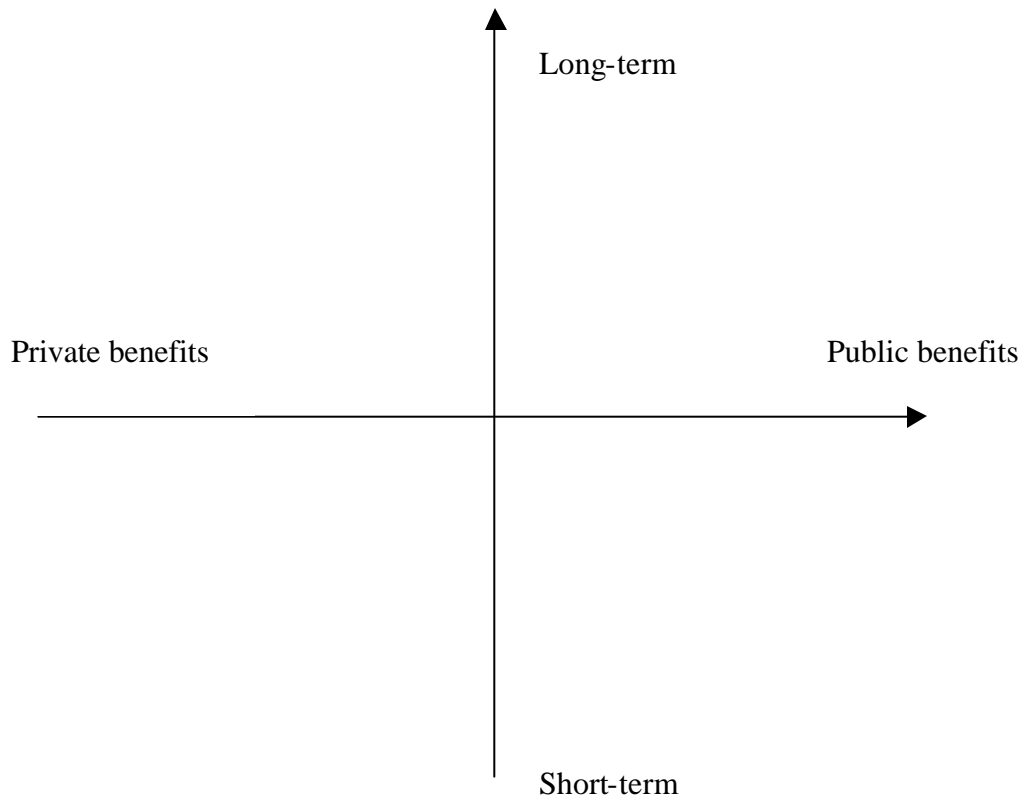
Whether a group organizes around short-term rewards or long-term investments is important not only for shaping the quality of its membership, but also for the strategies groups implement to maintain their forces over time. If groups organize around payoffs, the flow of short-term rewards must be maintained at any cost, as the behavior of the Renamo and the RUF suggest. The NRA and the EPLF, by contrast, sold their members on an investment that was risky and might never yield benefits. As a consequence, both groups exhibited far greater capacity to control, shape, and discipline the behavior of their combatants—all of who were committed to the long-term success of the movement.

**Figure 1.1: Theoretical Possibilities**



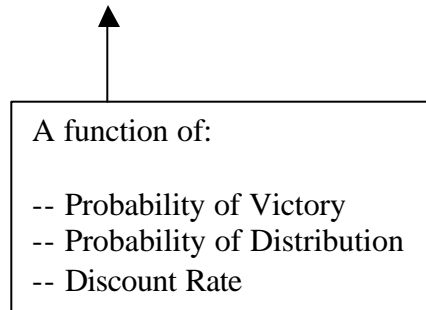


**Figure 1.2: Variation in Opportunity**

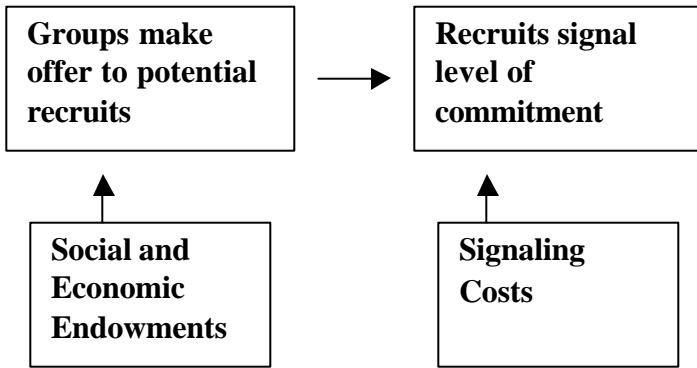


**Figure 1.3: The Rebel's Offer**

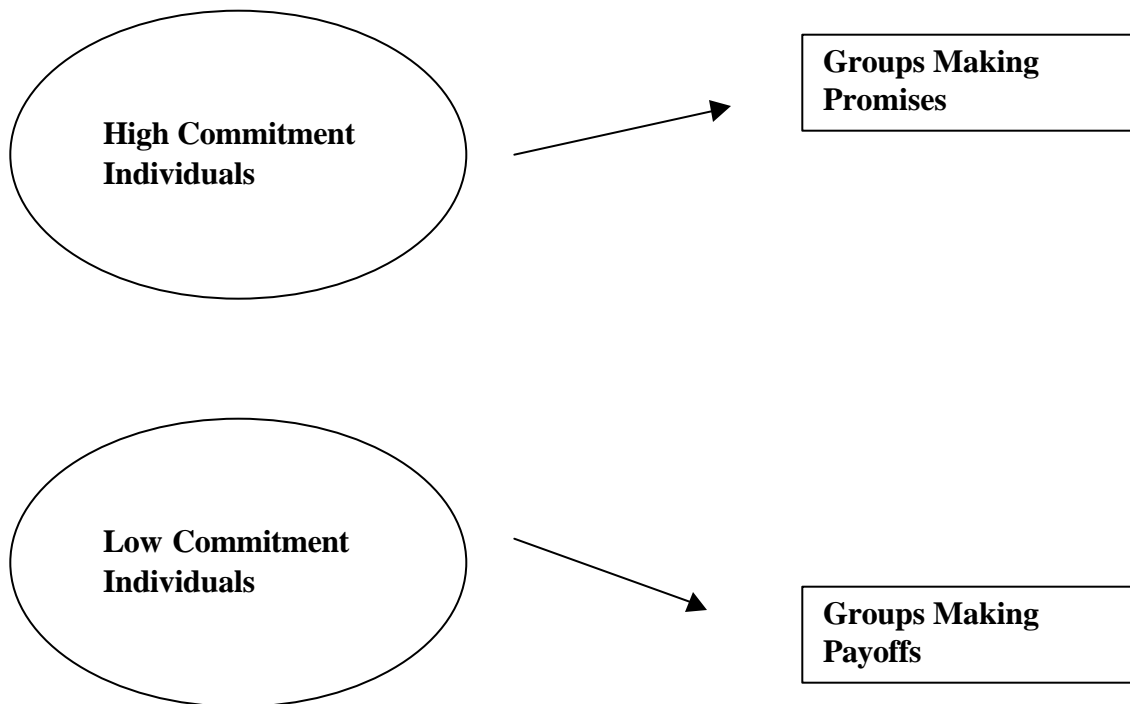
***Payoffs + Expected Value (Promises) > Reservation Wage***



**Figure 1.4: The Timeline**



**Figure 1.5: The Signaling Equilibrium**



**Table 1.1: Ethnic and Religious Make-up of the National Resistance Council (Historical Members), Uganda**

<b>Total Members</b>	<b>Identity Group</b>	<b>Percent</b>	<b>Other</b>	<b>Percent</b>
	Banyankole		Other	
40	25	62.5%	15	38.5%
	Balokole		Other	
40	6	15%	34	85%

**Table 1.2: Ethnic and Regional Make-up of Renamo's National Council, 1981**

<b>Name</b>	<b>Position</b>	<b>Ethnic Group</b>	<b>Region</b>
Aphonso Dhlakama	Commander in Chief; President	Ndau	Center
João Macia Fombe	Deputy Commander in Chief	Manyika	Center
Vareia Manje Languane	2 <sup>nd</sup> Battalion Commander	Sena	Center
José Domingos Cunai Calção	Secretary, Defense Department	Manyika	Center
José Luís João	9 <sup>th</sup> Battalion Commander	Sena	Center
Raúl Manuel Domingos	Secretary, Defense Department	Sena	Center
José Marques Francisco	Head, Training Department	Sena	Center
José Manuel Alfinete	Head, Telecommunications	Lomwé	Center
Mário Franque	3 <sup>rd</sup> Battalion Commander	Manyika	Center
Joaquim Rui de Figueiredo Paulo	Deputy Battalion Commander	Shangaan	South
Henriques Ernesto Samuel	Deputy Battalion Commander	Chope	South
Ossufo Momade	Deputy Battalion Commander	Makua	North
Olímpio Osório Caisse Cambona	Head, Telecommunications	Yao	North
Albino Chavago	Head, Health Department	Ronga	South

**Table 1.3: Age and Education of Soldiers in Mozambique's Civil War**

<b>Group</b>	<b>No. of Demobilized Soldiers</b>	<b>No. Recruited Before Age 18</b>	<b>Percent Recruited Before Age 18</b>
<b>Government</b>	70,902	16,553	23.3
<b>Renamo</b>	21,979	8,945	40.7
<b>Total</b>	92,881	25,498	27.4

	<b>Government</b>		<b>Renamo</b>		<b>Total</b>	
	<b>No.</b>	<b>Percent</b>	<b>No.</b>	<b>Percent</b>	<b>No.</b>	<b>Percent</b>
<b>Age</b>						
10	289	1.75	791	8.84	1,080	4.24
11	222	1.34	529	5.91	751	2.95
12	401	2.42	742	8.3	1,143	4.48
13	709	4.28	1,004	11.22	1,713	6.72
14	1,452	8.77	1,268	14.18	2,720	10.67
15	2,558	15.45	1,551	17.34	4,109	16.11
16	4,279	25.85	1,556	17.4	5,835	22.88
17	6,643	40.13	1,504	16.81	8,147	31.95
<b>Total</b>	16,533	100	8,945	100	25,498	100

<b>Level of Education</b>	<b>No. of Demobilized Soldiers</b>	<b>Percent</b>
None	26,434	28.46
Primary	25,381	27.33
Middle School	23,754	25.57
Secondary	2,197	0.29
University	271	0.20

**Note:** The information on soldiers' education levels could not be disaggregated by membership in Frelimo or Renamo.

## Appendix: The Mechanics of Rebel Signaling

In this appendix, I describe the mechanics of signaling in the market for rebel recruits through the use of a numerical example.<sup>67</sup>

Imagine that there are two types of individuals in the population and one rebel group. Low commitment individuals have a productivity of 1, while high commitment individuals have a productivity of 2. Low commitment individuals are a proportion  $q_1$  of the population, while high commitment individuals are a proportion  $1 - q_1$ .

In addition, individuals can signal their true productivity through the use of a signal. The signal works as follows. Individuals can choose an amount  $y$  of their economic return that they defer to the future, rather than accept in payment today. This is seen as an investment in the organization. The signal is costly, however. For low commitment individuals, the cost of deferring an amount,  $y$ , of economic returns to the future is  $y$ . That is, low commitment individuals discount future benefits entirely. For high commitment individuals, the cost of deferring  $y$  to the future is only  $y/2$ .

(Table A.1)

Following Spence, I identify an equilibrium by choosing a set of self-confirming conditional probabilistic beliefs for the rebel group and then see whether they are confirmed by the choices individuals make about what to defer to the future. Imagine that the rebel organization believes that there is some amount  $y^*$  such that if an individual chooses  $y < y^*$ , then productivity is one with probability one. However, if an individual chooses  $y > y^*$ , then productivity is two with probability one. If these are the conditional beliefs of the rebel group, it will offer the wage schedule  $W(y)$  as shown in Figure 1.

(Figure A.1)

Given the rebel group's offer, individuals will select the amount  $y$  that they wish to defer to the future. Consider the person who will set  $y < y^*$ . If he does this, he will set  $y = 0$  because deferring benefits is costly, and until he reaches  $y^*$ , there are no benefits to increasing  $y$ , given the employer's beliefs. An individual who sets  $y > y^*$  will set  $y = y^*$  since additional increases are costly and there are no additional benefits to be gained. As a result, everyone will set  $y = 0$  or  $y = y^*$ . In order for the rebel group's beliefs to be confirmed, low commitment individuals must set  $y = 0$ , while high commitment individuals set  $y = y^*$ , showing their willingness to defer benefits to the future.

I now introduce the cost schedules facing the two groups of individuals. Each group chooses the amount of benefits to defer to the future  $y$  to maximize the difference between the rebel's offer and the costs of the signal. Given the level of  $y^*$  in the diagram,

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<sup>67</sup> This numerical model is presented by Michael Spence in his classic article on signaling. See Michael Spence, "Job Market Signaling," *Quarterly Journal of Economics* 87, No. 3, August 1973, p. 355-374. Although his was designed for the case of a normal labor market, with the appropriate adjustments, it helps to illuminate the properties of signaling in rebel recruitment.



it is clear that low commitment individuals select  $y = 0$  while high commitment individuals set  $y = y^*$ . In this case, therefore, the rebel group's beliefs are confirmed and there is what Spence calls a "signaling equilibrium."

(Figure A.2)

More generally, it is obvious that low commitment individuals set  $y = 0$  as long as:

$$1 > 2 - y^*.$$

High commitment individuals set  $y = y^*$  provided that:

$$2 - (y^*/2) > 1.$$

Putting these two equations together, we know that the beliefs of the rebel group will be confirmed as long as  $y^*$  satisfies the following inequality:

$$1 < y^* < 2$$

It is important to note that there are an infinite number of equilibrium values for  $y^*$  given the expectations we assumed for the rebel group. All these equilibria enable the rebel group to separate high commitment and low commitment individuals. But there are not equivalent in terms of welfare. Increases in the level of  $y^*$  hurt high commitment individuals, while low commitment individuals are unaffected once the signaling mechanism is at work.<sup>68</sup> This decrease in welfare can be viewed as the necessary cost high commitment individuals must bear in order to get into particular rebel groups.

In addition, we need to keep in mind that, depending on the beliefs assigned to the rebel group, so called "pooling" equilibria also exist. These are equilibria in which both low and high commitment individuals set  $y = 0$  or, alternatively, both set  $y = y^*$ . In these cases,  $y$  provides no information to the rebel group about the level of commitment of the potential recruit. These equilibria result when rebel groups are uncertain about whether individuals are high or low commitment both above and below  $y^*$ .

For our purposes, however, the existence of the separating equilibrium is sufficient to motivate the analysis of the rebel's recruitment problem.

### **Two Key Issues Specific to the Rebel's Dilemma**

Applying Spence's signaling model to the case of rebel group recruitment raises two additional issues. First, the contexts in which rebel groups operate tend to be poor and most potential recruits are engaged in subsistence farming to survive. While it is highly probable that some individuals discount the future far more than others, given the scarcity of economic opportunity, it may be that there are very few options that provide greater payoffs today, thereby narrowing the distance between the cost curves of the two groups.

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<sup>68</sup> For a review of the welfare properties of signaling, see Spence (fn. 1), p. 363-365.

It is still possible to identify a separating equilibrium in this context, but it is one that requires higher levels of  $y^*$  in order for the signal to be an effective indicator of commitment. Such an example is provided in Figure 3. This example suggests that, to send an effective signal, high commitment individuals have to defer almost all of their benefits to the future. This may be the equilibrium we see at work in practice.

(Figure A.3)

An additional complication is presented by the fact that the rebel group is not interested in recruiting individuals of both types. In the example with a private firm, the key dilemma is how to direct high productivity workers into the high-salaried jobs, while keeping low productivity workers in the appropriate positions. What happens when, in reality, no offer is made to those individuals who choose a value of  $y$  below  $y^*$ ?

The key point here is, that for a separating equilibrium to result, the cost of deferring benefits to the future must be sufficiently high for low commitment individuals to keep them out of the market entirely. That is, low commitment individuals will choose not to join the rebel movement and will move into another labor market, rather than defer the benefits of participation into the future. This final example is presented in Figure 4.

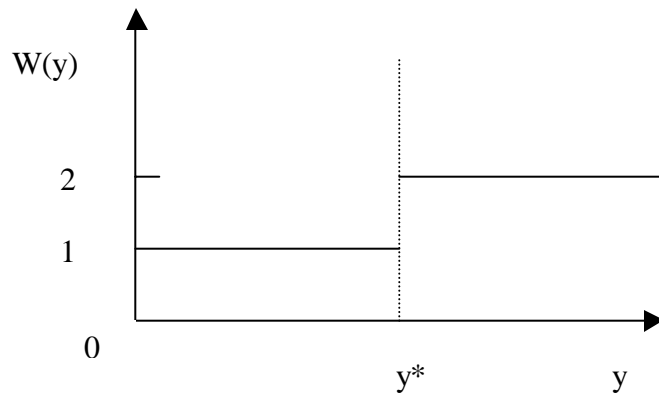
(Figure A.4)

This mechanical example is meant to illustrate the conditions under which a signal effectively separates high commitment from low commitment individuals in the labor marketplace. It demonstrates that separating equilibria exist and that they can be achieved when rebel groups are relatively certain about the meaning of an individual's willingness to defer benefits to the future. To the extent that such a signal carries credibility among rebel groups, prospective joiners use it to signal their true level of commitment to the movement. Moreover, even in situations where groups seek only high commitment individuals or where poverty drives the cost schedules of the two groups to converge, signaling equilibria are possible.

**Table A.1: The Basic Model**

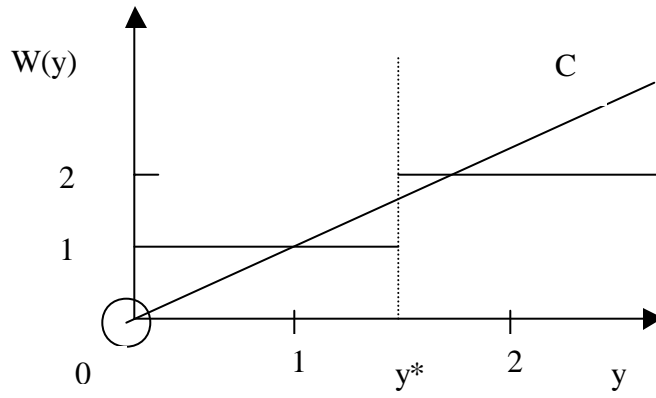
<b>Group</b>	<b>Marginal Product</b>	<b>Proportion of Population</b>	<b>Cost of deferring benefits <math>y</math> to the future</b>
Low Commitment	1	$q_1$	$y$
High Commitment	2	$1 - q_1$	$y/2$

**Figure A.1: Rebel's Offer as a Function of the Level of  $y$**

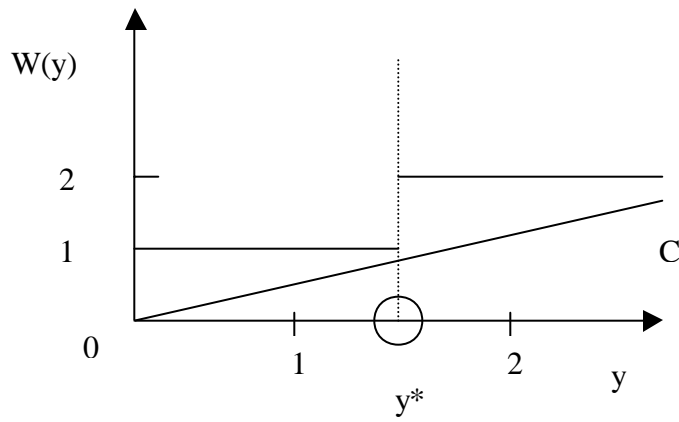


**Figure A.2: Optimizing Choice of  $y$  for Potential Recruits**

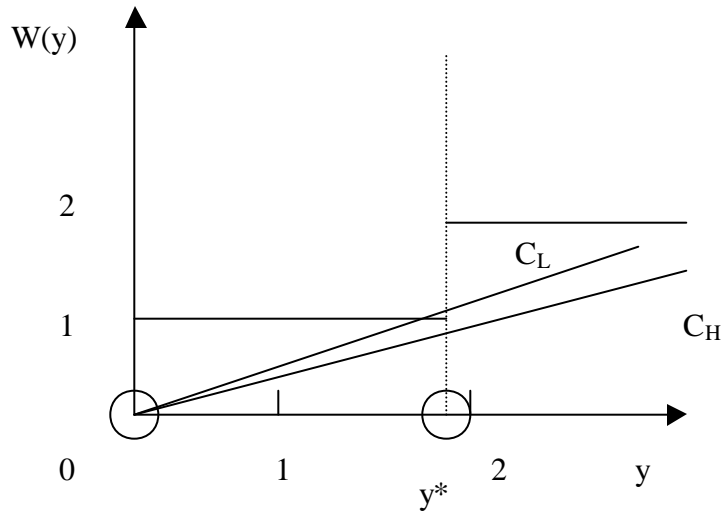
**Low Commitment Individuals**



**High Commitment Individuals**



**Figure A.3: Separating Equilibrium with Converging Cost Schedules**



**Figure A.4: Separating Equilibrium with No Alternative Wage**

