

ABSTRACT

Title of Document: ETHNIC REBELLION IN DEMOCRATIC EXPERIMENTS

Amy Pate, Doctor of Philosophy. 2007

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Numerous studies have found that, in general, democracy decreases intensity of ethnic rebellion. However, the recent transition experiences of multinational states problematize the assumption that social peace accompanies democratization. Especially in the post-Communist world, democratization has been followed by increases in ethnic rebellion. This dissertation explores the question of why some ethnic groups maintain or increase levels of rebellion following democratization while others rely on nonviolence or at least decrease the level of violence employed against the state. I conduct a large-N cross-national comparative investigation of these questions, employing Barry Weingast's (1998) reciprocal vulnerability framework, focusing on the impact of conflictual histories, political institutions, form of democratization and uncertainty. The analysis includes 102 ethnic groups in 42 countries that attempted democratization between 1980 and 2000 and employs data from the Minorities at Risk dataset, the

Polity dataset and original data on ethnic participation in democratization, autonomy and federalism, and repression. Multiple statistical methods are employed to test 13 hypotheses derived from the reciprocal vulnerability framework. Findings provide only limited support for reciprocal vulnerability as a generalizable explanation of ethnic rebellion. However, findings strongly support grievance-based theories of ethnic rebellion, and provide limited support for collective action theory of ethnic rebellion, particularly in terms of the effects of repression.

ETHNIC REBELLION IN DEMOCRATIC EXPERIMENTS

By

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Dissertation submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
2007

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Dedication

Dedicated to my parents, Thurman and Ann Pate, without whom this dissertation could not have been written.

Acknowledgements

This dissertation could not have been completed without the support of numerous people. First, I would like to acknowledge my committee – Professors Jonathan Wilkenfeld, Ted Robert Gurr, Mark Lichbach, Ken Conca and Gary LaFree – for their support in this endeavor. In particular, Jon Wilkenfeld was an outstanding chair and pushed me to write more effectively and to think more deeply about the implications of my results. Ted Gurr gave me my first opportunity to work on the Minorities at Risk project, an experience that has greatly shaped my academic point of view. The idea for this dissertation first arose in his class on ethnopolitical conflict.

I would also like to acknowledge the financial support provided by the Department of Government and Politics, the Center for International Development and Conflict Management, and the National Consortium for the Study of Terrorism and Responses to Terrorism. These have been my institutional homes and have provided not only considerable financial support but also communities of scholars with whom I have been privileged to interact. I would like to especially acknowledge Kathie Smarick for her encouragement; Rik Legault for his statistical advice; and David Quinn for access to revised Minorities at Risk lost autonomy data. Additionally, the Department of Agricultural and Resource Economics provided access to the NLogit statistical software package.

My parents, Thurman and Ann Pate, have been my biggest cheerleaders during this process and have provided enormous amounts of moral and financial support. My extended family has also been instrumental in providing encouragement as I worked on my degree. Bryan and Jennifer Pate provided a space to get away from

it all, while Maggie Jane, Declan, and Clare have provided much-needed diversions. Numerous friends also made this endeavor possible. Mary Michael provided assistance in the running of the Minorities at Risk project, without which I would not have been able to finish the dissertation. Trevor Wysong listened to numerous monologues and provided a quiet place to write. Michael Johns was a source of both encouragement and inspiration. Mark, Leah, John, Bev, and the members of College Park Church of the Nazarene also provided encouragement and a place of refuge from the stresses of dissertation writing. Bec, Jen and Preeti each listened to me prattle on about statistics and remained confident in my abilities when I doubted them.

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Chapter 1: Introduction

The Post-Communist Puzzle

Numerous studies have found that, on average, democracy decreases intensity of ethnic rebellion (see, e.g., Saideman et al. 2002, Gurr 2000). Although the conventional wisdom suggests that the relationship between democracy and internal peace is linear, recent experiences in democratizing states belie this line of thought. The transition experiences of the multinational states of post-Communist Europe, Latin America, sub-Saharan Africa and Asia problematize the assumption that social peace accompanies democratization. Gurr (2000) finds that in newly democratic states¹, six of 25 ethnic groups in post-Communist states and eight of 43 groups in developing states exhibited increased rebellion; not a single ethnic group in post-Communist states lowered levels of rebellion. In hybrid regimes (which Gurr defines as having a mixture of democratic and autocratic characteristics), he finds that eight of 27 groups in post-Communist states and 9 of 40 groups in developing states exhibited increased levels of rebellion; rebellion decreased in only two cases in the post-Communist world (Gurr 2000:158-161).² Tables 1.1 and 1.2 summarize Gurr's findings for newly democratic and hybrid regimes.

¹ Following the Polity dataset, Gurr defines new democracies as those states with fully or mostly democratic political institutions that were established between 1980 and 1994 and have not reverted to authoritarian rule since then. Transitional regimes – here called hybrid regimes – are countries whose regimes have a mixture of authoritarian and democratic features or countries that attempted transitions to democracy after 1970 that ended with temporary or enduring reversion to authoritarian rule.

² It should be noted here ethnic group rebellion in any type of state is a relatively rare event. In new democracies, Gurr reports that 42 of 68 groups did not engage in any form of rebellion. Among transitional polities, 35 of 67 groups did not engage in any form of rebellion (Gurr 2000: 158-161; see

Table 1.1 Changes in Ethnic Rebellion in Newly Democratic Regimes

	Increase	Decrease or No Change	No Rebellion	Total
Post-Communist	6	0	19	25
Developing	8	12	23	43

Table 1.2 Changes in Ethnic Rebellion in Hybrid Regimes

	Increase	Decrease or No Change	No Rebellion	Total
Post-Communist	8	2	17	27
Developing	9	13	18	40

Clearly, especially in the post-Communist world, democratization does not immediately lead to decreases in ethnic violence – and may in fact be followed by increases in levels of ethnic rebellion. Why – when democratization seems to promise increased levels of minority accommodation – do some ethnic groups continue to rely on violence while others rely on nonviolence? In particular, why are ethnic groups in post-Communist states more likely than groups in non-post-Communist states to increase rebellion following attempts to democratize?

Overview of Approach

This study conducts a large-N cross-national comparative investigation of these questions, employing Barry Weingast's (1998) reciprocal vulnerability framework. In this framework, the ability of each ethnic group within a state to

also Laitin and Fearon 1996). Academic interest in ethnic violence stems not so much from the absolute number of violent ethnic campaigns as from their rapid increase in the 1990s and the magnitude of human suffering generated by the most severe examples (e.g., in Sudan, the former Yugoslavia, Rwanda, etc.)

capture the governing apparatus of the state and subvert it for its own purposes creates vulnerability for all groups in the state, what Weingast terms “reciprocal vulnerability.” Under certain conditions, to be discussed later, vulnerability can lead groups to engage in preemptive violence.

The framework of reciprocal vulnerability may be especially relevant to societies undergoing large-scale political change, as the uncertainty inherent to such situations should intensify processes the framework highlights. While democratizing countries are not the only societies undergoing such change, they are a critical subset in the past quarter-century, both because of the number of countries undergoing democratization and because of growing international norms promoting democratization.

There are several reasons why such a study will advance the literatures on ethnic conflict and democratic transition. From an empirical standpoint, while several authors have noted the propensity of post-Communist states to experience ethnic violence following attempts to democratize, none has conducted a cross-national study that included both the post-Communist and developing world. The fact that post-Communist transitions have primarily been compared with other post-Communist transitions makes it difficult for scholars to draw conclusions regarding why these ethnic groups seem more likely to engage in rebellion following transition. A cross-national study that includes both post-Communist states and other states attempting transitions in a similar time-frame will better define the scope of observations regarding democratic transitions and ethnic violence. Additionally, while most post-Communist states have completed transitions to democracy, others

remain undemocratic, including the states of Central Asia, and still others have reverted to more authoritarian forms of rule, such as in Russia. Therefore, while this study has a historical value, it continues to have relevance for the future.

Secondly, those studies that have been conducted have often focused on the state as the unit of analysis. For example, Roeder (1999) examined the propensity of post-Communist states to experience constitutional crises following democratization or liberalization. However, focusing on the state obscures the variation found within the state and may result in overemphasis on state-level characteristics without closer attention being paid to the dynamics of state-group relations, group-group relations or intra-group politics.

From a theoretical standpoint, while Weingast has used case studies to provide confirming evidence for the reciprocal vulnerability framework, it has not been subjected to large-N statistical tests. Furthermore, the cases Weingast selected to support his theorizing did not vary on the dependent variable, although they did represent different types of internal conflict. In both of his cases (the wars in the former Yugoslavia and the American Civil War), violence was the outcome. The selection of cases based on the dependent variable increases the risk of making incorrect generalizations.

From a policy-making standpoint, ethnic rebellion is costly in both human and economic terms not only for the state in which it occurs but also for the larger community of states. And while the onset of new ethnic rebellions has declined, the majority of authoritarian states currently attempting (or being encouraged to attempt) democratic transitions host one or more minority groups, representing a large pool of

potential conflicts. Furthermore, eruptions of ethnic conflict have also short-circuited democratic transitions in several states, including Côte d'Ivoire, and have contributed to backsliding to less democratic rule in others, including Russia. Better understanding of what drives ethnic groups to adopt violence over nonviolence to seek redress of grievances in the context of democratization has the potential to guide policy so as both to avert large-scale violence and to promote the goals of democratic consolidation. International intervention and U.S. intervention in locales such as Afghanistan and Iraq underscore the needs of policymakers for pragmatic solutions to ethnic conflict management in the context of establishing democratic institutions.

Outline of Chapters

This study will proceed as follows. Chapter 2 gives a theoretical overview, in which Weingast's theory of reciprocal vulnerability is elaborated and compared to competing theories for explaining ethnic conflict. Hypotheses are derived and explicated. Chapter 3 provides an explanation of the methodology used to test the various hypotheses, including descriptions of the data being used. The relative strengths and weaknesses of the chosen methods are also discussed. Chapters 4 and 5 present the results of the quantitative analyses with discussion. Chapter 6 summarizes key findings and their implications, in terms of both theoretical refinement and policymaking. Additionally, chapter 6 includes discussion of further research directions.

Chapter 2: Reciprocal Vulnerability and Why Ethnic Groups Rebel

Pieces of the Puzzle

Recent studies of the impact of democratization on the persistence of ethnic rebellion have discovered a differential effect depending on whether a state is post-Communist. Post-Communist states – as most dramatically demonstrated by the states of the former Yugoslavia and the former Soviet Union – have tended to see an increase in ethnic violence while states in the developing world have more often seen democratization alleviate ethnic violence. Gurr (2000: 163) proposes four possible explanations for democratization in post-Communist countries leading to increased levels of ethnorebellion:

1. Democratization provides ethnic entrepreneurs incentives for outbidding,¹ leaving minority peoples insecure.
2. When central authority is weakened by the transition process, opportunities arise for the eruption of long-suppressed hostilities.
3. Ethnofederal structures provide ethnic groups and their leaders with political and territorial bases.
4. Institutions in new states (such as those of the former Soviet Union and former Yugoslavia) are too weak to contain (or inhibit) ethnorebellion.

¹ Outbidding occurs when ethnic politicians have an incentive to make increasingly extreme claims in order to capture or maintain the vote of members of their ethnic constituency. This can occur both within the ethnic majority as well as in ethnic minority. (See Horowitz 2000: 342-364.)

While these four factors (ethnic outbidding, weakened central authority, ethnofederal structures, and new states) are not unique to the post-Communist experience, given the time frame of most previous analyses (1980s to the present), it is argued that these factors are concentrated in the post-Communist world and can help explain seemingly anomalous post-Communist cases.

Snyder (2000) proposes that the intersection of weak political institutions and nationalist elite interests that are not adaptable to democracy lead to ethnic nationalism, with incidence of violence influenced by the levels of economic development, the level of threat to elite interests posed by democratization, and the nature of political institutions during the transitions.

Ethnofederal structures, defined as federal units that are designed to be under the control of titular ethnic groups, have received much attention, especially among scholars of post-Communist states. Brubaker (1996) sees ethnofederal structures as one factor driving the break-up (sometimes violent) along ethnic lines of Yugoslavia and the Soviet Union. Roeder (1999) focuses on ethnic machines (remnants of ethnofederal structures) as the explanatory variable for the increase of ethnorebellion in post-Communist states. Leff (1999) argues that the earlier democratization of ethnofederal units delegitimized the central state and led to the eventual disintegration of the Soviet Union and Yugoslavia. Bunce (2004: 189), writing in the post-Communist context, is blunt in her negative assessment of ethnofederalism, saying “Ethnofederalism emerges ... as a highly problematic approach to the management of majority-minority relations. Ethnofederalism seems to undermine the state’s territorial integrity. Ethnofederal states seem more prone to violence and continuing

violence at that; and such a structure appears to complicate and sometimes derail the transition from dictatorship to democracy.” Skepticism regarding ethnofederalism’s merits is not limited to scholars of the post-Communist world. Mozaffar and Scarritt (1999) argue that ethnofederal structures are equally inappropriate for African states.

However, not all assessments of ethnofederalism are negative. Lijphart (1977) in his work on consociationalism provides a classic example stressing the positive impact ethnofederalism can have. Horowitz (1985), using examples in India and Nigeria, stresses that ethnofederal structures provide a means for minority elites to satisfy political ambitions while diffusing any conflict that does occur away from the center. Gurr (1993, 2000) also notes that ethnofederal structures may satisfy minority grievances and allow the state to survive intact. Kymlicka (2000) notes that in Western liberal democracies, granting national minorities territorial or cultural autonomy has served to alleviate grievances and violence.

State capacity is also frequently cited as a second contributing factor to the presence or absence of ethnic violence. Weak states are unable to control violence for two primary reasons: They lack the coercive resources to suppress outbreaks of violence, and they lack the material resources to accommodate or co-opt discontented minority groups (Gurr 2000; Benson and Kugler 1998).

State response to ethnic demands is another factor that may lead to groups choosing violent means or escalating violence. In particular, several authors note that the use of repression may result in equally violent responses on the part of ethnic groups (Thompson and Rudolph 1986; Rothchild 1986; Kymlicka 2000).

Reciprocal Vulnerability

Most of the authors discussed above take a primarily structuralist viewpoint in explaining the persistence or cessation of ethnic rebellion in the context of democratizing states. However, often the macrostructural foci of such authors obscure the mechanisms by which certain institutions lead to ethnic group conflict with the state. I will argue that using the framework of reciprocal vulnerability highlights possible mechanisms that lead to conflict.

Weingast (1998) defines reciprocal vulnerability as the opportunity that each group in a state has to control the state apparatus and to subvert it for its own advancement at the expense of other groups (Weingast 1998). Under conditions of reciprocal vulnerability – where costs of victimhood are high and there are no institutionalized guarantees of protection – groups must assess the probability that others will initiate violence. If the assessed probability goes above a certain point (the point at which the expected costs of victimhood in the future outweigh the expected costs of fighting in the present), then the group will use violence preemptively. However, so long as the assessed probability is below this critical probability assessment, then no violence will occur (Weingast 1998). Mechanisms that come into focus under this framework are those that affect the level of assessed probability of victimhood and the critical probability assessment point. That is to say, factors that increase a group's feelings of vulnerability (i.e., increase the assessed probability of victimhood) increase the likelihood of the group engaging in preemptive violence. Additionally, factors that increase the costs of victimhood or decrease the benefits of

cooperation (i.e., lower the critical probability assessment point) also increase the likelihood of the group engaging in preemptive violence.

Although rationalist in orientation, the reciprocal vulnerability framework allows for institutions to play a crucial role in influencing the eruption and level of ethnic violence. Additionally, given its emphasis on threat perception in a group's probability assessment, it allows for theorization on the impact of ethnic extremism and ethnic nationalism, a lacuna found in other rationalist theories of ethnic rebellion. Furthermore, unlike some other rationalist theories of ethnic war (in particular, Posen's (1993) work on the ethnic security dilemma and Fearon's (1995a, 1995b) work on the bargaining theory of war), reciprocal vulnerability does not begin with anarchy or near-anarchy as an underlying assumption.² In fact, reciprocal vulnerability highlights the importance of the state without assuming its neutrality.³ At the same time, reciprocal vulnerability retains the focus on credible commitments as a driving factor in ethnic violence, a conceptual strength in the work of Posen and Fearon. Under conditions of reciprocal vulnerability, the ability of the state (and the groups which control it) to commit credibly to non-exploitation directly impacts minority groups' assessments of the likelihood of victimhood and hence directly the likelihood that minorities will engage in violence against the state.

Thus far, the discussion has focused on relations between a single ethnic minority and the state. Reciprocal vulnerability, however, also applies to relations

² This leaves the collapse of state institutions unexplained and unaccounted for. As de Figueiredo et al. (1999) point out, the collapse of the state is often coincident with ethnic violence and may be the cause or the product of ethnic conflict.

³ Paul Brass, in discussing the relationship(s) between the state and ethnic groups makes an excellent argument for not assuming the state is a dominant, neutral actor in the study of ethnic conflict (Brass 1985).

between ethnic groups. If the central state is weak and unable to regulate intergroup competition, this may heighten perceived vulnerabilities that lead to increased levels of conflict. Additionally, if the state favors one ethnic group over others this will increase perceived vulnerability, again leading to a higher probability of violent conflict occurring. (See Osaghae 2005 for a discussion of these dynamics in the African context.)

In using the reciprocal vulnerability framework, I will focus on four sets of factors that are hypothesized to influence the level of assessed probability of victimhood and the critical probability assessment point: conflictual histories; the nature of the democratic transition; institutional design; and uncertainty. In particular, I will focus on how these factors impact the ability of the state – and the groups that control it – to commit credibly to non-exploitation of minority ethnic groups.

I focus on these factors in order to explain the differences in group response to democratization attempts in post-Communist versus developing states, as groups in post-Communist states seem more prone to violent outcomes. While the difference may be explained by the dynamics of the transition itself, it may also be a result of factors not directly related to transition, per se. For example, different historical legacies of group-state relations may result in different group responses to democratization. Likewise, different institutional designs – while all democratic – may have differential impacts on group security and thus generate different responses to transition.

Theoretical Rivals

There are a multitude of theoretical approaches to the study of ethnic conflict, including rationalist, culturalist, structuralist and psychological explanations. Table 2.1 gives a general comparison of these approaches to explaining ethnic conflict.

Table 2.1 Research Traditions within the Study of Ethnic Conflict⁴

	Rationalist	Culturalist	Structuralist	Psychological
Ontology	Rational actors; intentions; methodological individualism	Rules; intersubjectivity; common knowledge and/or values	Relations among actors; holistic	Individuals and collectivities; individual and group cognition
Methodology	Comparative statics; formal modeling	Case study; interpretation; fieldwork; survey data; deconstruction	Comparative statics; case study; typologies	Experimental; interviewing; survey data; comparative statics
Emphasis within explanation	Irrational social consequences of individually rational actions; unexpected outcomes	Meaning and significance; culture as constitutive of identity, reality, action	Structures with laws of dynamics	Individual cognition, also aggregated to collectivity
Theoretical goals	Generalization; explanation	Interpretivism; understanding	Realism; causality; generalization	Generalization; explanation
Weaknesses	Instrumental rationality; mechanical-behavioral view of subjectivity	Tautology, teleology in existence and causal impact on outcomes	Overly deterministic; volunteerism absent	Aggregation problems; connections between cognition and behavior
Subtraditions	Human nature rationalists; social situation rationalists	Subjectivists; intersubjectivists	State/society; pluralist-Marxist; statist	
Exemplars within ethnic conflict	Weingast 1998; Fearon and Laitin 1996	Huntington (1996)	Gurr 1993, 2000; Olzak 2006; Saideman et al. 2002	Gurr 1970; Horowitz 1985

⁴ Table adapted from Lichbach (1997)

Weingast's theory of reciprocal vulnerability is generally placed in the rationalist camp. However, due to its emphasis on threat perception, it also shares much in common with psychological theories. Within the rationalist camp, one increasingly prominent theory is Fearon's bargaining theory of war. Among psychological explanations, Gurr's theory of relative deprivation is prominent. Most structural theories are rooted in Tilly's ideas concerning collective mobilization.

Fearon (1995: 381) proposes three rationalist logics for why leaders choose war despite its risky and costly nature. First, he offers that leaders may have private information about capabilities or resolve while also having incentives to misrepresent that information. Second, credible commitment problems – situations where one or both actors have an incentive to defect from an agreement in the future – may prevent leaders from agreeing to an otherwise acceptable bargain. Third, although Fearon finds this problem less likely, issue indivisibilities may make negotiated solutions unattainable.

Much of the work testing Fearon's theory has been in the realm of interstate conflict and bargaining. However, authors have also begun to apply his insights in the realm of internal conflict, including civil war (Fearon and Laitin 2003) and ethnic secessionism (Walter 2006).

There is much in the bargaining theory of war that resonates with reciprocal vulnerability. Both situate ethnic actors and governments in a strategic setting, in which imperfect information, incentives to misrepresent capabilities and resolve, and problems of credible commitment may result in violence. However, while in Fearon's

model the primary goal of actors appears to be to achieve gains, for Weingast a much more important motivator is the desire to avoid losses.

Charles Tilly (1978) outlines a theory of collective action based on the intersection of interests, organization and opportunity structures. Briefly, he proposes that shared advantages and/or disadvantages, common identities and unifying structures, availability of resources, and open opportunity structures lead to collective action (Tilly 1978: 54-56). Responding to the prominence of relative deprivation theorists, Tilly and colleagues argue that grievances are not enough to generate violence. Rather, opposition actors must be able to mobilize the resources in order to initiate and sustain collective action. Key determinants of actors' ability to mobilize resources include state structure (such as, openness of the political system and levels of state repression), levels of economic development, and availability of both domestic and external coalition partners. While Weingast and other rationalists recognize that resources are an important component of the ability to rebel, they subsume considerations of resources into calculations of relative costs.

Ted Robert Gurr is the preeminent proponent of relative deprivation, defined as the "perceived discrepancy between men's values expectations and their value capabilities" (Gurr, 1970: 13). In his seminal 1970 work, primary focus is indeed on the mechanisms that increase feelings of relative deprivation and how relative deprivation interacts with other variables (such as state coercion) to produce violent conflict. By the mid-1990s, however, Gurr had synthesized relative deprivation theory with elements of political process theory. Referring to processes of ethnopolitical mobilization and conflict, he writes:

“The most basic assumption of the theory is that ethno-political activism is motivated by peoples’ deep-seated grievances about their collective status in combination with the situationally determined pursuits of political interests, as articulated by group leaders and political entrepreneurs.” (Gurr, 1993: 123)

Gurr’s application of relative deprivation to the field of ethnic conflict shares several characteristics with Weingast’s theory of reciprocal vulnerability. Both theories emphasize the role of perception in driving violent dynamics. For Gurr, it is the perception of deprivation more than an objective indicator of deprivation that is important. Similarly, in the theory of reciprocal vulnerability, it is a group’s perception or beliefs about the intention of the other and about the relative costs of exploitation that lead to preemptive violence.

Despite the similarities, there are key differences. First, although Gurr speaks of fear of future losses, much of the analytic focus is on resentment over the past and/or current discrimination. Thus, the primary emotional drivers in relative deprivation are frustration and anger. This is quite different from situations of reciprocal vulnerability where the primary emotional driver seems to be fear.

Hypotheses and Discussion

The Effects of History

Not all authoritarianism is equal. Some authoritarian states are relatively accommodative of ethnic minorities, while others are not. For example, systems of hegemonic exchange in Africa allowed ethnic groups some measure of cultural (if not political) autonomy. Communist Yugoslavia also afforded ethnic groups some

measure of cultural accommodation. Other authoritarian states, however, actively suppress ethnic diversity and attempt forced assimilation of ethnic minorities. These different historical legacies may affect the ability of the state to commit credibly to non-exploitation in the present or future.

Ethnic groups, as Lake and Rothchild (1996) note, view the future through the lens of the past. Groups, in part, will base their assessments of vulnerability on past interactions. Particularly in situations of uncertainty (such as during regime transitions), groups can be expected to rely on expectations and prior beliefs of the intentions of other groups (see Bendor 1993). Therefore, we should suspect that groups with conflictual histories with the state or with other groups within the state are more likely to mistrust the state. This may, in turn, lead to widespread perceptions of vulnerability within the group (Eidelson and Eidelson 2003). Heightened perceptions of vulnerability increase the risk of violence. Furthermore, under conditions of distrust, groups are less likely to receive at face value assurances of cooperation (Schul et al. 2004).

I test the effects of conflictual histories on the outbreak of ethnic rebellion using four indicators: past discrimination, past repression, history of lost autonomy, and presence of intergroup conflict. Groups that previously experienced discrimination are more likely to suspect the state's neutrality and its ability to distribute fairly public goods to various ethnic actors within the state. Suspicion of the state's neutrality causes the group's assessed probability to increase, thus increasing the risk that it will cross the critical probability assessment.

Hypothesis 1: *Ethnic groups that have experienced higher levels of economic or political discrimination in the past will exhibit higher levels of rebellion than those groups that have been subject to lower levels of economic or political discrimination.*

Legacies of past repression may exacerbate perceptions of vulnerability in the present. Groups measure a state's willingness and capacity to repress in part by reference to past repression. Repressive histories leave legacies of distrust and destroy more constructive channels of political communication. Repressive legacies also increase suspicion of the state's neutrality, which causes the group's assessed probability of victimhood to increase. This leads to the following hypothesis:

Hypothesis 2: *Ethnic groups that have been subject to higher levels of repression in the past will exhibit higher levels of rebellion than those that have been subject to lower levels of repression.*

Groups that were previously autonomous but have lost the ability and right to rule themselves will also be more likely to distrust the state, especially since most historical incorporations of groups into state structures have been carried out coercively and without the consent of the group.

Hypothesis 3: *Ethnic groups that were historically autonomous but have been incorporated into a state will exhibit higher levels of rebellion than those that never enjoyed self-rule.*

Groups that have been involved in intergroup conflict are more likely to suspect the state's neutrality. If the state is unable or unwilling to protect groups within society from each other, the group will reassess the likelihood of victimhood

since the state is the most important safeguard against victimization by other groups in society.

Hypothesis 4: Groups that have been involved in intergroup conflict in previous periods will exhibit higher levels of rebellion than groups that have not been involved in such conflict.

Ethnic violence is not inevitable if groups have conflictual histories. However, legacies of mistrust do necessitate stronger institutional designs to build credible commitments, an issue to which I will turn below.

The Nature of Democratic Transitions

The nature of the democratic transition experienced by groups may also affect their propensity to engage in violence against the state. Often, regime collapse leaves an institutional vacuum which approximates the context of anarchy. Collapse, therefore, greatly intensifies that security dilemma of ethnic groups. Especially in the context of pre-existing conflict or tensions, collapse may provide both an incentive and the political space in which ethnic violence may take place (see Bertrand 2004: 178). Pacted transitions, transitions that are negotiated between the government and opposition forces, have lower levels of uncertainty. As changes are negotiated, institutional replacement tends to be more ordered and slower. This leads to the following hypothesis:

Hypothesis 5: Ethnic groups in states attempting democratization following regime collapse will exhibit higher levels of rebellion than ethnic groups in states undergoing pacted transitions to democracy.

The likelihood of pacted transitions experiencing ethnic rebellion is therefore largely dependent on the ethnic makeup of the parties negotiating the transition pact, as well as prior state-group relations, as discussed in a previous section, and institutional design, as discussed below. If ethnic groups do not participate in the negotiation of a transition, they are faced with higher levels of uncertainty about the probable outcomes of the transition. Furthermore, if ethnic groups are not involved in the negotiation of the transition, it is more likely that their particular security concerns will not be addressed. Finally, the exclusion (intentional or not) of ethnic minorities from the negotiation process in pacted transitions signals to ethnic minorities that they are, in fact, excludable. This signaling may cause groups to raise their estimation of the probability that they will be victimized, even under a more democratic regime. This leads to the following hypothesis:

***Hypothesis 6:** Ethnic groups in states where the democratic opposition during transition is ethnically inclusive will exhibit lower levels of rebellion than ethnic groups in states where the democratic opposition is ethnically exclusive.*

Institutions to Build Credible Commitments

Soltan et al. (1998: 3) argue, “Strategic cooperation depends on the existence of trust, credible commitments, and the elimination of antisocial options from consideration” – functions that the authors argue institutions may fulfill. Weingast (1998) focuses on how institutions that credibly commit the state and groups to mutual toleration can result in the growth of mutual trust.

Different authors focus on various institutional arrangements that can mitigate problems of credible commitment. Walter (2002), studying the implementation phase of civil war settlements, focuses on various sorts of power-sharing pacts. Weingast (1998) focuses on the existence of mutual veto powers of various ethnic groups in society. Lake and Rothchild (1996) list a variety of institutional arrangements – including power-sharing, elections designed to produce group interdependence and federalism.

As with authoritarian regimes, not all democracies are the same. A variety of institutional arrangements meet democratic criteria. Democracies may be unitary or federal, presidential or parliamentary. However, not all institutional arrangements have equivalent impacts on assessments of group security. Nor are all democratic arrangements equally effective in building credible commitments in ethnically divided countries.

Falascetti and Miller (2001) explicate a theoretical framework for understanding how institutional design may aid in creating credible commitments. They critique current theories of the state for assuming that external agents (e.g., Hobbes' "Leviathan") are non-opportunistic and non-strategic. If external agents (i.e., the state) are not constrained, then rational actors will not submit to them, hence forfeiting gains that are possible through cooperation. Falascetti and Miller argue:

While external agents are necessary for political economies to sustain efficient outcomes, they are not sufficient. Left unchecked, these agents possess an incentive that is inconsistent with the objective for which they are designed – namely, the incentive to opportunistically

redistribute any efficiency gains that they help to create (Falaschetti and Miller 2001: 396).

Drawing from theories of the firm, they demonstrate that diffuse (e.g., as opposed to unitary) external agents are more likely to be able to credibly commit to non-exploitation. If the external agent is in fact a “team” then team production problems inhibit the ability to pursue self-interest. If individual preferences within the external agent are sufficiently different, then the external agent cannot be “rational” in the sense of seeking its own interests. Thus, “rational, self-seeking individuals who have the incentive *and* capacity to play efficiency-retarding, opportunistic actions as *unitary* external agents may have neither when they comprise an external agent that is itself a team” (Falaschetti and Miller 2001: 402, emphasis in original).

Falaschetti and Miller (2001) point to multiple mechanisms for diffusing the functions of external agents, including division of powers between central and federal units and creating systems of checks and balances between various branches of the central government. However, they note that there are trade-offs to be made between securing credible commitments and the efficiency gains for which the external agent is created.

While many of these institutions point to democracy as seemingly alleviating the likelihood of violent ethnic conflict, there are potential problems with democratic institutions. Elections may encourage ethnic outbidding by ethnic entrepreneurs who manipulate group fears to advance personal interests. Additionally, purely majoritarian electoral systems in social systems where the predominant means of political mobilization is ethnicity may result in permanent “majority domination”

(Welsh 1993). In such circumstances, where elections are more akin to censuses (see Horowitz 1985), electoral institutions may encourage violence on the part of minorities who foresee their permanent exclusion from political decision-making.

However, Falaschetti and Miller's argument can be modified to account for situations where ethnic identity is politicized and becomes a primary means of political mobilization. If we assume that preferences within ethnic groups are more uniform than preferences between ethnic groups, then the corollary to Falaschetti and Miller would be that political institutions should diffuse the functions of the external agent (i.e., the state) across ethnic groups.

Falaschetti and Miller's discussion highlights several mechanisms by which institutional design can help build credible commitments. Institutions that effectively tie the hands of the state, for example, can alleviate ethnic group fears. Likewise, institutions that distribute the functions of the state across multiple actors – especially multiple ethnic actors – should also facilitate the building of credible commitments. Finally, institutions that provide multiple entry points to and veto points within the political system for minorities should also facilitate credible commitments. Hypotheses below will focus on how certain institutional designs – in particular, federalisms, electoral design and the nature of the executive – fulfill these functions and aid in the creation of credible commitments.

Federalism provides multiple entry points into the political system and has the potential to diffuse institutions across ethnic actors. Both multiple entry points for political access and dispersion of power across ethnic groups facilitate credible commitments. However, this will be somewhat dependent on the geographic

dispersion of groups and on the size of the federal units. Ethnofederalism, in which ethnic groups are given primary control over a federal unit, by definition, diffuses the power of institutions across ethnic groups. And even in primarily unitary states, ethnic groups that are granted some level of political autonomy are guaranteed institutional access. The above discussion results in the following hypotheses.

***Hypothesis 7a:** Ethnic groups in states characterized by federalism will exhibit lower levels of rebellion than groups in unitary systems.*

***Hypothesis 7b:** Ethnic groups in states characterized by ethnofederalism will exhibit lower levels of rebellion than groups in either federal or unitary states.*

***Hypothesis 7c:** Ethnic groups which have been granted autonomous powers in otherwise unitary states will exhibit lower levels of rebellion than groups in federal or unitary states, but will not show systematic differences from groups in states with ethnofederal structures.*

Proportional representation also has the potential to diffuse institutions across ethnic actors. Majoritarian electoral systems, however, have the potential to concentrate state institutions into the hands of a single ethnic group, decreasing the probability that commitments will be seen as credible and thus heightening the likelihood of violence. This leads to the following hypothesis:

***Hypothesis 8:** Ethnic group rebellion will be lower in states with proportional electoral rules than in states with majoritarian electoral systems.*

The question of whether parliamentarism or presidentialism is more conducive to providing credible commitments depends largely on how such institutions are created. Presidential systems with strong executive privileges and weak legislatures are likely to heighten fears of institutional capture and thus lead to heightened probabilities of violent conflict. However, if presidential systems are characterized by a more even division of power between the executive and legislative branches, then presidential systems may serve as distributed external agents that provide credible commitments. Similarly, parliamentary systems under proportional electoral rules – which often result in coalition governments – are more likely to provide credible commitments than Westminster-style parliamentary systems in which one party can dominate. Thus, neither parliamentarism nor presidentialism necessarily results in a unitary or plural external agent. The effects of parliamentarism and presidentialism are dependent on how they interact with electoral systems and the constraints put on the executive by the division of powers. The following hypotheses result:

***Hypothesis 9:** Neither parliamentarism nor presidentialism will be related systematically to higher levels of ethnic rebellion than the other.*

***Hypothesis 10:** Ethnic groups will exhibit lower levels of rebellion in states characterized by parliamentary systems combined with proportional representation electoral rules than in majoritarian parliamentary systems.*

***Hypothesis 11:** Ethnic rebellion will be lower in presidential systems characterized by highly constrained executives than in presidential systems characterized by strong executives with broad powers.*

The Problem with Uncertainty

Uncertainty can be classified in two ways. Strategic uncertainty exists when actors have incomplete information regarding the preferences and intentions of other actors. Analytic uncertainty exists when actors do not fully comprehend all the relevant causal mechanisms of the system in which they act, which means that actors may be uncertain of their payoffs even when the actions of all relevant actors are known. (For a more complete discussion of the differences and similarities between strategic and analytic uncertainty, see Iida 1993).

Both strategic and analytic uncertainty can affect ethnic group relations with the state. Under strategic uncertainty, groups are uncertain whether the state (and the group or groups that control it) is committed to mutual tolerance or not. Under analytic uncertainty, groups are uncertain of the actual outcomes of institutions. That is, they do not know if institutions will function as intended, e.g., if they will give minorities access to power and provide mutual veto points. Both types of uncertainty may increase the influence of extremist ethnic entrepreneurs. Under strategic uncertainty, where ethnic group members are uncertain of the intentions of the state and the ethnic group or groups that control it, ethnic entrepreneurs are more easily able to foster rumors and to deploy historical myths regarding the dangers of cooperation with the state (see, e.g., Kaufmann 2001). Under analytic uncertainty,

where it is unclear if institutional arrangements will in fact provide political access to minorities, ethnic extremists are again more able to convince kin of the necessity of preemptive violence.

New states and young regimes exacerbate uncertainty in similar ways. Ethnic groups may be unsure of governments' disposition to them in both contexts as interactions will probably have been limited. Both new states and young regimes may not have fully consolidated power, leaving uncertain their ability to control events or societal actors. Furthermore, rules and procedures – and their outcomes – may not be clearly established.

New states also are susceptible to dynamics not as common under regime change. The nature of national symbols (which often have ethnic significance), constitutional design, institutional structure, and citizenship are all open to debate in ways not generally present under regime change. Furthermore, the effects of such decisions are uncertain.

***Hypothesis 12:** Ethnic groups in new states will exhibit higher levels of rebellion than groups in states established prior to democratization.*

***Hypothesis 13:** Ethnic groups in young regimes will exhibit higher levels of rebellion than ethnic groups in more established regimes.*

The methods and measurements used to test the above hypotheses (and, in turn, to test the extent to which Weingast's theory of reciprocal vulnerability explains ethnic rebellion in democratizing states) are the subject of the following chapter.

Chapter 3: Methodology

The Quantitative Study of Ethnic Conflict

The quantitative study of ethnic conflict has expanded rapidly in the past 20 years, much of it spurred by the availability of the Minorities at Risk project dataset. For example, since the MAR project released its first data, at least 64 articles employing some portion of the MAR data have appeared in peer-reviewed journals.

In recent years, pooled cross-sectional time series have dominated large-N approaches to the study of ethnic conflict. The appeal of pooled cross-sectional time series is that researchers can explore the effects of variables that do not vary frequently within cases but show variation between cases and also attempt to capture time dynamics. However, the use of cross-sectional time series can pose methodological issues, if not modeled appropriately. In a series of articles, Nathaniel Beck and Jonathan Katz (1995, 1996) outline methods for dealing with times-series cross-section data that have since become canonical in political science. In particular, they recommend the use of panel-corrected standard errors to deal with heteroscedasticity and a lagged dependent variable to deal with serial correlation. However, recent debates warn against the blind acceptance of their advice.

In the following sections, I will outline several methodological issues concerning times-series cross-section data. I will also introduce the data to be used in this research project.

Methodological Conundrums and Potential Solutions

Temporal Dependencies

All time-series data is likely to suffer from problems of serial correlation.

After all, common sense indicates that the state of affairs in any given place at time t is likely to depend, at least in part, on the state of affairs in the same place at time $t-1$.

There are several methods for dealing with temporal dependency in time-series cross-section data. Beck and Katz (1995, 1996) advocate the use of a lagged dependent variable model (LDV), as opposed to methods such as using serial correlated errors. Although both methods may “fit” the data, Beck and Katz argue that using the lagged dependent variable will cause researchers to ponder model dynamics (Beck and Katz 1996: 12).

After a decade’s passage, Beck and Katz’s admonition has taken root. In a recent survey of 195 articles using time series methodologies, Wilson and Butler (2007) find that only a minority (although still 22.1%) of studies do not include dynamics, the vast majority with no justification. However, although many social science researchers have adopted Beck and Katz’s recommendation of LDV, the hope that researchers would ponder model dynamics has been woefully under-realized. Wilson and Butler (2007) found that only 26.7% of studies using LDV cited theoretical reasons. The majority cited it as a technical corrective for autocorrelation (69.3%) and/or as recommended by Beck and Katz (60.0%). Furthermore, only 26.1% used or considered alternative dynamic specifications. Despite this blind use of LDV models, Wilson and Butler do find that the use of LDV is an appropriate option in datasets typically used in political science. Furthermore, in another study, Keele

and Kelly (2006: 203) find that LDV provides estimates that are superior to other models, *even* in the presence of minor residual autocorrelation.

Given the evidence that lagged dependent variable models are generally superior (or at least no worse than) other models, I will use a dependent variable with a one-year lag as my primary means of controlling for time dynamics.

Unit Heterogeneity

In cross-sectional panel data, the issue of unit heterogeneity should be considered. That is, the units under analysis (here, ethnic groups) may differ in ways not necessarily explained by the independent variables. Local factors, which are either unobservable or too difficult or time-consuming to measure quantitatively, may impact the behavior (in this case, propensity to rebel) of the groups in question. The issue of unit heterogeneity is frequently overlooked in quantitative studies using cross-sectional, pooled time-series methodologies in comparative politics and international relations. According to a recent review of 195 such studies, only 77 considered (even tangentially) unit heterogeneity (Wilson and Butler 2007: 9).

What are the possible impacts of not considering unit heterogeneity? The basic impact is similar to that of other types of omitted variable bias – a perennial problem in quantitative analysis. The researcher risks misinterpreting the effects of the independent variables of interest. Furthermore, without analyzing the panels separately, the researcher cannot know whether the pooled regression correctly estimates the slope, overestimates it, underestimates, or results in an incorrectly signed slope (for an illustration of such problems, see Wilson and Butler 2007: 5).

One potential corrective for unit heterogeneity is to employ fixed effects models, in which panels are allowed to have different intercepts. Fixed effects (FEM) models are unbiased, with known small-sample properties so long as some assumptions – to be discussed below – are met.

FEM models may be used as a diagnostic tool to determine if unit effects impact parameters of interest by comparing coefficients with those of OLS; and *F*-tests can identify statistically significant unit effects by panel, by subset of data, or for the entire dataset (Butler and Wilson 2007). Furthermore, the analyst can easily identify which panels are most removed from the mean regression. Given that most statistical packages have routines for fixed effects models, why do researchers not employ them? One reason may be that FEM models cannot include time-invariant models, and slowly moving (“sluggish”) variables are likely to have high standard errors due to correlation with fixed effects (Wilson and Butler 2007). Since many of the variables of interest to political scientists (and included in my research as well) are static, this makes the use of FEM models problematic. Consider, most political institutions – for example, whether a country has a presidential or parliamentary system of government – are static for the time period being considered. Also, some properties of ethnic groups are relatively static (for example, the degree of cultural difference with the majority population in the state).

To take into account both the possibility of unit effects while still testing for the effects of time-invariant and sluggish variables, I will employ a three-step method – called fixed-effects vector decomposition – recently developed by Thomas Plümer and Vera Troeger (2007). First, I will estimate unit fixed effects by running a fixed

effects estimate of the baseline model. Then, I will regress the resulting unit effects on the static and sluggish explanatory variables in my model, in order to identify the degree to which the unit effects are explained by these variables. Then, I will perform a pooled OLS estimation of my baseline model, including all explanatory variables of interest (time-variant, time-invariant and sluggish) plus the residuals of the unit effects regression (i.e., the unexplained part of the fixed effects vector).

Selection Bias(es)

Simon Hug (2003) outlines several types of selection bias common in comparative political studies, including studies of ethnic conflict. He identifies three forms of selection bias. The first occurs when researchers sample on the dependent variable of interest. Political scientists, after being taken to task for more than 15 years by authors such as Geddes (1990) and King et al. (1994), have made strides in avoiding this type of bias.

The other two types of bias are much more problematic, in that there may be little any researcher can do in order to avoid them: cases may select themselves into a population in a non-random manner; or a clear-cut population from which to draw a random sample may not exist. It is these two forms of bias that pose the most fundamental problems for studies of ethnic conflict. So, for example, it is likely that ethnic boundaries are formed and maintained (at least in part) by the very conflict processes that we wish to study (see, e.g., Jowitt 2001), leading to problems with endogeneity (see Christin and Hug 2003). Additionally, the fluid nature of ethnic boundaries makes it difficult to identify the population to be studied. Ethnic

boundaries may be situationally determined (see, e.g., Davydd 1985; Schlee 2002), nested (see, e.g., Mozaffar and Scarritt 1999), or strategically deployed (see, e.g., Elwert 2002; Brubaker 2004). Hug (2003) critiques the use of Minorities at Risk data primarily in these terms. However, given that selection criteria for ethnic group inclusion incorporate discrimination and political mobilization, there also are risks of endogeneity.

Hug suggests using a two-stage incidental truncation regression model to test for selection effects when using the Minorities at Risk dataset. Truncated regression models the selection mechanism into the incomplete data set together with an outcome equation modeling the relationship between the dependent variable and independent variables of interest (see also Breen 1996).

Using Monte Carlo simulations, Hug (2003) finds that the truncated regression estimator outperforms the OLS estimator when sample sizes are small relative to the overall population size and when $n > 200$ (see figure 1 in Hug 2003: 263). However, there are tradeoffs as the truncated estimates tend to have inflated standard errors.

I will use Hug's recommended method to test for selection effects in my models. However, given that my sample size is less than 200 (a situation in which Hug finds that the OLS estimator outperforms the truncated estimator), I will conduct this analysis mainly as a robustness check.

Non-Interval Level Data

Strictly speaking, the primary indicator used to measure ethnic rebellion is not an interval level measure. Technically, regression techniques assume interval level data. However, since the late 1960s, social scientists and methodologists have made convincing arguments that ordinal level data may be used in regression techniques with little distortion of results. Labovitz (1967: 151) argues, “certain assumptions of both descriptive and inference statistics *can* be violated without unduly altering the conclusions; and strict adherence to measurement scales may lead to an extensive waste of information.” In two studies, Labovitz (1967, 1970) finds that there is little distortion in interpretation when ordinal scales are used in place of interval level data. The caveat, restated in Labovitz (1971), is that the amount of error present is inversely related to the number of ranks employed. Thus, it is often advisable *not* to use regression techniques meant for interval level data on dichotomous or trichotomous measures.

The first dependent variable to be examined in following chapters is an ordinal measure of ethnic group rebellion. However, as the number of ranks (8) is relatively high and as at least one study has found a high level of correlation between the ranked value and interval measures of rebellion (Fearon and Laitin 2002), multivariate regression techniques may be used with a relatively high degree of confidence.

Changes in levels of ethnic rebellion, however, are trichotomous variables. In the case of ordinal data with few ranks, it is unadvisable to use parametric techniques. However, nonparametric techniques for longitudinal data are underdeveloped. To

model both the grouped and longitudinal nature of the data, I will use an ordinal logit regression with clustering (Rabe-Hesketh and Skrondal, 2005:155).

Presentation of Data

Case Selection

The focus of this research is the behavior of ethnic groups in countries undergoing democratic transitions between 1980 and 2000. Countries were identified as having undergone a transition when the Polity score reached at least a 6 and maintained that level of democracy for at least one year. A Polity score of 6 is generally considered the minimum score for a full democracy.

Ethnic groups were defined based on their inclusion in the Minorities at Risk dataset. The Minorities at Risk project includes ethnic groups in countries with populations of at least 500,000 based on the following criteria:

1. The ethnic group is subject to differential treatment vis-à-vis other groups in society; and/or
2. The ethnic group is the focus of political mobilization; and
3. The ethnic group has a population of at least 100,000 or 1% of the country's population.

Furthermore, the following practices are also followed in the selection and inclusion of ethnic groups:

1. Data on any ethnic group is collected for each country for which it meets the above criteria.

2. Ethnic groups are considered at the highest reasonable level of aggregation.
3. Disadvantaged and advantaged minorities are included, as well as disadvantaged majorities or pluralities. However, advantaged majorities are not included.

The above criteria yielded 59 ethnic groups in 27 countries in the developing world and 43 ethnic groups in 15 post-Communist states. (See Appendix A for complete list of cases.)

Dependent Variables

Several dependent variables are included in the quantitative analyses. First is the Minorities at Risk rebellion score. The rebellion variable is coded annually for all groups included in the dataset. It is scaled as follows: 0 (no rebellion); 1 (sporadic acts of terrorism); 2 (campaigns of terrorism); 3 (local rebellion); 4 (small-scale guerrilla warfare); 5 (intermediate-scale guerrilla warfare); 6 (large-scale guerrilla warfare); 7 (protracted civil war). Since the research questions at hand also deal with increases and decreases in ethnic rebellion – not just the absolute level of rebellion in a given year – dependent variables capturing increases and decreases are also included. Typically in times-series analysis, change in a particular variable is measured from one year to the next. However, the question of interest is not, for example, whether rebellion in year four after democratization is more than rebellion in year three after democratization. Rather, it is whether rebellion post-democratization has increased from pre-democratization levels. To capture this, two primary dependent variables were created. One captures whether rebellion in each

year post-democratization is less than, the same as, or more than the highest level of rebellion exhibited in the five years prior to democratization. The second captures whether rebellion in each year post-democratization is less than, the same as, or more than the median level of rebellion for the five years prior to democratization. (Appendix B provides a complete description of all variables used in analysis and coding rules employed.)

Independent Variables

Historical Experiences

To test hypotheses regarding the effects of conflictual histories on current levels of violence, I use five indicators. I employ two measures of discrimination: economic discrimination and political discrimination, taken from the MAR dataset (2005) and Asal's (2003) extension. Variables for both economic and political discrimination range from 0 to 4, with a 4 indicating the highest level of exclusion. Data for three repression variables, based on the target (civilian, nonviolent political actors, violent political actors) of repression, were collected independently. Repression variables range from 0 to 5, with a 5 indicating that the state used lethal force at least once during the year being coded. Additionally, the MAR dataset includes an index of lost autonomy.¹ This index takes into account when the group in question lost autonomy, giving more weight to autonomy lost more recently. It also takes into account the degree of autonomy that was lost. It ranges in value from 0 to 6

¹ The Minorities at Risk lost autonomy variables were refined, updated and corrected by David Quinn. Although they have not yet been released to the general public, David Quinn graciously provided them for this analysis.

Finally, I include a scaled measure of intercommunal conflict. Taken from the MAR dataset (2005), this variable codes the most severe manifestation of intercommunal conflict for each decade from the 1940s through the 1980s.

The Nature of the Democratic Transition

Measures of the type of democratic transition and the composition of democratization forces were collected independently. Type of democratic transition (rupture or pacted) is a dichotomous measure. A democratic rupture is a transition led from below in which the authoritarian state is overwhelmed by opposition and is unable to influence directly the outcome of the transition. The paradigmatic case is Portugal's "Revolution of the Carnations," in which junior military officers led a leftist coup that led to democratization. (See O'Donnell and Schmitter 1986; Linz and Stepan 1996). Pacted transitions are characterized by an "explicit, but not always publicly explicated or justified, agreement among a select set of actors which seeks to define (or, better, to redefine) rules governing the exercise of power on the basis of mutual guarantees for the 'vital interests' of those entering into it." (O'Donnell and Schmitter 1986:37) The paradigmatic case is the Spanish transition following Franco's death, in which reformists within the regime negotiated the rules of the transition with members of the democratic opposition. I categorize democratic transitions as ruptures or pacted based on available case information and country summaries from the Polity IV dataset.

Ethnic minorities can play different roles during democratization. Sometimes, ethnic minorities are at the forefront of forces pushing for democratization; other times, ethnic minorities are absent from democracy movements; and occasionally,

ethnic actors (generally those which have been privileged minorities) are part of anti-democracy movements. I categorize ethnic involvement in democratization as follows: group is involved in anti-democratic countermovements; group is not involved in either anti- or pro-democracy movements (or is involved in both); individual members of the ethnic group are involved in pro-democracy movements; ethnic group organizations are involved in pro-democracy coalitions; and ethnic group organizations lead the pro-democracy forces.

Measuring Institutions

To test institutional hypotheses, four measures taken from Saideman et al. (2002), two additional measures developed from it and Polity IV (2002), and two measures independently coded are employed. The federal system variable is a dichotomous variable, with federal systems taking the value of 1. This variable does not take into account whether or not the federalism has an ethnic character to it – as is the case in Russia, India, and Ethiopia, for example. Therefore, it can only be used to determine the efficacy of decentralization in ameliorating ethnic conflict – but cannot be used to speak to the debate on the efficacy of federalism set up along ethnic lines. Therefore, I include two additional measures which were independently coded. A measure of ethnofederalism is a dichotomous indicator of whether a group controls a federal unit. A measure of ethnic autonomy indicates whether a group has been granted some level of political and territorial autonomy within an otherwise unitary state. The codes for federalism, ethnofederalism and autonomy are mutually

exclusive; that is to say, an ethnic group may be coded as a 1 under only one of these variables at a time.

I also include several control variables in determining the effects of various types of decentralization. While federal states differ from ethnofederal states in that ethnic groups are not explicitly recognized as “owners” of federal units, if an ethnic group is the largest group in a federal unit, it can proxy the effects of ethnofederalism. Therefore, I also include a dichotomous measure indicating if the ethnic group is the plurality or majority population of a federal unit not otherwise recognized as ethnofederal. On the other hand, in ethnofederal states or in autonomous zones for ethnic minorities, the presence of a significant portion of the minority population outside the region the group controls may offset any beneficial effect of ethnofederalism or autonomy. Therefore, I also include dichotomous indicators of whether more than 25% or more of the minority population lives outside an ethnofederal unit or autonomous zone.

An ordinal variable indicates whether a state’s electoral system is proportional, semi-proportional, plurality or majoritarian. It is taken from the Saideman et al. (2002) replication dataset.

I employ four variables in an attempt to disentangle the effects of parliamentary versus presidential systems. First, I use a dichotomous measure to indicate parliamentary systems, with presidential systems taking a null value. Second, I interact this variable with the variable for minimal democracies employing proportional electoral systems. This is to measure the effects of having a parliamentary regime elected through a proportional electoral system. Third, I invert

the dichotomous measure (so that presidential systems take the value of 1) and interact it with the executive constraints measure taken from Polity IV (2002). The executive constraints measure takes a value from 1 to 7, with 7 indicating the highest level of constraint on executive decision-making (Marshall and Jaggers 2002). I also interact this variable with the competitive executive recruitment measure from Polity IV (2002). This measure ranges from 1 to 3, with 3 indicating the highest level of competition in executive recruitment. Both structural, legal constraints on decision-making and competition may serve as different types of constraint on executive authority, so both are considered as measures of such.

Indicators for Uncertainty

I use two variables to capture institutional sources of uncertainty. Regime age measures the age in years of the political/constitutional order of the state and is derived from the Polity IV (2002) durability measure. State age measures how long the state has been independent.

Control Variables

I also include in my analysis several control variables, most of which attempt to capture the capabilities of states and ethnic groups. As Falaschetti and Miller (2001) aptly point out, it is costly to diffuse institutions and requires more resources than centralizing political institutions. To control for the ability of states to construct institutions which accommodate ethnic minorities, I use GDP per capita and change in GDP per capita, taken from World Bank (2006). These indicators are also proxies for a state's ability to apply repression.

I also include variables from the MAR dataset to control for ethnic group capacity. As Lischer (1999) points out, even if ethnic groups fear for their survival, to use preemptive violence requires some level of organization and resources. Group organization for joint political action measures the most militant form of organization used by the group. This variable helps capture an ethnic group's organizational capacity to engage in violence against the state. Number of kindred segments measures the presence of kindred groups in adjoining countries. Kindred groups in neighboring countries represent one important source for resources.

I also control for the degree of cultural distinctiveness of ethnic minorities. I use the cultural categoriness measure in the MAR dataset as my measure of cultural distinctiveness. This variable measures the number of dimensions (linguistic, religious, racial and customary) on which the minority is different from the majority while also accounting for the cultural cohesion of that minority. Finally, I control for the geographic dispersion of the ethnic group. Certain policy interventions (such as federalism) may be more effective when groups are geographically concentrated, whereas other (such as proportional electoral systems) may be less important when groups are concentrated. The geographic concentration variable ranges from 0 for the most dispersed groups to 3 for groups that are the most concentrated.

Table 3.2 gives an overview of hypotheses to be tested as they are related to specific indicators.

Table 3.1 Summary of Hypotheses with Indicators

Hypothesis		Indicators	Hypothesized relationship
H1	Past economic or political discrimination increases levels of rebellion	POLDIS, ECDIS	+
H2	Past repression increases levels of rebellion	REPGENCIV, REPNVOL, REPVIOL	+
H3	Lost autonomy increases levels of rebellion	AUTLOST	+
H4	Past intercommunal conflict increases levels of rebellion	COMCON	+
H5	Democratization through rupture increases levels of rebellion	TRANSITION	+
H6	Inclusion in democratic opposition decreases levels of rebellion	ETHNICTRANS	-
H7a	Federalism decreases rebellion	FEDERAL	-
H7b	Ethnofederalism decreases rebellion	ETHFED	-
H7c	Autonomy decreases rebellion	AUTONOMY	-
H8	Proportional electoral rules decrease rebellion	ELECTORAL	-
H9	Neither parliamentarism or presidentialism are correlated with rebellion	PARLIAMENTARY	-
H10	Parliamentary systems with proportional electoral rules decrease rebellion	PARLELECT	-
H11	Presidential systems with constrained executives decrease rebellion	PRESCONST, PRESCOMP	-
H12	Young states have higher levels of rebellion	STATEAGE	+
H13	Young regimes have higher levels of rebellion	REGIMEAGE	+

Chapter 4: Quantitative Analysis: Levels of Ethnic Rebellion

Summary Characteristics of Data

The dependent variable of interest in this section of the study is the absolute level of rebellion employed by an ethnic group. Figure 4.1 gives a breakdown of the number of group-years at each level of rebellion, as measured by the REB variable in the Minorities at Risk project. As is evident from the figure, the presence of group rebellion at any level is relatively uncommon.

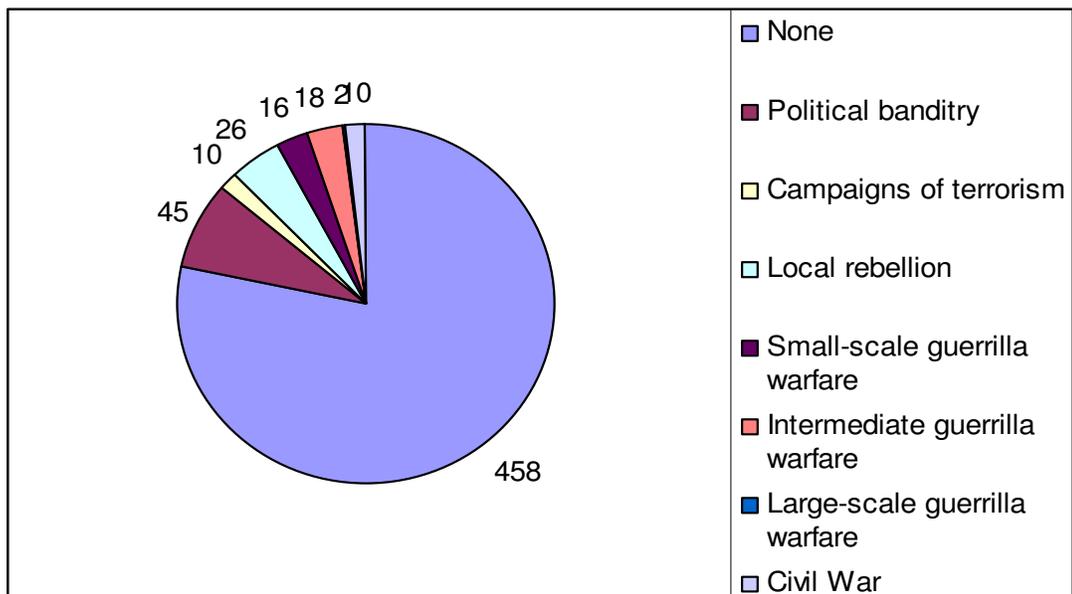


Figure 4.1 Levels of ethnic rebellion (group-years)

Table 4.1 further breaks down the distribution of group-years of rebellion by examining post-Communist states in comparison to developing states.

Table 4.1 Levels of Rebellion in Post-Communist and Developing States (Group-Years)

Level of Rebellion	Developing States	Post-Communist States
None	244	214
Political Banditry	35	10
Campaigns of Violence	9	1
Local Rebellion	15	11
Small-scale guerrilla warfare	16	0
Intermediate guerrilla warfare	18	0
Large-scale guerrilla warfare	0	2
Civil war	9	1

Ethnic groups in developing countries transitioning to democracy exhibit more variation in the overall level of rebellion than groups residing in post-Communist states undergoing democratization. They also exhibit higher levels of ethnic rebellion, with more than 12 percent of group-years experiencing at least small-scale guerrilla warfare. This contrasts with the post-Communist world, in which just over 1 percent of group-years experience any level of guerrilla warfare.

While the above table and figure give an idea of the distribution of rebellion across categories, they do not give a sense of the distribution of rebellion across time or across ethnic groups. Appendix C, therefore, contains time plots by ethnic group, divided into the developing and post-Communist subsamples.

In this chapter, I use several longitudinal methods to determine the relative effects of independent variables on levels of ethnic conflict in both the overall sample and in the sub-samples from the developing and post-Communist worlds. However, before I begin those analyses, I first use an incidental truncation model to check for

the presence of selection bias. Then, I conduct two analyses – linear regression with panel-corrected standard errors and fixed-effects vector decomposition – on the entire set of cases. Multiple statistical methods are used to test the robustness of results. An indicator for whether a group resides in a post-Communist state is included in order to test if the differences in levels of ethnic rebellion in the post-Communist versus the developing world observed by other researchers can be explained primarily by differences in the levels of other independent variables. As will be shown below, the indicator for post-Communism is significant. Therefore, in order to analyze further the differences between ethnic groups in post-Communist countries and those in developing countries, I conduct analyses using the same statistical models but splitting the sample into the two sub-samples.

Analysis 1: Establishing if Selection Bias is Present

In this analysis, an incidental truncation model is used to establish if selection bias is present. As discussed in Chapter 3, the Minorities at Risk dataset has been criticized as biased in its selection of cases (see discussion in Chapter 3). The incidental truncation model uses simulation to test for the presence and degree of selection bias in the data (see Hug 2003). Despite its usefulness, incidental truncation models are limited to cross-sectional data and are not able to model times-series data such as used in this study. Therefore, although the technique will give some indication of the presence or absence of selection bias, the coefficients cannot be interpreted.

Table 4.2 shows the results from two models. The first is the regular ordinary least-squares regression. This provides the baseline with which to compare the

incidental truncation model. The second model is the incidental truncation model. The variables used for the selection equation were chosen because of their relationship to selection criteria for both the MAR project and for this study. So, both political and economic discrimination are criteria by which ethnic groups are selected into the MAR database. The variable for protest is included since it is a prominent measure of minority group mobilization, another selection criterion for MAR. Cultural differentials were included since MAR only includes groups that are in some way culturally distinct from dominant groups. The Polity score was included because of this study's focus on democratizing countries. Finally, group concentration and history of lost autonomy were included because it is expected that these two factors increase the likelihood that scholars and others will "notice" a minority.

Table 4.2 Incidental Truncation Compared to Ordinary Regression¹

Variable	OLS Regression Coefficient (<i>Std error</i>)	Incidental Truncation Coefficient (<i>Std error</i>)
<i>Regression Equation</i>		
Rebellion (lagged one year)	.142*** (.016)	.142*** (.011)
Economic Discrimination	.065 ⁺ (.037)	.065* (.031)
Political Discrimination	.079* (.038)	.079** (.038)
Repression -- civilians (lagged one year)	.871 (3.059)	.871 (4.434)
Repression -- nonviolent actors (lagged one year)	.685 (2.770)	.685 (3.344)
Repression -- violent actors (lagged one year)	-1.527 (2.858)	-1.527 (3.745)
Lost autonomy	-.105*** (.026)	-.105* (.041)
Communal conflict	-.176*** (.024)	-.176*** (.022)

¹ These regressions were conducted using the NLogit statistical software package.

Decentralization ²	-.065*** (.015)	-.065*** (.014)
Electoral system	3.290 (3.357)	3.290 (4.770)
Parliamentary system	2.565 (4.237)	2.565 (7.279)
Electoral*Parliamentary	-5.847* (2.552)	-5.847 (4.868)
Presidential system -- constrained executive	-.232 (1.453)	-.232 (2.121)
Presidential system -- competitive executive recruitment	.310 (1.453)	.310 (2.127)
Transition type	-.077* (.034)	-.077+ (.045)
Ethnic involvement in transition	.072* (.036)	.072+ (.043)
State age	.390*** (.024)	.390*** (.024)
Regime age	.411*** (.033)	.411*** (.033)
Post-Communist	.213 (.196)	.213 (4.855)
Group concentration	-.177 (.135)	-.177 (5.307)
Cultural differentials	.012 (.026)	.012 (.026)
GDP/capita	-.002* (.003)	-.002 (.004)
Change in GDP/capita	.035 (.017)	.035 (.244)
Polity	-.362*** (.101)	-.362*** (.109)
Protest	.349*** (.016)	.349*** (.012)
Constant	-54.080 (15.716)	-54.080 (.371E+7)

² The incidental truncation model would not converge when separate variables denoting different types of decentralization (federalism, ethnofederalism, and autonomy) were included in the model. Therefore, a collapsed indicator was created. Decentralization is scored 1 if federalism or ethnofederalism or autonomy is scored 1 and is 0 otherwise. Variables capturing if a significant minority of the ethnic group is outside a territorial unit under the group's control also were dropped from the model so that the incidental truncation model would converge. Additionally, to reach conversion, the variable for group organization was dropped.

<i>Selection Equation</i>		
Political discrimination	--	-.048 (.709E+18)
Economic discrimination	--	-.049 (.715E+18)
Polity	--	-.042 (.609E+18)
Lost autonomy	--	.032 (.462E+18)
Protest	--	-.012 (.176E+18)
Group concentration	--	-.031 (-.031E+18)
Cultural differentials	--	-.009 (.129E+18)
Constant	--	42.413 (.622E+18)

As can be seen from the above table, it is unlikely that selection bias is a problem for analysis. None of the variables in the selection equation reach significance. Therefore, the coefficients are the same in the incidental truncation model as they are in the regular regression model, although the standard errors are different. The results from this comparison mean the following analyses can be viewed with confidence that selection bias is not affecting their results.

Analysis 2: Pooled Sample

Regression with Panel-Corrected Standard Errors

The standard method for analyzing cross-section times-series data has become linear regression with panel-corrected standard errors.³ As a baseline model, I use times-series regression with a lagged dependent variable and panel-corrected standard

³ This and all subsequent analyses were conducted using Stata 9 (StataCorp. 2005)

errors for the entire sample (cases from both post-Communist and developing countries).⁴ Results are shown in Table 4.3.

⁴ The complete list of cases is included in Appendix A. Briefly, ethnic groups in post-Communist countries include those in Eastern Europe and the former Soviet Union. Ethnic groups in developing countries include groups in Latin America, sub-Saharan Africa and Asia.

Table 4.3 Results for Regression with Panel-Corrected Standard Errors

Variable Category	Variable	Coefficient (Std error)
Lag of dependent variable	Rebellion (lagged one year)	.749*** (.087)
Conflict variables	Economic Discrimination	.052 (.037)
	Political Discrimination	.053 (.035)
	Repression -- civilians (lagged one year)	-.003 (.038)
	Repression -- nonviolent actors (lagged one year)	.024 (.037)
	Repression --violent actors (lagged one year)	.008 (.039)
	Lost autonomy	.155* (.073)
	Communal conflict	.089*** (.023)
Institutional variables	Federal state	-.019 (.106)
	Majority in federal unit	-.115 (.121)
	Ethnofederalism	-.144 (.228)
	More than 25% outside federal unit	.533 (.333)
	Autonomous region	-.500 (.305)
	More than 25% outside autonomous region	.433 (.307)
	Electoral system	.012 (.034)
	Parliamentary system	-.260 (.157)
	Electoral*Parliamentary	.010 (.040)
	Presidential system -- constrained executive	.015 (.015)
	Presidential system -- competitive executive recruitment	-.059* (.028)

Uncertainty variables	Transition type	.230 ⁺ (.123)
	Ethnic involvement in transition	.014 (.054)
	State age	.000 (.000)
	Regime age	.026 (.026)
Control Variables	Post-Communist	-.337* (.140)
	Cultural differentials	-.035 (.032)
	GDP/capita	-.000 (.000)
	Change in GDP/capita	-.015** (.005)
	Polity	-.021 (.031)
	Protest	.040 (.027)
	Constant	-.010 (.222)
⁺ $p < .1$ * $p < .05$ ** $p < .01$ *** $p < .001$ Dependent variable is rebellion score N = 417 (80 groups) $R^2 = .81$		

In addition to the results given in the above table, several variables were tested for joint significance. So, for example, a group having the majority population in a federal unit; the central state designating a federal unit as being the “home” territory of a specific ethnic group (i.e., ethnofederalism); and the state granting autonomy to the ethnic group may be functionally equivalent (although they are mutually exclusive in the coding). That is, each of these policies represents a form of decentralization in which the ethnic minority has increased control over its own affairs. Therefore, it is important to test these variables together. I performed Wald F-tests to check for joint significance and found that these three factors are jointly

significant at the .1 level and have an ameliorative effect on levels of ethnic conflict. Additionally, political and economic discrimination are jointly significant at the .01 level and increase levels of ethnic conflict. Finally, the presence of a constrained executive and the presence of competitive executive recruitment in presidential systems are jointly significant at the .05 level and lower levels of ethnic rebellion. Not jointly significant are the type of transition and the involvement of the ethnic group in the transition process; nor is any combination of repression measures significantly associated with levels of rebellion.

Within this model, conflict and institutional variables are the most consistently significant. Among conflict indicators, all except the repression variables are either individually or jointly significant. Economic and political discrimination are not individually significant; however the combined effect is significant, with the coefficient in the expected direction. The substantive effect, however, is small. The highest coded level of both political and economic discrimination is associated with an increase of only .42 in the rebellion score in this model. A history of lost autonomy has a greater substantive effect than political and economic discrimination combined. The highest coded level of lost autonomy is associated with an increase of .465 in the rebellion score. Finally, the presence of intercommunal conflict also has a moderate effect on the level of ethnic conflict. The highest coded level of intercommunal conflict is associated with an increase in the rebellion score of .53. This result is highly statistically significant, although this indicator does not take into account the relationship between the group antagonist and the state, nor does it take into account which group is victim and which is perpetrator of the violence.

Several of the institutional variables are also significant. All forms of decentralization reduce levels of ethnic rebellion, and they reach significance when taken jointly. However, according to this analysis, not all forms of decentralization are equally effective. Autonomy – in many cases a more extreme form of decentralization than federalism or ethnofederalism – has four to five times the effect as the other forms of decentralization included. Parliamentarism, alone or when combined with proportional representation, does not reach statistical significance. However, constraints posed by competitive executive recruitment in a presidential system have a moderate effect that is statistically significant. The most competitive forms of executive recruitment are associated with a .59 decrease in levels of ethnic rebellion.

Indicators of uncertainty are the most weakly related to levels of organizational rebellion. Only transition type (pacted or rupture) is marginally significant, with ruptures (as hypothesized) associated with higher levels of rebellion. However, the substantive impact is small. I will now turn to supplementary analyses to test the robustness of these results.

Testing for Local Effects – Fixed-Effects Vector Decomposition

In Chapter 3, several common issues with longitudinal, cross-sectional data were discussed. Prominent among these is the problem of unit heterogeneity, which can be summarized as the problem of local effects. Fixed effects models allow for different units of analysis to take different intercepts, controlling for local factors that are difficult or impossible to measure quantitatively. However, as mentioned

previously, fixed effects models do not allow for the inclusion of static variables and the standard errors of slowly changing variables tend to be greatly inflated. This obviously poses a problem for much political analysis, since political institutions tend to be either static or slowly changing. Therefore, I use fixed-effects vector decomposition (FEVD), developed by Plümper and Troeger (2007). In this method, the baseline model minus static and sluggish variables is run with fixed effects. The resulting fixed effects are then regressed on the static and slowly changing variables. Finally, OLS regression with panel-corrected standard errors is used, with the inclusion of static and slowly changing variables and the residuals of the fixed effects. Table 4.4 gives the results of this final stage in the process. (Results from the first two steps can be found in Appendix D.)

Table 4.4 Results for Fixed-Effects Vector Decomposition Regression

Variable Category	Variable	Coefficient (Std error)
Lag of dependent variable	Rebellion (lagged one year)	.749*** (.091)
Conflict variables	Economic Discrimination	.067 (.042)
	Political Discrimination	.026 (.038)
	Repression -- civilians (lagged one year)	.011 (.032)
	Repression -- nonviolent actors (lagged one year)	.042 (.038)
	Repression --violent actors (lagged one year)	.021 (.044)
	Lost autonomy	.134 ⁺ (.076)
	Communal conflict	.100*** (.027)
Institutional variables	Federal state	-.013 (.098)
	Majority in federal unit	-.103 (.134)
	Ethnofederalism	-.115 (.117)
	More than 25% outside federal unit	.383 (.354)
	Autonomous region	-.468* (.239)
	More than 25% outside autonomous region ⁵	--
	Electoral system	.041 (.033)
	Parliamentary system	-.186 (.182)
	Electoral*Parliamentary	-.020 (.043)
	Presidential system -- constrained executive	.017 (.018)
	Presidential system -- competitive executive recruitment	-.043* (.020)

⁵ This variable was dropped from the analysis to achieve convergence.

Uncertainty variables	Transition type	.157 (.170)
	Ethnic involvement in transition	.018 (.063)
	State age	-.000 (.001)
	Regime age	.020 (.027)
Control Variables	Group organization (lagged)	.002 (.009)
	Post-communist	-.481* (.199)
	Group concentration	.010 (.017)
	Cultural differentials	-.055 (.038)
	GDP/capita	-.000 (.000)
	Change in GDP/capita	-.003 (.008)
	Polity	-.022 (.032)
	Protest	.038 (.029)
	Fixed effects residuals	3.65 (2.91)
	Constant	-.0418 (.303)
⁺ $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$ Dependent variable is rebellion score N = 408 (78 groups) $R^2 = .81$		

As in the previous analysis, several variables were tested for joint significance.

Having a majority in a federal unit, ethnofederalism and autonomy are jointly significant at the .05 level and have an ameliorative effect on levels of ethnic conflict.

Additionally, political and economic discrimination are jointly significant at the .001 level and increase levels of ethnic conflict. The presence of a constrained executive and of competitive executive recruitment in presidential systems are not jointly

significant; nor are the type of transition and the involvement of the ethnic group in the transition process. Additionally, no combination of repression measures is statistically significant.

The results from this analysis are quite similar to the results from the regular regression with panel-corrected standard errors performed earlier. The joint significance of political and economic discrimination increases in the FEVD, with the substantive impact of economic discrimination increasing slightly, while the substantive impact of political discrimination is halved.

The impact of lost autonomy is only slightly different, although the statistical significance decreases. However, the joint significance of forms of decentralization in the FEVD model increases, although the substantive impact is virtually unchanged. Finally, the presence of a constrained executive and of competitive executive recruitment are not jointly significant in the FEVD model.

Finally, it should be noted that the coefficient for fixed effects residuals (that part unexplained by the included static and sluggish variables) is not statistically significant. This bolsters confidence that local factors are not systematically influencing levels of ethnic rebellion significantly.

Comparison and Discussion

Several of the hypotheses presented in Chapter 2 are supported by the analyses above. Both the regression with panel-corrected standard errors and with fixed-effects vector decomposition support the hypothesis that past economic and political discrimination lead to increased levels of ethnic rebellion, although the

substantive impact is relatively small. Furthermore, both analyses support hypotheses regarding the impact of lost autonomy and of communal conflict on levels of ethnic rebellion. However, again, the substantive impact of these factors appears to be relatively small. Neither analysis supports hypotheses regarding the impact of repression on absolute levels of ethnic conflict.

Hypotheses regarding the impact of transition type and ethnic group involvement in the transition are not supported in general, although there is weak support for the impact of transitional ruptures in the regression with panel-corrected standard errors.

The effects of institutions are fairly consistent across method of analysis. Hypotheses regarding the effects of decentralization and giving ethnic minorities political control of territory (whether through federalism, ethnic federalism or autonomy) are supported. Furthermore, the relative impacts of these variables – especially autonomy – are larger than in the case of most of the conflict variables. However, there is a caveat to this finding. Excluding large minorities of the ethnic population from the territorial unit in which the ethnic group dominates essentially nullifies the positive effects of such institutions. This is a finding that requires further exploration and has significant policy implications. It also has the potential to help explain some of the discrepancies in findings on the impact of decentralization in different regions. This analysis is perhaps the first to control for the geographic dispersion of the group outside such territorial units when determining their effects on the level of ethnic rebellion.

As expected, neither presidentialism nor parliamentarism are consistently associated with higher or lower levels of ethnic rebellion. However, there is some limited support in both analyses for hypotheses regarding the impact of constrained executive systems, though the substantive impacts are small.

None of the hypotheses regarding the impact of uncertainty (as measured by state age or regime age) are supported in analyses.

Table 4.5 summarizes the support found for hypotheses by the various methods employed.

Table 4.5 Summary of Hypotheses Supported

Hypothesis		PCSE Regression	FEVD Regression
H1	Past economic or political discrimination increases levels of rebellion	Supported	Supported
H2	Past repression increases levels of rebellion	Not supported	Not supported
H3	Lost autonomy increases levels of rebellion	Supported	Weakly Supported
H4	Past intercommunal conflict increases levels of rebellion	Supported	Supported
H5	Democratization through rupture increases levels of rebellion	Weakly supported	Not supported
H6	Inclusion in democratic opposition decreases levels of rebellion	Not supported	Not supported
H7a	Federalism decreases rebellion (and group majority in federal unit)	Supported	Supported
H7b	Ethnofederalism decreases rebellion (jointly significant with other forms of decentralization)	Supported	Supported
H7c	Autonomy decreases rebellion	Supported	Supported
H8	Proportional electoral rules decrease rebellion	Not supported	Not supported
H9	Neither parliamentarism or presidentialism are correlated with rebellion	Supported	Supported
H10	Parliamentary systems with proportional electoral rules decrease rebellion	Not supported	Not supported
H11	Presidential systems with constrained executives decrease rebellion	Weakly supported	Weakly supported
H12	Young states have higher levels of rebellion	Not supported	Not supported
H13	Young regimes have higher levels of rebellion	Not supported	Not supported

Of the control variables used in the analyses, only one was significant in both: the dichotomous indicator for groups in post-Communist countries was significant with a relatively large substantive impact. In order to further explore differences between ethnic groups in post-Communist and developing countries, analysis was carried out on each sub-sample.

Analysis 3: Comparison of Post-Communist Sample with Developing Countries

Regression with Panel-Corrected Standard Errors

As with the entire sample, regression with a lagged dependent variable and panel-corrected standard errors was employed to test the effects of the independent variables on the absolute level of ethnic rebellion. One regression tested the effects of the independent variables on rebellion by ethnic groups from post-Communist countries, while a second analysis was employed using the sample of ethnic groups from developing countries. Table 4.6 reports the results of these analyses, presented side-by-side for ease of comparison.

Table 4.6 Regression with Panel-Corrected Standard Errors, by Sub-Sample

Variable Category	Variable	Post-Communist	Developing
		Coefficient (<i>Std. Error</i>)	Coefficient (<i>Std. Error</i>)
Lag of dependent variable	Rebellion (lagged one year)	.568*** (.143)	.722*** (.108)
Conflict variables	Economic Discrimination	.069 (.196)	.040 (.046)
	Political Discrimination	.196*** (.057)	.092 ⁺ (.049)
	Repression -- civilians (lagged one year)	.003 (.027)	-.033 (.036)
	Repression -- nonviolent actors (lagged one year)	-.070 (.074)	.041 (.038)
	Repression --violent actors (lagged one year)	.079 (.068)	-.024 (.052)
	Lost autonomy	.126 (.104)	.333 ⁺ (.175)
	Communal conflict	.081* (.037)	.057* (.028)
Institutional variables	Federal state	.161 (.256)	.228 (.225)
	Majority in federal unit	.124 (.262)	-.448** (.174)
	Ethnofederalism	.233 (.146)	-.023 (.305)
	More than 25% outside federal unit	.660 (.423)	.505 (.347)
	Autonomous region	-.969** (.440)	-.611 (.415)
	More than 25% outside autonomous region	-- ⁶	.390 (.435)
	Electoral system	-.221 (.203)	.065 (.042)
	Parliamentary system	1.52 (1.11)	-.525** (.174)
	Electoral*Parliamentary	.037 (.135)	.144* (.066)
	Presidential system -- constrained executive	.223** (.106)	.003 (.021)
	Presidential system -- competitive executive recruitment	.223 (.106)	-.023 (.032)

⁶ This variable was excluded from this analysis in order to achieve convergence.

Uncertainty variables	Transition type	-.233 (.211)	.553 ⁺ (.306)
	Ethnic involvement in transition	-.072 (.073)	.017 (.064)
	State age	.005** (.002)	.001 (.002)
	Regime age	.032 (.021)	.010 (.031)
Control Variables	Cultural differentials	.091 (.095)	.008 (.044)
	GDP/capita	-.000 (.000)	-.000 (.000)
	Change in GDP/capita	-.015*** (.004)	-.007 (.018)
	Polity	.055 (.043)	-.032 (.041)
	Protest	.017 (.052)	.069 ⁺ (.041)
	Constant	-4.287* (2.122)	-.303 (.256)
⁺ $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$ Dependent variable is rebellion score N = 158, 34 groups (post-Communist sample); N = 259, 46 groups (developing sample) $R^2 = .79$ (post-Communist sample); $R^2 = .83$ (developing sample)			

Once again, several combinations of variables were also tested for significance. In the post-Communist sample, economic and political discrimination are jointly significant at the .01 level – not surprising since political discrimination is significant at the .001 level – and increase levels of ethnic conflict. Having control of a federal unit, ethnofederalism and autonomy are jointly significant at the .05 level and are associated with lower levels of ethnic rebellion. No other combinations of variables reach significance.

In the developing sample, political and economic discrimination are jointly significant at the .05 level, resulting in higher levels of ethnic conflict. Having control of a federal unit, ethnofederalism and autonomy are jointly significant at the .001

level and result in lower levels of ethnic conflict. No other combinations of variables reach significance.

There are several notable differences between the impacts of the independent variables on ethnic group rebellion in post-Communist versus developing countries. In post-Communist states, political discrimination has nearly double the effect and is more highly significant than in developing states. Intercommunal conflict has an almost 50 percent greater impact in the post-Communist region than it does in developing countries. This again raises the question, discussed briefly in Chapter 2, on the effects of conflict with more powerful versus less powerful groups. Is it the type and/or status of ethnic groups involved in intercommunal conflict in the post-Communist region that leads to that variable having a greater impact there than in the developing world? That is one area which deserves more thorough exploration in future work.

A history of lost autonomy has three times the effect in the developing sample as compared to the post-Communist significant, and is significant in the former but not in the latter. This is an interesting finding, since it would be expected that histories of lost autonomy would be more directly related to separatist rebellions as opposed to rebellion for control of or access to the existing state. Separatist rebellions have been far more prevalent, as a percentage of conflicts, in the post-Communist context than in developing countries. Furthermore, the average level of lost autonomy for post-Communist groups is higher than that for groups in the developing world. One partial explanation may rest in the use of decentralized forms of governance in the post-Communist region. Among groups that have a history of lost autonomy in

the post-Communist region, 43.5 percent have some form of decentralized governance structures for their benefit, most commonly an ethnofederal unit. Among groups that have histories of lost autonomy in developing countries, a mere 18.4 percent experience a decentralized form of governance. That being said, having control of a federal unit has the opposite effect for group rebellion in developing states than in post-Communist states, where it is associated with higher levels of rebellion; additionally, autonomy has a much larger impact in post-Communist states than in developing states, although in both sub-samples autonomy is associated with lower levels of ethnic rebellion. There is a similar split between the two regions in the effects of the governmental system, with parliamentary systems having a larger impact in the developing sample while presidential systems with constrained executives have a larger impact in the post-Communist sample.

A slightly different profile of supported hypotheses emerges from analyzing the samples separately than from the analysis of the combined samples. Among the conflict variables, the most consistently supported hypotheses are on the impact of past discrimination and intercommunal conflict. The impact of past discrimination holds for all three analyses (full sample, post-Communist sub-sample, developing sub-sample), but holds more strongly for political than for economic discrimination and for the post-Communist region. Even more consistently, the impact of communal conflict is seen in all three analyses, reaching statistical significance in each. The three hypotheses regarding the impact of decentralization (federalism, ethnofederalism and autonomy) are also consistently supported across analyses, although the relative effects vary from analysis to analysis.

There are also several hypotheses that are consistently refuted across analyses. In all three analyses, repression (regardless of what type of actor it is levied against) does not have an impact on the absolute level of rebellion. Ethnic group involvement in (or opposition to) the democratic transition also does not have a significant impact on levels of ethnic rebellion post-democratization. Hypotheses regarding the impact of young states and young regimes are also not supported. In fact, in the post-Communist sample, ethnic groups in older states have higher levels of rebellion than ethnic groups in younger states, the opposite effect from what was hypothesized. Proportional electoral rules also do not seem to lower levels of ethnic rebellion.

Other hypotheses receive mixed support, depending on the sample analyzed. The impact of lost autonomy is seen in groups in developing states (and carries into the full sample), but not in the post-Communist sample. Given that more groups in the post-Communist region are living in states noted for renewed nationalism (see, e.g., Brubaker 1996), this finding is somewhat surprising. Transitions through rupture are shown to increase ethnic rebellion in the developing sample (and the effect carries through to the combined analysis), but not in the post-Communist sample. Parliamentarism has a significant effect on decreasing ethnic rebellion in the developing sample, an effect that does not carry over to the combined sample and is opposite of the effect (not statistically significant) in the post-Communist region. Finally, the impact of governmental system is split by sub-sample. In the developing region, parliamentarism combined with more highly proportional electoral rules is associated with higher levels of ethnic rebellion, an effect opposite from what was hypothesized. In the post-Communist region, presidential systems with highly

constrained executives are also associated with higher levels of rebellion, an effect also not expected. Table 4.7 summarizes the hypotheses supported by analysis of the post-Communist and developing worlds.

Table 4.7 Summary of Support for Hypotheses

Hypothesis		Post-Communist	Developing
H1	Past economic or political discrimination increases levels of rebellion	Supported	Weakly supported
H2	Past repression increases levels of rebellion	Not supported	Not supported
H3	Lost autonomy increases levels of rebellion	Not supported	Weakly supported
H4	Past intercommunal conflict increases levels of rebellion	Supported	Supported
H5	Democratization through rupture increases levels of rebellion	Not supported	Weakly supported
H6	Inclusion in democratic opposition decreases levels of rebellion	Not supported	Not supported
H7a	Federalism decreases rebellion (and group majority in federal unit)	Not supported	Weakly supported
H7b	Ethnofederalism decreases rebellion (jointly significant with other forms of decentralization)	Supported	Supported
H7c	Autonomy decreases rebellion	Supported	Not supported
H8	Proportional electoral rules decrease rebellion	Not supported	Not supported
H9	Neither parliamentarism or presidentialism are correlated with rebellion	Supported	Not supported
H10	Parliamentary systems with proportional electoral rules decrease rebellion	Not supported	Not supported
H11	Presidential systems with constrained executives decrease rebellion	Not supported	Not supported
H12	Young states have higher levels of rebellion	Not supported	Not supported
H13	Young regimes have higher levels of rebellion	Not supported	Not supported

Fixed-Effects Vector Decomposition

As with the entire sample, fixed-effects vector decomposition (FEVD) was used to test for the effects of unit heterogeneity within the post-Communist and developing country samples. Table 4.8 gives the results for the final stage of this process. (Results for the first two steps of fixed-effects vector decomposition are given in Appendix E.)

Table 4.8 Results for Fixed-Effects Vector Decomposition, by Sub-Sample

Variable Category	Variable	Post-Communist	Developing
		Coefficient (<i>Std. Error</i>)	Coefficient (<i>Std. Error</i>)
Lag of dependent variable	Rebellion (lagged one year)	.503*** (.125)	.727*** (.111)
Conflict variables	Economic Discrimination	-.036 (.074)	.043 (.062)
	Political Discrimination	.332*** (.078)	.086 (.059)
	Repression -- civilians (lagged one year)	-.005 (.036)	-.033 (.035)
	Repression -- nonviolent actors (lagged one year)	-.158* (.073)	.046 (.035)
	Repression --violent actors (lagged one year)	.167* (.071)	-.024 (.050)
	Lost autonomy	.043 (.118)	.326* (.162)
	Communal conflict	.041* (.031)	.057* (.028)
Institutional variables	Federal state	.087 (.206)	.243 (.208)
	Majority in federal unit	.286 (.274)	-.472* (.238)
	Ethnofederalism	.485** (.157)	-.017 (.296)
	More than 25% outside federal unit	.444 (.400)	.510 (.338)
	Autonomous region	-1.101** (.395)	-.633 (.425)
	More than 25% outside autonomous region ⁷	--	--
	Electoral system	-.200 (.159)	.075 (.046)
	Parliamentary system	2.00 (1.22)	-.468 ⁺ (.266)
	Electoral*Parliamentary	.004 (.116)	.133 ⁺ (.077)
	Presidential system -- constrained executive	.222* (.107)	.004 (.023)
	Presidential system -- competitive executive recruitment	.254 (.332)	-.018 (.036)

⁷ This variable was dropped from the analysis to achieve convergence.

Uncertainty variables	Transition type	-.502* (.201)	.563 ⁺ (.305)
	Ethnic involvement in transition	.075 (.060)	.021 (.058)
	State age	.004* (.002)	.001 (.001)
	Regime age	.037 (.025)	.009 (.032)
Control Variables	Group concentration	.248** (.088)	.021 (.052)
	Cultural differentials	.196* (.097)	.007 (.040)
	GDP/capita	-.000 (.000)	-.000 (.000)
	Change in GDP/capita	-.016*** (.004)	-.007 (.020)
	Polity	.096 (.064)	-.028 (.044)
	Protest	.035 (.049)	.072 (.047)
	Fixed effects residuals	.414 (3.56)	1.378 (5.335)
	Constant	-5.348** (2.040)	-.478 (.585)
⁺ $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$ Dependent variable is rebellion score N = 149, 32 groups (post-Communist sample); N = 253, 45 groups (developing sample) $R^2 = .83$ (post-Communist sample); $R^2 = .83$ (developing sample)			

Tests were also conducted for joint significance within both the post-Communist and developing states sample. In the post-Communist sample, political and economic discrimination, which increase ethnic rebellion, are jointly significant at the .001 level. The type of transition and ethnic group involvement in the democratic transition are jointly significant at the .05 level. Lagged values for repression against the civilian population and repression against nonviolent actors are jointly significant at the .05 level, while repression against the general civilian population and violent actors are jointly significant at the .1 level. Additionally,

repression against nonviolent and violent actors is significant at the .01 level. The three repression variables tested jointly are significant at the .05 level. Finally, minority control of a federal unit, ethnofederalism and autonomy are jointly significant at the .01 level. No other combinations reach significance.

In the sample of ethnic groups from developing countries, economic and political discrimination are jointly significant at the .05 level. Minority control of a federal unit, ethnofederalism and autonomy are significant at the .05 level. No other combination of variables reached statistical significance.

The results for the fixed-effects vector decomposition for the sample of ethnic groups in developing countries are not significantly different from the results from the standard regression with panel-corrected standard errors for the developing sample or from the results for the fixed-effects vector decomposition for the combined sample. However, the results from the post-Communist sample differ from both the results from the combined sample fixed-effects vector decomposition and from the regression with panel-corrected standard errors for the post-Communist sample. Discrimination – in particular political discrimination – continues to be a significant factor linked to increased levels of ethnic rebellion. Additionally, repression emerges as significant, with repression against nonviolent political actors decreasing levels of ethnic rebellion and repression against violent actors increasing ethnic rebellion. While the first result does not conform to the expectations, the second does confirm the hypothesis – and runs counter to theories that expect a displacement effect of repression. That is, these findings contradict theorists who expect repression of nonviolent actors to result in increased reliance on violence with repression of violent

actors to result in increased reliance on nonviolence. A history of lost autonomy is also not significantly associated with increased levels of ethnic rebellion.

Furthermore, intercommunal conflict loses significance in this analysis.

Another finding is that ethnofederalism is significantly associated with increased levels of ethnic rebellion while autonomy is associated with decreased levels of ethnic rebellion within the post-Communist region. This finding contradicts expectations, although it also confirms other studies that find troublesome the legacies of ethnofederalism in the post-Communist region. One possible explanation (explored in Bunce 2004) for this is the timing of ethnofederalism's development in the region. As ethnofederalism is a legacy of Communist regimes, having control of an ethnofederal unit may not be perceived by an ethnic group as a sufficient guarantee against state repression. After all, ethnofederal structures in the Communist period were seen as instruments of state control of ethnic minorities through the cooptation of ethnic elites rather than as a means for minority empowerment. Ethnofederalism established through negotiations with minorities (as opposed to its imposition by the center) and with real powers may have a substantially different effect.

Also disconfirming the expectations of reciprocal vulnerability theory is that democratic transition through rupture decreases levels of ethnic conflict and higher levels of ethnic group involvement in the transition process increases levels of rebellion.

Table 4.9 summarizes the support found for various hypotheses within the fixed-effects vector decomposition analysis by sub-sample tested.

Table 4.9 Summary of Supported Hypotheses by Sub-Sample

Hypothesis		Post-Communist	Developing
H1	Past economic or political discrimination increases levels of rebellion	Supported	Weakly supported
H2	Past repression increases levels of rebellion	Partially supported	Not supported
H3	Lost autonomy increases levels of rebellion	Not supported	Supported
H4	Past intercommunal conflict increases levels of rebellion	Not supported	Supported
H5	Democratization through rupture increases levels of rebellion	Not supported	Weakly supported
H6	Inclusion in democratic opposition decreases levels of rebellion	Not supported	Not supported
H7a	Federalism decreases rebellion (and group majority in federal unit)	Not supported	Supported
H7b	Ethnofederalism decreases rebellion (jointly significant with other forms of decentralization)	Not supported	Weakly supported
H7c	Autonomy decreases rebellion (jointly significant with other forms of decentralization)	Supported	Weakly supported
H8	Proportional electoral rules decrease rebellion	Not supported	Not supported
H9	Neither parliamentarism or presidentialism are correlated with rebellion	Supported	Not supported
H10	Parliamentary systems with proportional electoral rules decrease rebellion	Not supported	Not supported
H11	Presidential systems with constrained executives decrease rebellion	Not supported	Not supported
H12	Young states have higher levels of rebellion	Not supported	Not supported
H13	Young regimes have higher levels of rebellion	Not supported	Not supported

Conclusion

The overall results from the preceding analyses show only weak support for the constellation of hypotheses derived from reciprocal vulnerability theory. Among the conflict variables, the presence of communal conflict is the most consistently

significant. In each analysis, it is associated with higher levels of ethnic rebellion, as would be expected by reciprocal vulnerability theory. This is a result that warrants more detailed research in the future, as the intercommunal conflict variable in this analysis captures the highest level of conflict but not other dimensions of the conflict. The conflicts coded may be with ethnic groups that have a privileged relationship with the state or with other disadvantaged ethnic groups. Additionally, there is no modeling of whether the ethnic group that is the subject of study is the victim or the aggressor (or both) in the conflict. These questions have significance for further theoretical refinement. So, for example, if the ethnic group being studied is the aggressor and is targeting an ethnic group that is privileged by the state, then that communal conflict may be better conceptualized as another facet of rebellion against the state. This would be expected by reciprocal vulnerable theory. However, if the ethnic group in question is targeting another disadvantaged minority, then the causal mechanisms connecting communal violence to ethnic rebellion are much more difficult to conceptualize in terms of reciprocal vulnerability.

A history of lost autonomy reaches significance in four out of six analyses and is associated with higher levels of ethnic rebellion. This relationship is in the predicted direction. As discussed previously, an interesting wrinkle emerges in the sub-sample analyses. The effect of lost autonomy has almost three to nearly seven times (depending on method of statistical analysis) the effect in the developing context as it does in the post-Communist context. Again, this may be the result of a much higher percentage of groups in the post-Communist context being

accommodated through various forms of governmental decentralization than are groups in the developing world.

Political discrimination, by itself, reaches significance in only the sub-sample analyses using regression with panel-corrected standard errors. A larger effect is seen in the post-Communist sub-sample. However, coefficients in the full-sample analyses are in the predicted direction. Similarly, economic discrimination, when considered alone, does not reach significance in any of the analyses. Furthermore, in the fixed-effects vector decomposition analysis of the post-Communist sample, the coefficient has the opposite sign as expected by reciprocal vulnerability. Jointly, however, economic and political discrimination are significant in every analysis and, when considered together, are uniformly associated with higher levels of ethnic rebellion, as predicted.

The repression variables – alone or in linear combination – also fail to reach significance, except in the FEVD analysis of the post-Communist region. In that analyses, repression of *nonviolent* political actors was associated with *lower* levels of ethnic rebellion, an effect opposite of what reciprocal vulnerability theory would predict. However, the effect of repression of violent actors was in the direction predicted and associated with higher levels of ethnic rebellion. These findings, together, are also opposite of what would be expected by reciprocal vulnerability's rationalist rival, collective action theory, which predicts a displacement effect. The coefficients for the repression variables where they did not reach significance are frequently in the opposite directions as predicted; however, the substantive effect is small, and the standard errors quite large.

Among the institutional variables, forms of decentralization are consistently significant and generally associated with lower levels of rebellion, as predicted by reciprocal vulnerability theory. While these results carried over into the sub-sample analysis of groups in developing countries, results are different for groups in post-Communist countries. While autonomy is still associated with lower levels of rebellion, ethnofederalism and minority control of a federal unit are associated with higher rebellion scores. As discussed previously, one possible explanation for these anomalous results is that in most post-Communist countries, ethnofederal and federal structures are legacies of Communist regimes and may therefore lack the legitimacy necessary to dampen ethnic rebellion.

Neither type of electoral system nor whether a system is parliamentary or presidential is significant when considered alone. However, parliamentary systems with more proportional electoral rules are associated with higher levels of ethnic conflict in developing countries. This is the opposite result from what is predicted by reciprocal vulnerability theory. The question is raised why a political system in which ethnic minorities would perhaps be more able to garner political representation would exhibit higher levels of ethnic rebellion. One possible explanation is that highly proportional electoral systems – such as those with low minimum thresholds to gain representation – may result in ethnic extremists from other ethnic groups⁸ becoming part of the government (and potentially part of the governing coalition). The inclusion of such extremists – regardless of the inclusion of the ethnic minority under consideration – could result in perceptions of increased vulnerability. Similarly,

⁸ In many cases, these ethnic extremists would be from the majority or plurality ethnic group. However, in more diverse countries, the ethnic extremists may be from another disadvantaged group or from a group that is a regional rival to the group under consideration.

highly proportional electoral rules may also result in ethnic extremists from the ethnic group in question to gain seats, giving them added legitimacy and a platform from which to propagate their message. If those ethnic extremists choose to spread fear regarding the intentions of other groups, that could also increase perceptions of vulnerability which could, in turn, result in higher levels of ethnic rebellion. These scenarios fit the logic of reciprocal vulnerability theory. However, without further investigation, it cannot be determined if they are more or less common in the cases being studied.

In the post-Communist sub-sample, different institutional arrangements than in developing countries are associated with higher levels of ethnic conflict. Presidential systems with more highly constrained executives are associated with higher levels of rebellion in post-Communist countries. This effect is opposite from what would be expected according to reciprocal vulnerability theory. One possible explanation may be found by more closely examining the source of constraints on the executive. So, if the actor (or actors) serving as a constraint on the powers of the executive is seen as being hostile or threatening to ethnic minorities, then the perceived vulnerability of those minorities may increase. This, in turn, increases the likelihood of ethnic rebellion. For example, the fact that many executives in Latin America have faced constraints imposed by activist militaries would do very little to reassure minority – and especially indigenous – populations, since those militaries had engaged in repression of minorities and were generally viewed as hostile to minority interests.

A different type of constraint on executive power – competitive executive recruitment – has a more positive effect on levels of ethnic rebellion. In the full sample of cases, presidential systems with the most competition for executive recruitment have lower levels of ethnic rebellion in the regression analysis with panel-corrected standard errors.

Among variables intending to capture the effects of uncertainty, the type of democratic transition (pacted or rupture) is the most consistently significant. In the regression analysis with panel-corrected standard errors, ruptures are associated with higher levels of ethnic rebellion, as predicted by reciprocal vulnerability theory, although the significance level is marginal. However, in the sub-sample analyses, a different pattern emerges. In the post-Communist context, ruptures are associated with lower levels of rebellion while in the developing context the opposite is true.

State age is the only other indicator of uncertainty that reaches significance in any of the analyses. In the post-Communist sub-sample, older states exhibit higher levels of rebellion than younger states. This is the opposite of what would be expected based on reciprocal vulnerability theory.

As the above discussion shows, the analyses in this chapter show little support for hypotheses derived from reciprocal vulnerability theory. Not only do many indicators fail to reach statistical significance, several have significant effects in the opposite direction from that predicted by the theory. Furthermore, those hypotheses which are supported in multiple analyses are consistent not only with reciprocal vulnerability theory but also with grievance-based theories. The lack of support for hypotheses dealing with uncertainty (and including hypotheses regarding the effects

of transition type and ethnic involvement in transition), which are associated primarily with reciprocal vulnerability theory but not with either grievance- or resource mobilization-based theories of ethnic conflict, especially undermines the theory's claim to generalizability.

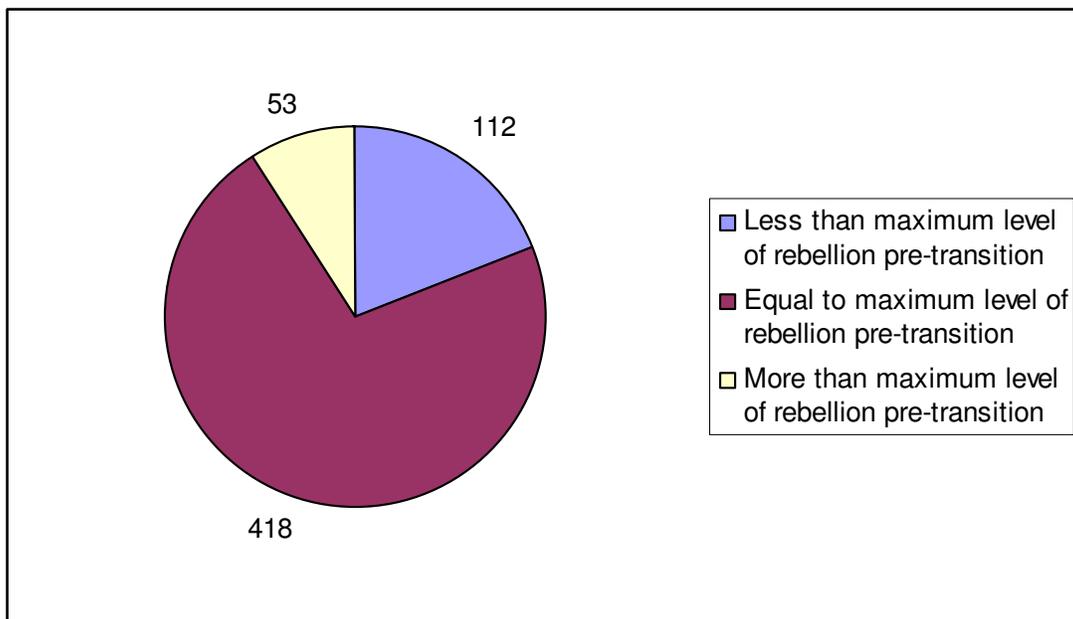
However, further exploration is still warranted on several levels. First, there is the question of the determinants of the absolute level of rebellion versus the determinants of changes in levels of ethnic rebellion. This is a question that will be explored in the following chapter. Second, and beyond the immediate scope of this study, is the continued differences between post-Communist ethnic minorities and those in the developing world. It was initially thought that differences between these two sets of ethnic minorities could be explained by one of several factors: differences in the political structures of the states in which they reside; differences in histories of lost autonomy; differences in levels or targets of repression following democratization; differences in dominant mode of democratization in post-Communist versus developing countries; or some combination of the above. However, the effects of these variables – with various controls applied and in two methodologically distinct analyses – diverge for minorities in these two areas. While the preceding analyses may be considered to eliminate a considerable number of plausible explanations for differences in post-Communist countries versus the developing world, they have not been successful in identifying factors to explain such differences. Further directions to explore these discrepancies will be presented in the concluding chapter.

Chapter 5: Quantitative Analysis: Changes in Ethnic Rebellion

Summary Characteristics of the Data

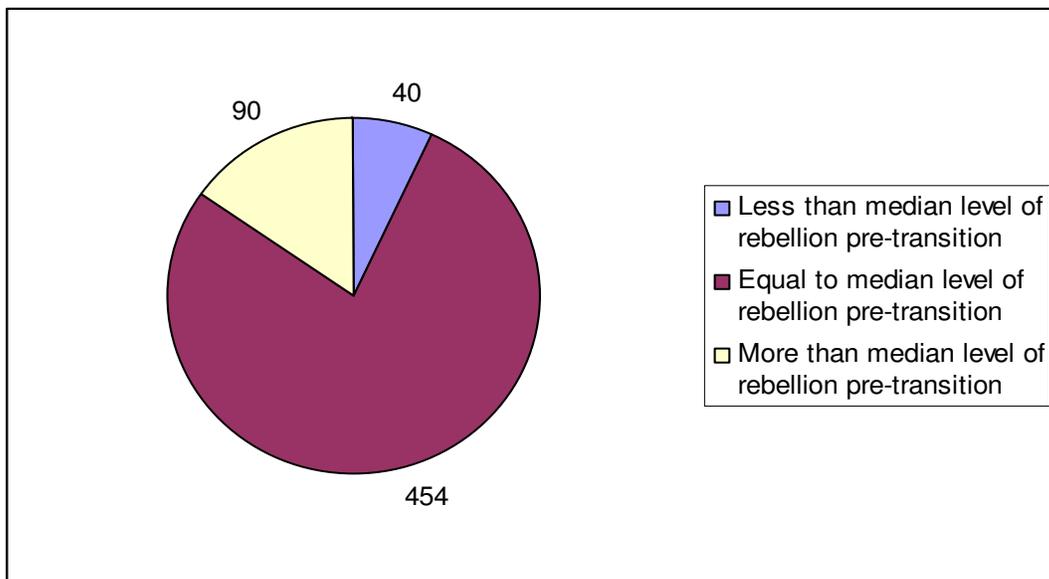
The independent variables of interest in the following analysis measure changes in the level of rebellion employed by an ethnic group after a democratic transition takes place. As mentioned previously, these analyses are conducted as the correlates of changes in the level of ethnic rebellion may be distinct from the correlates of particular levels of rebellion. Furthermore, the use of a lagged dependent variable does not answer the question of interest: namely, what are the correlates of changes from the pre-transition level of rebellion in the post-transition time period. For these purposes, two different measures are used to gauge what variables impact change in levels of rebellion. First, MOREREBMAX measures if a year post-

Figure 5.1 Changes in level of rebellion from pre-transition maximum (group-years)



employed during the five years prior to the transition. Figure 5.1 gives the number of group-years that levels of rebellion increased, decreased or remained unchanged from the pre-transition maximum. Second, MOREREBMED measures if a year post-transition has a greater level of rebellion than the median level of rebellion for the five years prior to transition. Figure 5.2 gives the distribution of this variable.

Figure 5.2 Changes in levels of rebellion from pre-transition median (group-years)



As can be seen from the above distributions, discussion of whether ethnic rebellion decreases or increases following a democratic transition depends heavily on what the measure of comparison is. Decreases from the maximum level of rebellion are much more frequent than are decreases from the median level of rebellion.

Analysis: Ordinal Logit Regression

To test the impact of the independent variable on changes in ethnic rebellion, an ordinal logit regression (clustered on the ethnic group and with a lagged dependent variable) was used. Briefly, ordinal logit models estimate the odds of the dependent

variable falling in a particular category (in this case, increase, decrease, or no change in rebellion) based on the values of the independent variables (Vermunt and Jacques 2004: 376). Results for both dependent variables are reported in Table 5.1.

Table 5.1 Results for Ordinal Logit Regression

Variable Category	Variable	Change from Maximum Odds Ratio (Std error)	Change from Median Odds Ratio (Std error)
Lag of dependent variable	Rebellion (lagged one year)	1.113 (.190)	1.51 ⁺ (.367)
Conflict variables	Economic Discrimination	1.10 (.235)	.736 (.147)
	Political Discrimination	1.433* (.243)	1.250 (.193)
	Repression -- civilians (lagged one year)	.963 (.149)	1.40* (.202)
	Repression -- nonviolent actors (lagged one year)	1.504* (.312)	1.247 (.185)
	Repression --violent actors (lagged one year)	.857 (.097)	.670 ⁺ (.150)
	Lost autonomy	.735 (.239)	.514 (.226)
	Communal conflict	.910 (.169)	1.110 (.183)
Institutional variables	Federal state	1.530 (.942)	1.151 (.615)
	Majority in federal unit	.270 (.228)	2.118 (1.682)
	Ethnofederalism	1.254 (1.554)	.553 (.472)
	More than 25% outside federal unit	17.928* (24.098)	1.619 (1.819)
	Autonomous region	.068 (.127)	.019* (.037)
	More than 25% outside autonomous region	73.107 (213.547)	108.350 (268.652)
	Electoral system	.839 (.395)	.433* (.173)
	Parliamentary system	.690 (.562)	.103** (.089)
	Electoral*Parliamentary	1.075 (.273)	1.653 (.520)
	Presidential system -- constrained executive	.900 (.081)	1.085 (.081)
	Presidential system -- competitive executive recruitment	1.044 (.190)	.651** (.096)

Uncertainty variables	Transition type	.590 (.474)	2.510 (2.045)
	Ethnic involvement in transition	.963 (.314)	.742 (.201)
	State age	1.001 (.006)	.991 (.007)
	Regime age	1.057 (.083)	1.173 ⁺ (.098)
Control Variables	Group organization (lagged)	.969** (.011)	1.002 (.007)
	Post-communist	2.864 (2.337)	.611 (.351)
	Group concentration	.960 (.256)	1.269 (.310)
	GDP/capita	1.000 (.000)	1.000 (.000)
	Change in GDP/capita	.990 (.021)	.981 (.023)
	Polity	1.088 (.112)	1.154 (.143)
	Protest	1.095 (.191)	1.252 (.259)
⁺ $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$ N = 412 (80 clusters)			

In addition, several combinations of variables are tested for joint significance in both regressions. Economic and political discrimination are jointly significant at the .05 level and result in higher odds of rebellion being more than the maximum level from the pre-transition period. Minority control of a federal unit, ethnofederalism, and autonomy are jointly significant at the .05 level and result in higher odds for lower levels of rebellion in the post-transition period than experienced in the pre-transition period. No other combination of variables is significant in determining whether rebellion in the post-transition period is higher or lower than the maximum level in the pre-transition period.

A different set of combinations is significant when change from the median level of rebellion in the pre-transition period (MOREREBMED) is the dependent variable of interest. Repression against ethnic civilians and non-violent political actors are jointly significant at the .05 and are associated with increases in rebellion in the post-transition period. Additionally, two combinations of variables are associated with decreases in the level of rebellion in the post-transition period. First, ethnic control of a federal unit, ethnofederalism and autonomy are marginally significant at the .1 level. Additionally, the presence of constrained executives and competitive executive recruitment are jointly significant at the .001 level.

Interpretation of Results

Interpretation of ordinal logit is less straightforward than OLS regression, as the effect of any independent variable depends on the levels of the other independent variables. Table 5.2 provides the discrete change in predicted probability of ethnic rebellion decreasing, remaining the same or increasing from the pre-transition maximum value for variables that were significant either singly or in linear combination. All non-dichotomous variables were held at their mean values; dichotomous variables were held at 0, except for having a parliamentary system, which was held at 1. Table 5.2 describes results for the developing world, since the indicator for groups in post-Communist countries is held at 0. Results specific to groups in the post-Communist region will follow.

Table 5.2 Changes in Predicted Probabilities for Changes from Pre-Transition Maximum Level of Ethnic Rebellion in Developing Countries

Variable	Decrease	No Change	Increase
Political discrimination			
Min→Max ¹	-.176	.087	.090
-/+sd/2 ²	-.070	.040	.031
Repression-civilians (lagged)			
Min→Max	.017	-.010	-.007
-/+sd/2	.005	-.003	-.002
Repression-nonviolent actors (lagged)			
Min→Max	-.144	-.079	.222
-/+sd/2	-.068	.038	.030
Repression-violent actors (lagged)			
Min→Max	.124	-.090	-.035
-/+sd/2	.034	-.019	-.015
Autonomy			
0→1	.468	-.412	-.057
Control of federal unit			
0→1	.247	-.206	-.041
Ethnofederalism			
0→1	-.022	.011	.011
More than 25% of population outside ethnofederal unit			
0→1	-.132	-.345	.477
Pr (y x)	.141	.803	.056

As shown in the table above, as political discrimination against the ethnic group increases from its minimum to its maximum value, the probability that the group will engage in higher levels of rebellion than the pre-transition maximum increases by .090. As repression against civilian members of the ethnic group's

¹ Signifies movement in variable value from minimum to maximum value

² Signifies change in one standard deviation, centered around variable mean

population goes from the minimum to maximum, the probability that the group will engage in more rebellion than the pre-transition maximum level decreases by .007. Increases in the level of repression against violent political actors decreases the probability of higher levels of rebellion by .335. However, increases from the minimum to the maximum level of repression against non-violent political actors increases the probability that ethnic rebellion will increase from its pre-transition maximum by .222.

Among the institutional indicators, autonomy for the ethnic group results in a decreased probability of higher levels of rebellion by .057. Similarly, ethnofederalism decreases the probability of increases from the pre-transition maximum level of rebellion by .041 while minority control of a federal unit increases that probability by .011 in the developing context. Having more than 25 percent of the ethnic population outside a federal unit under its control compounds that increase, with such groups showing an increase in the probability of higher levels of rebellion of .477.

The above analysis is based on the developing sample only. Table 5.3 provides discrete changes in the predicted probabilities of ethnic rebellion decreasing, staying the same, or increasing with changes in the levels of relevant variables for ethnic groups in post-Communist states.

Table 5.3 Changes in Predicted Probabilities for Changes from Pre-Transition Maximum Level of Ethnic Rebellion in Post-Communist Countries

Variable	Decrease	No Change	Increase
Political discrimination			
Min→Max ³	-.092	-.081	.173
-/+sd/2 ⁴	-.036	-.025	.061
Repression-civilians (lagged)			
Min→Max	.009	.005	-.014
-/+sd/2	.003	.002	-.004
Repression-nonviolent actors (lagged)			
Min→Max	-.070	-.289	.359
-/+sd/2	-.035	-.025	.060
Repression-violent actors (lagged)			
Min→Max	.068	.004	-.071
-/+sd/2	.018	.013	-.030
Autonomy			
0→1	.329	-.209	-.120
Control of federal unit			
0→1	.148	-.063	-.086
Ethnofederalism			
0→1	-.011	-.011	.022
More than 25% of population outside ethnofederal unit			
0→1	-.062	-.542	.604
Pr (y x)	.067	.814	.120

As shown in the table above, as political discrimination against the ethnic group increases from its minimum to its maximum value, the probability that the group will engage in higher levels of rebellion than the pre-transition maximum increases by .173. As repression against civilian members of the ethnic group's population goes from the minimum to maximum, the probability that the group will

³ Signifies movement in variable value from minimum to maximum value

⁴ Signifies change in one standard deviation, centered around variable mean

engage in more rebellion than the pre-transition maximum level decreases by .014. Increases in the level of repression against violent political actors decrease the probability of higher levels of rebellion by .071. However, increases from the minimum to the maximum level of repression against non-violent political actors increase the probability that ethnic rebellion will increase from its pre-transition maximum by .359.

Among the institutional indicators, autonomy for the ethnic group results in a decreased probability of higher levels of rebellion by .120. Similarly, ethnofederalism decreases the probability of increases from the pre-transition maximum level of rebellion by .086 while minority control of a federal unit increases that probability by .022 in the post-Communist context. Having more than 25 percent of the ethnic population outside a federal unit under its control compounds that increase, with such groups showing an increase in the probability of higher levels of rebellion of .604.

The results from the post-Communist region are similar to the results from the developing the region, although some of the effects seem intensified. So, for example, the impact of political discrimination increasing from its minimum to its maximum has nearly double the effect in the post-Communist region as in the developing context.

The above analyses refer to changes in predicted probabilities when the dependent variable is changes from the maximum level of rebellion in the pre-transition period. Table 5.4 provides the discrete change in predicted probability of ethnic rebellion decreasing, remaining the same or increasing from the pre-transition median value for variables that were significant either singly or in combination with

other variables. As before, all non-dichotomous variables were held at their mean values; dichotomous values were held at 0, except for having a parliamentary system, which was held at 1. This interpretation of the results is for the developing world, since the indicator for groups in the post-Communist region is held constant at 0; an additional interpretation based on groups in the post-Communist region will follow.

Table 5.4 Change in Predicted Probabilities for Changes from Pre-Transition Median Level of Ethnic Rebellion in Developing Countries

Variable	Decrease	No Change	Increase
Repression-civilians (lagged)			
Min→Max ⁵	-.008	-.355	.363
-/+sd/2 ⁶	-.004	-.069	.071
Repression-nonviolent actors (lagged)			
Min→Max	-.006	-.266	.272
-/+sd/2	-.002	-.070	.072
Repression-violent actors (lagged)			
Min→Max	.033	.302	-.335
-/+sd/2	.005	.144	-.149
Autonomy			
0→1	.192	.213	-.405
Electoral system			
Min→Max	.031	.655	-.686
-/+sd/2	.009	.238	-.247
Presidential system – competitive executive recruitment			
Min→Max	.154	.711	-.865
-/+sd/2	.009	.250	-.259
Regime age			
Min→Max	-.008	-.309	.317
-/+sd/2	-.002	-.033	.060
Pr (y x)	.008	.618	.374

⁵ Signifies movement in variable value from minimum to maximum value

⁶ Signifies change in one standard deviation, centered around variable mean

As shown in the table above, as the level of repression used against civilian members of the ethnic group increases from its minimum to its maximum value, the probability that the group will engage in higher levels of rebellion than in the pre-transition period increases by .362. Similarly, as repression against non-violent political actors goes from the minimum to maximum, the probability that the group will engage in higher levels of rebellion post-transition increases by .272. However, increases in the level of repression against violent political actors decrease the probability of higher levels of rebellion by .335.

Among the institutional indicators, competitive recruitment of the executive in presidential systems has the largest effect. Going from the least competitive to most competitive systems decreases the probability of higher levels of rebellion in the post-transition period by .865. Autonomy for the ethnic group results in a decreased probability of higher levels of rebellion by .405. The most proportional electoral system lowers the probability of higher levels of rebellion by .686 as compared to the most majoritarian electoral system.

Finally, contrary to expectations, the oldest regime in the sample has a probability of higher levels of rebellion in the post-transition period greater by .317 than the youngest regime in the sample.

The above analysis is based on the developing sample only. Although the indicator for the post-Communist region is not significant in the ordinal logit regression, the same analysis as above was carried out for that region to give a more complete picture. Table 5.5 shows these results.

Table 5.5 Change in Predicted Probabilities for Changes from Pre-Transition Median Level of Ethnic Rebellion in Post-Communist Countries

Variable	Decrease	No Change	Increase
Repression-civilians (lagged)			
Min→Max	-.011	-.346	.357
-/+sd/2	-.005	-.096	.101
Repression-nonviolent actors (lagged)			
Min→Max	-.008	-.256	.264
-/+sd/2	-.003	-.062	.066
Repression-violent actors (lagged)			
Min→Max	.043	.245	-.289
-/+sd/2	.004	.129	-.136
Autonomy			
0→1	.241	.098	-.340
Electoral system			
Min→Max	.042	.624	-.666
-/+sd/2	.012	.214	-.226
Presidential system – competitive executive recruitment			
Min→Max	.196	.642	-.839
-/+sd/2	.013	.225	-.237
Regime age			
Min→Max	-.011	-.291	.303
-/+sd/2	-.003	-.052	.055
Pr (y x)	.011	.682	.307

As can be seen from a comparison of Tables 5.2 and 5.3 and of Tables 5.4 and 5.5, there are not significant differences between the effects of the independent variables of interest on ethnic group rebellion in developing from post-Communist countries. This is a somewhat different result than that in Chapter 4, in which in the sub-sample fixed-effects vector decomposition analyses for ethnic group rebellion revealed several distinctions between the developing and post-Communist countries.

Discussion of Results

Depending on the dependent variable being used, somewhat different hypotheses are supported, although there are several supported by both analyses. Unlike the analyses in Chapter 4, in which discrimination (especially political discrimination) is found to be related consistently to higher levels of ethnic rebellion, political discrimination is only related to increases from the maximum level of pre-transition rebellion in these analyses. Furthermore, for economic discrimination, the relationship (although not significant) is the opposite of what would be expected from relative vulnerability theory. However, when groups face both political *and* economic discrimination, the compounded effect is higher odds of increased levels of rebellion.

The results for repression, which only showed significant relationships to levels of ethnic rebellion in the post-Communist sub-sample in the Chapter 4 analyses, also differ. Repression against non-violent political actors of the ethnic community significantly increases the odds of increased rebellion from the maximum pre-transition level, as expected. Furthermore, repression against group members of the civilian population results in higher odds of increased rebellion from the pre-transition median, with the effect compounded when both the civilian population and non-violent political actors face repression. This is also the expected result based on relative vulnerability theory. However, the opposite effect occurred when considering changes from the pre-transition maximum level of rebellion. Not expected is the impact of repression on violent political actors. Relative vulnerability theory suggests that repression against violent actors would also increase the odds of higher levels of rebellion; however, in the analyses of both changes from pre-transition medians and

from pre-transition maxima, repression against violent actors significantly decreases the odds of increases in rebellion. This combination of effects – with repression against civilians and non-violent actors resulting in higher odds of increased rebellion while repression against violent actors results in lower odds of increased rebellion – is consistent with rationalist theories that predict a displacement effect (see, e.g., Lichbach 1987; Moore 1998; Saxton and Benson 2006).

The impact of lost autonomy on changes in levels of rebellion is negligible and only weakly supported in the analysis of changes from median levels of rebellion in the pre-transition levels. This differs significantly from the analyses in Chapter 4, in which a history of lost autonomy is significantly related to levels of ethnic rebellion. Intuitively, it makes sense that histories of lost autonomy (which pre-date, sometimes by centuries, periods of democratic transition) would be more significant in determining overall levels in ethnic rebellion than in affecting changes in those levels.

Similarly to histories of lost autonomy, past intercommunal conflict – which is a significant factor influencing overall levels of ethnic rebellion – is not a significant factor in determining changes in those levels. This is unexpected, as levels of intercommunal conflict are variable, unlike a group's history of lost autonomy. One possibility for future exploration is to model the impact of changes in intercommunal conflict when analyzing changes in levels of ethnic rebellion.

Neither the form of democratic transition nor minority involvement in (or opposition to) the democratic opposition has significant effects on changes in levels of ethnic rebellion. This is consistent with findings in Chapter 4, in which these variables are also (in general) not significant. Given reciprocal vulnerability theory's

emphasis on the roles of uncertainty and institutional inclusion on group response, these are findings that undermine the theory's generalizability outside the cases in which contexts it was developed. However, it may be that further disaggregation of the ethnic group is necessary to tease out the impacts of involvement in democratization. For a sizable number of cases, there were organizations claiming to represent group interests on both sides of the democratization debate.

Taken jointly, the impact of different forms of decentralization seem to decrease the levels of ethnic rebellion, although the impact is seen more clearly in decreases from the maximum level of rebellion pre-transition than from the median level. These findings are consistent with the results presented in Chapter 4, in which forms of decentralization are also associated with lower overall levels of ethnic rebellion. Taken together, the results support the expectations of reciprocal vulnerability theory, especially when taken in context to the results of having significant portions of the ethnic populations outside the unit under minority control. While not consistently significant, there are indications that having more than 25 percent of the ethnic population outside the minority's territorial unit offset the dampening effects on rebellion decentralization holds.

Proportional electoral rules – as a single indicator – are not a significant factor in predicting changes in levels of ethnic rebellion. However, taken jointly with parliamentary systems, it is a more significant factor, at least when analyzing changes in the median level of rebellion in the pre-transition period.

It was initially hypothesized that the type of governmental system would not impact ethnic rebellion in any consistent or significant manner. However,

parliamentary systems were significantly more likely to see decreases in levels of ethnic rebellion from the pre-transition median than presidential systems. While the significance level is higher for this analysis than for others, the direction of the effect is consistent with the analyses in Chapter 4 and the analysis of changes from the pre-transition maximum.

Despite the finding that parliamentary systems decrease levels of rebellion, presidential systems can be made less susceptible to ethnic rebellion through the imposition of constraints on the executive. Competitive executive recruitment was associated with decreased levels of ethnic rebellion in the analysis of changes from pre-transition medians. This is consistent with the whole-sample findings presented in Chapter 4, in which competitive executive recruitment was associated with lower absolute levels of ethnic rebellion.

Finally, hypotheses regarding the effects of young states and young regimes are, in general, not supported by this analysis. In fact, in the analysis of change from the pre-transition median, older regimes had higher odds of facing increases in ethnic rebellion.

Table 5.6 provides a summary of hypotheses supported from the analysis performed with both dependent variables – changes from the maximum pre-transition levels of rebellion and changes from median pre-transition levels.

Table 5.6 Summary of Hypotheses Supported, by Dependent Variable

Hypothesis		MOREREBMAX	MOREREBMED
H1	Past economic or political discrimination increases levels of rebellion	Supported	Not supported
H2	Past repression increases levels of rebellion	Partially supported	Partially supported
H3	Lost autonomy increases levels of rebellion	Not supported	Weakly supported
H4	Past intercommunal conflict increases levels of rebellion	Not supported	Not supported
H5	Democratization through rupture increases levels of rebellion	Not supported	Not supported
H6	Inclusion in democratic opposition decreases levels of rebellion	Not supported	Not supported
H7a	Federalism decreases rebellion (and group majority in federal unit)	Weakly supported	Not supported
H7b	Ethnofederalism decreases rebellion (jointly significant with other forms of decentralization)	Supported	Weakly supported
H7c	Autonomy decreases rebellion (jointly significant with other forms of decentralization)	Supported	Weakly supported
H8	Proportional electoral rules decrease rebellion	Not supported	Supported
H9	Neither parliamentarism or presidentialism are correlated with rebellion	Supported	Not supported
H10	Parliamentary systems with proportional electoral rules decrease rebellion	Not supported	Not supported
H11	Presidential systems with constrained executives decrease rebellion	Supported	Supported
H12	Young states have higher levels of rebellion	Not supported	Not supported
H13	Young regimes have higher levels of rebellion	Not supported	Not supported

In Chapter 4, additional analyses by sub-sample were performed. However, the number of cases required for ordinal logit is significantly higher than for OLS times-series regression or for fixed-effects vector decomposition. Therefore, analyses

based on sub-sample will not be utilized here. Furthermore, given that the indicator for ethnic groups residing in the post-Communist world is not significant in the initial regression and that there are no significant differences in the effects of the independent variables on changes in probability, it is unlikely that such analyses would yield additional insights.

Conclusion

The above analyses provide very little support for Weingast's theory of reciprocal vulnerability. When the dependent variable is changes from the highest level of rebellion pre-transition, only seven of the 13 hypotheses derived from reciprocal vulnerability theory have *any* support. When the dependent variable is changes from the median level of rebellion pre-transition, only six of 13 hypotheses are supported.

In Weingast's initial formulation of reciprocal vulnerability theory, he models primarily the onset or outbreak of civil violence (both ethnic and regional). The dependent variables used in this chapter deal with all changes in the level of ethnic rebellion, not merely changes from a state of no rebellion to a state of rebellion. In this sense, this chapter represented an extension of reciprocal vulnerability theory. However, the theory does not seem to stretch the limited distance from explaining onset of rebellion to changes in intensity of rebellion. The question remains, however, what theory *does* best explain changes in the levels of ethnic rebellion.

Variables that do reach significance (either singly or in linear combination) in the previous analyses lend support primarily to grievance-based theory, although also

somewhat to collective action explanations of ethnic violence. That the compounded effect of political *and* economic discrimination (which indicates that the combination of forms of discrimination is not additive in its effects but multiplicative) is higher odds of increases in ethnic rebellion supports grievance-based explanations of ethnic rebellion, as do the ameliorative effects of decentralization.

The effects of repression variables, however, are what would be expected from rationalist collective action theories, which would expect a displacement effect. That is, these theories expect that as the costs of nonviolent action increase (through, for example, repression of nonviolent actors), actors will rely increasingly on violent forms of collective action. Likewise, as the costs of violent action increase (such as through repression of violent actors), actors will rely increasingly on nonviolent forms of collective action.

Given the above findings, it is evident that much work in both theoretical refinement and empirical testing is required before firm conclusions can be drawn regarding the mechanisms driving changes in levels of ethnic rebellion. However, from these initial results, it appears that a combination of grievance and relative costs of specific strategies is instrumental in determining the dynamics of ethnic rebellion, an idea that will be explored further in the concluding chapter.

Chapter 6: Conclusion

Theoretical Review

The theory of reciprocal vulnerability postulates that outbreaks of civil conflict, including ethnic rebellion, are a result of preemptive uses of violence, conditioned on perceptions of vulnerability and the costs of being victimized (Weingast 1998). This theory argues that when the costs of being victimized and the perceived probability of being victimized reach a critical point – the point at which the expected costs of being victimized exceed the expected costs of fighting – then ethnic groups will choose preemptive violence.

Reciprocal vulnerability theory was developed in the context of two large-scale civil conflicts: the American civil war (a regional conflict) and the wars of the former Yugoslavia (ethnic and regional conflicts). This study has sought to test and to expand the theory in several ways, although it has also applied it in a more limited manner in several ways as well. This study is a more limited test of the theory in that it is confined to ethnic conflict and also to countries undergoing democratization. However, it also gives more generalizable tests of the theory by expanding the geographic domain to include the developing world. Furthermore, it is a large-N test of the theory that includes cases of violence but also cases where violence has been non-existent. Furthermore, cases in which violence did occur were not limited to instances of large-scale violence or civil war. Instead, the instances in which violence did occur include variation from very low levels of violence to civil war. While the

results of the preceding analysis may not be generalizable to cases beyond those included, the cases do represent two large and important subsets in the global environment.

Four sets of interrelated factors – conflictual histories, institutions, form of democratization and uncertainty – were hypothesized to impact perceptions of vulnerability, perceived costs of being victimized and/or the costs of violence. Conflictual histories – operationalized in terms of past discrimination, histories of lost autonomy, past repression, and communal conflict – were hypothesized to increase ethnic rebellion. Institutional forms of decentralization – in the forms of federalism, ethnofederalism or autonomy – were hypothesized to decrease levels of ethnic rebellion. Similarly, institutions that are more likely to provide access to the central government and protect the minority from central government – such as electoral voting systems and constrained executives with competitive recruitment – were also hypothesized to decrease levels of ethnic rebellion. Dynamics of democratic transition that increase uncertainty – operationalized as democratic rupture and ethnic group isolation from or opposition to democratization – were hypothesized to increase levels of ethnic rebellion. Finally, other factors that increase uncertainty – such as young regimes or young states – were also hypothesized to increase ethnic rebellion. The next section summarizes key findings for each of these four sets of factors and discusses them relative to reciprocal vulnerability theory and its rivals. A discussion of implications for policymaking that emerge from the analyses of this study follows the section on key findings. Finally, future research directions are outlined.

Summary Findings

Conflictual Histories

Political and economic discrimination – when considered together – consistently are associated with higher levels of ethnic rebellion, although they are not always significant when considered alone. This result is supportive of both reciprocal vulnerability theory and of grievance-based theories of ethnic conflict. Furthermore, the fact that economic discrimination, when combined with political discrimination, does not seem to hinder capacity for group mobilization for violence is a finding that deserves future exploration. Groups facing economic discrimination should find it more difficult to mobilize because of reduced material resources. However, this is not supported by the analyses in this study. The question then becomes how the group is garnering sufficient material resources to rebel. Two distinct possibilities suggest themselves. First is the possibility that group members engage in criminal activities to offset economic disadvantage. The second is that the group is able to solicit external support. The second possibility would fit the pattern of joint political and economic discrimination increasing rebellion particularly well, as groups that face political discrimination may be better able to argue their cause to external actors.

Repression – whether against the civilian population, nonviolent political actors or violent actors – does not seem to be associated with absolute levels of rebellion. However, there is an association between repression and changes in the level of rebellion. Repression indiscriminately applied (i.e., repression of nonviolent,

including civilian, actors) appears counterproductive, while repression targeted at violent actors makes it more likely that rebellion will decrease. This finding is not consistent with reciprocal vulnerability. However, it is consistent with collective action theories of mobilization (see Lichbach 1987; Moore 1998; Saxton and Benson 2006).

A history of lost autonomy is significantly associated with higher levels of ethnic conflict; however, this effect is much weaker in the post-Communist setting. This remains a conundrum worthy of further exploration. Ethnic groups in post-Communist settings have, on average, higher levels of the lost autonomy indicator than groups in the developing world. Furthermore, the conventional wisdom suggests that majority ethnonationalist sentiment – which when combined with a history of lost autonomy may be expected to trigger defensive nationalism on the part of the minority – is more prevalent in the post-Communist region than in the developing world. However, the impact of lost autonomy is much stronger in the developing than in the post-Communist world. One possible explanation is the more widespread use of decentralized forms of governance in post-Communist countries than in developing countries as tempering the negative effects of histories of lost autonomy.

Finally, the presence of intercommunal conflict is significantly associated with higher absolute levels of ethnic rebellion, although no relationship with changes in levels of ethnic rebellion emerges. This is consistent with theories of reciprocal vulnerability. Furthermore, it is noteworthy that ethnic groups can sustain conflict with both the state and with other communal groups simultaneously. This result justifies further work in disaggregating the dynamics of communal conflict – who is

victim and victimizer, what is the relationship between ethnic antagonists and the state – in order to better specify the causal mechanisms driving this relationship.

Institutions

Forms of administrative decentralization are consistently associated with lower levels of ethnic rebellion. However, the sub-sample analyses reveal that different forms of decentralization are effective in the post-Communist than in the developing context. In the post-Communist context, autonomy seems most effective in alleviating ethnic rebellion whereas in the developing context, forms of federalism are more effective. Part of this discrepancy may be due to Communism delegitimizing federalism as a means of minority empowerment (see Bunce 2004). This anomaly within the post-Communist world seems to be a result of a specific historical experience, not necessarily generalizable to other contexts. The findings are (in general) consistent with the expectation of reciprocal vulnerability theory, but they are also consistent with grievance-based theories. The findings (in general) are not consistent with resource mobilization theories that expect administrative decentralization to fuel rebellion by providing a base (territorial, financial, and population) for ethnic entrepreneurs.

It was hypothesized that more proportional electoral systems (especially when combined with parliamentary systems) would decrease ethnic rebellion. This expectation was only partially met. In the developing sample, parliamentary systems combined with more proportional electoral rules are associated with higher levels of rebellion, a finding which initially seems to undermine reciprocal vulnerability theory. However, if highly proportional parliamentary systems result in ethnic

extremists from opposing ethnic groups (including the majority group) in gaining power, then that could increase perceived vulnerability on the part of the ethnic group being studied. If this mechanism is, in fact, present, then the finding would still be consistent with reciprocal vulnerability theory. However, further investigation is needed to see if this is in fact the story driving the statistics. In the analysis of changes from the median pre-transition level of rebellion, more proportional electoral systems and parliamentary systems, considered alone, do decrease the odds of increases in rebellion. The effect of highly proportional parliamentary systems, though not significant, is still to make increases in ethnic rebellion more likely.

Presidential systems are less prone to ethnic rebellion when executive recruitment is competitive. This is a finding that is consistent – and consistently significant – across modes of analysis. Since executive recruitment in democratic settings tends to be through majoritarian elections, one explanation is that majoritarianism may help promote moderation. If the median voter preference is likely to be more moderate, then the need to garner a majority of votes may in turn lead to a moderation of position by candidates for the spot of top executive in a presidential system. This finding is consistent with reciprocal vulnerability theory. Constrained presidential systems, however, appear more prone to ethnic rebellion. One possible explanation for this finding is that the source of constraints on an executive may be viewed as inimical to minority interests. Further research, however, is needed to test this hypothesis.

Dynamics of Democratization

Findings regarding the effects of type of democratic transition and ethnic group involvement in democratization are mixed. In developing countries, democratic ruptures are associated with higher levels of ethnic rebellion, as predicted. However, in the post-Communist setting, ruptures are associated with lower levels of ethnic rebellion. The first finding is consistent with reciprocal vulnerability theory while the second is not. Further investigation – perhaps through case studies – is needed to explain the mechanisms driving these differences.

Ethnic group involvement in or opposition to democratization does not reach statistical significance in analyses in preceding chapters. This may be a situation that requires further disaggregation to the level of ethnically based organizations in order to tease out the dynamics as many ethnic groups have segments both opposed to and in favor of democratization efforts.

Uncertainty

Hypotheses regarding the role of uncertainty received the weakest support in preceding analyses. Neither younger regimes nor younger states were more prone to ethnic rebellion. In fact, in the post-Communist sub-sample, it is older states that experience higher levels of ethnic rebellion. Contrary to the expectations of reciprocal vulnerability theory, ethnic groups seem willing to give new states and new regimes the benefit of the doubt. It may be that more precise operationalizations of uncertainty are needed to find significant effects. For example, in the case of new regimes, one could examine how turnover in certain key positions -- for example, leaders of security forces -- affects propensity to rebel. One could also examine reputation

effects, as most leaders of either new regimes or even new states have political histories prior to taking leadership of the country.

Policy Implications

Several policy implications arise from the preceding analysis. Before discussing them, it should be noted that this analysis looks at relatively short-term effects – the first five years following a democratic transition. Further analysis comparing short-term effects to long-term effects is certainly called for before wholeheartedly endorsing some policies over others. That being said, the above analysis does give considerable insight useful to the policy realm.

First is the double-edged nature of state repression. Substitution was the main effect supported by the analyses in this study. That is, when states repress nonviolent actors, rebellion increases; however, repression of violent actors is more likely to result in a decrease in levels of ethnic rebellion. Thus, states would be well-advised to target their repression as narrowly as possible on actors engaged in violence against the state or other citizens. This may be a suggestion that is more easily said than implemented, as violent actors frequently embed themselves within civilian populations in order to shield themselves from repression or even to draw the state into the repression of civilians and thus increase the ability of the insurgents to recruit from that population. Nevertheless, the findings of this study suggest that the government that lashes out at a civilian population or political actors engaged in nonviolent activities will likely reap more violence instead of less.

The second policy implication deals with the benefits of decentralization in ameliorating ethnic rebellion. Despite concerns raised by the experience of post-Communist states, in the preceding analyses forms of administrative decentralization are more consistently associated with decreases in the level of ethnic rebellion.

Third, is the relationship between parliamentarism and proportional electoral systems. There is evidence to suggest that either a parliamentary system or highly proportional electoral rules ameliorate ethnic conflict. However, the combined effects appear more deleterious. The analyses contained in this study suggest that parliamentary systems may be less prone to ethnic rebellion if they are less proportional. However, further research is still called for to determine *how* proportional is *too* proportional.

Other findings provide fertile ground to search for potential policy applications. One will be highlighted here: the impact of histories of lost autonomy. Policymakers are often seen as constrained by historical legacies that they cannot change. This is certainly the case. However, in the above analyses, it becomes apparent that historical legacies are not insurmountable. Histories of lost autonomy are uniformly associated with higher levels of ethnic rebellion. However, in the post-Communist setting, those legacies are no longer *significantly* associated with higher levels of rebellion. What is less clear – and the reason why this remains fertile ground to till for policy implications – is why these histories are no longer having the impact in the post-Communist setting as they do in the developing context.

Future Research Directions

Future research directions for this project take four different trajectories, beyond those avenues suggested in the summary of findings. First is the expansion of the temporal period of data collection. This has two aspects: the temporal expansion of democratization, which would result in a larger sample of cases being included; and coding for more years post-transition for each case. Currently, data for only five years post-transition have been collected. Expanding that data collection to 10 years may allow for other patterns to emerge.

The second trajectory for further research is to drill down an additional level of analysis to look at ethnically based organizations, in addition to ethnic groups as a whole. This would, in particular, allow for further refinement of analyses on the impact of governmental inclusion on levels of ethnic rebellion, as in many cases some ethnic organizations are included while others are excluded. In the aggregate analysis, this dynamic may be clouding results that disaggregated analysis will make clearer.

The third trajectory for further research is to expand the testing of cases to both established democracies and to authoritarian regimes. This will require more generic hypotheses (as several of the hypotheses tested in this work are specific to the democratizing context). However, these analyses could easily be extended to cases of liberalization that fall short of the democratization criteria used here and to cases of “reverse democratization,” or backsliding into authoritarianism.

The final trajectory to be discussed here is the addition of a qualitative component to the research program. Comparative case studies of both conforming and deviant cases are important components for the purposes of confirming that

hypothesized causal mechanisms are in fact occurring and for identifying additional causal mechanisms that can further theory refinement and explication.

Final Words

Like many studies, the analyses in the preceding chapters have raised as many new questions as they have provided answers to the questions motivating the study. However, some conclusions may be drawn. First, although some findings support the expectations of reciprocal vulnerability theory, the overall picture is to undermine claims to its generalizability. Most of the expectations that found support are also consistent with grievance-based theories of ethnic rebellion. Furthermore, several hypotheses derived from the theory not only failed to find support but were actually refuted in the analyses.

Second, based on the sub-sample analyses in Chapter 4, we can conclude that the post-Communist experience is in some ways unique and not comparable to experiences in other parts of the world. The historical legacy of Communism seems to be salient even when democratization lags by a decade behind the fall of Communism.

Third, results strongly support grievance-based theories of ethnic rebellion with some results also providing more limited support to either resource mobilization or collective action theories. In particular, findings regarding the ameliorative effects of decentralization support grievance-based theory. Findings regarding the effects of repression support collective action theory. However, to further tease out this support,

additional research – with hypotheses and data derived from these theoretical viewpoints – is needed.

The challenges of ethnic conflict in general and ethnically based rebellions in particular are likely to stay with us for the foreseeable future, despite positive signs of more ethnic rebellions reaching negotiated settlements and fewer new ones erupting. Thus, the need for empirically based and theoretically informed research remains great. This study has attempted to contribute to the theoretical debates while also keeping an eye to issues of policymaking. Furthermore, it has opened new avenues for research that also promise to provide additional insights, both in terms of theoretical refinement and of policy innovation. These avenues will be pursued in future work, although with the understanding that the complexities of human behavior make definitive answers elusive.

Appendix A: Cases

Post-Communist Cases

Country	Transition Year	Ethnic Groups
Hungary	1990	Roma
Czech Republic	1993	Slovaks
		Roma
Slovakia	1993	Hungarians
		Roma
Macedonia	1991	Albanians
		Roma
		Serbs
Croatia	2000	Roma
		Serbs
Serbia	2000	Kosovar Albanians
		Croats
		Hungarians
		Sandzak Muslims
		Roma
Bulgaria	1990	Roma
		Turks
Moldova	1993	Gaguaz
		Slavs
Romania	1995	Magyars/Hungarians
		Roma
Russia	1992	Avars
		Buryats
		Chechen
		Ingush
		Lezgins
		Karachay
		Kumyks
		Roma
		Tatars
		Tuvinians
		Yakut
Estonia	1991	Russians
Latvia	1991	Russians

Lithuania	1991	Russians
		Poles
Ukraine	1991	Crimean Russians
		Crimean Tatars
		Russians
Belarus	1991	Russians
		Poles

Developing Cases

Country	Transition Year	Ethnic Group
Dominican Republic	1996	Haitian Blacks
Mexico	1997	Mayan
	1997	Zapotecs
	1997	Other Indigenous
Guatemala	1996	Indigenous
Honduras	1982	Indigenous
		Black Karibs
El Salvador	1984	Indigenous
Nicaragua	1990	Indigenous
Panama	1989	Blacks
		Chinese
		Indigenous
Guyana	1992	Afro-Guyanese
		Indo-Guyanese
Bolivia	1982	Highland indigenous
		Lowland indigenous
Paraguay	1992	Indigenous
Chile	1989	Indigenous
Argentina	1983	Jews
		Indigenous
Mali	1992	Tuareg
Senegal	2000	Diolas in Casamance
Niger	1992	Tuareg
Zambia	1991	Bembe
		Lozi

South Africa	1994	Xhosa
		Zulus
		Europeans
		Coloreds
		Asians
Namibia	1990	San
		Basters
		Europeans
		Caprivians
Madagascar	1992	Merina
Sudan	1986	Nuba
		Southerners
		Darfur Black Muslims
Taiwan	1992	Taiwanese
		Aboriginals
		Mainland Chinese
Korea South	1988	Honamese
Pakistan	1988	Sindhis
		Pashtuns
		Mohajirs
		Baluch
		Ahmadis
		Hindus
Bangladesh	1991	Biharis
		Chittagong Hill Tribes
		Hindus
Philippines	1987	Moros
		Igorots
Indonesia	1999	Papuans
		Acehnese
		Chinese
		East Timorese
Fiji	1999	Fijians
		East Indians

Appendix B: Variable Descriptions and Coding Rules

Dependent Variables

REB

Level of ethnic rebellion

Taken from the Minorities at Risk project dataset (2005)

-99	Missing/no information
0	None recorded
1	Political banditry/terrorism (fewer than 6 events)
2	Campaigns of terrorism (6 or more events)
3	Local rebellion
4	Small-scale guerrilla warfare, characterized by: <ul style="list-style-type: none">· fewer than 1,000 armed fighters· fewer than 6 armed attacks· attacks in small area occupied by group
5	Medium-scale guerrilla warfare, characterized by one or two characteristics of small-scale and one or two characteristics of large-scale guerrilla warfare
6	Large-scale guerrilla warfare, characterized by: <ul style="list-style-type: none">· more than 1,000 armed fighters· more than 6 armed attacks· attacks in large area occupied by group
7	Civil war, characterized by: <ul style="list-style-type: none">· all the characteristics of large-scale guerrilla warfare, plus· ethnic group controls base area from which in can exclude land forces of the state

MOREREBMAX

Change in rebellion from highest level in five years prior to democratization

Coded independently, based on rebellion score

-99	Missing/no information
-1	Decrease
0	No change
1	Increase

MOREREBMED	Change in rebellion from median level in five years prior to democratization
	Coded independently, based on rebellion score
-99	Missing/no information
-1	Decrease
0	No change
1	Increase

Independent Variables

Conflictual Experiences

POLDIS	Political discrimination
	Taken from the Minorities at Risk dataset (2005)
-99	Missing/no information
0	No discrimination
1	Historical neglect/remedial policies
2	Historical neglect/neutral policies
3	Societal discrimination/neutral policies or remedial policies ineffective
4	Public policy discrimination

ECDIS	Economic discrimination
	Taken from the Minorities at Risk dataset (2005)
-99	Missing/no information
0	No discrimination
1	Historical neglect/remedial policies
2	Historical neglect/neutral policies
3	Societal discrimination/neutral policies or remedial policies ineffective
4	Public policy discrimination

REPGENCIV	Repression against ethnic civilians
	Coded independently
-99	Missing/no information
0	None recorded
1	Surveillance
2	Harassment
3	Nonviolent coercion
4	Violent coercion, no lethality
5	Violent coercion, lethality

REPVIOL**Repression against ethnic members engaged in nonviolent collective action**

Coded independently

-99	Missing/no information
0	None recorded
1	Surveillance
2	Harassment
3	Nonviolent coercion
4	Violent coercion, no lethality
5	Violent coercion, lethality

REPVIOL**Repression against ethnic members engaged in violent collective action**

Coded independently

-99	Missing/no information
0	None recorded
1	Surveillance
2	Harassment
3	Nonviolent coercion
4	Violent coercion, no lethality
5	Violent coercion, lethality

AUTLOST**History of lost autonomy**

Taken from David Quinn's revision of Minorities at Risk dataset (2005)

An indexed variable taking the following form:

 $(MAGN+PRSTAT-1)/YEARWT$ *YEARWT**Year autonomy lost or control transfer*

-99	Missing/no information
0	No history of autonomy or transfer
1	<25 years ago
2	25-49 years ago
3	50-74 years ago
4	75-99 years ago
5	>100 years ago

<i>MAGN</i>	<i>Magnitude of change</i>
-99	Missing/no information
0	No history of autonomy or transfer
1	Transfer centralized authority only
2	Loss of short-term (<10 years) autonomy
3	Loss of long-term autonomy

<i>PRSTAT</i>	<i>Group status prior to change</i>
-99	Missing/no information
0	No history of autonomy or transfer
1	Autonomous but acephalous
2	Part of larger segment of group OR province in another state or territory
3	Traditional centralized authority OR autonomous region or province OR autonomous people under colonial rule
4	State or republic

COMCON **Intercommunal conflict (highest level with any non-state group in year being coded)**

Taken from Minorities at Risk dataset (2005)

-99	Missing/no information
0	None recorded
1	Individual acts of harassment, no fatalities
2	Political agitation, campaigns urging authorities to impose restrictions on group
3	Sporadic violent attacks by gangs or other small groups, some fatalities
4	Anti-group demonstrations, rallies, marches
5	Communal rioting, armed attacks
6	Communal warfare

Nature of Democratic Transition

TRANSITION

Nature of transition

Coded independently

-99	Missing/no information
0	Negotiated transition
1	Rupture

ETHNICTRANS**Ethnic group involvement in transition**

Coded independently

- 99 Missing/no information
- 1 Ethnic members advocate against democratization
- 0 Ethnic members either not involved in pro- or anti-democracy forces OR involved in both pro- and anti-democracy forces
- 1 Ethnic group members involved in pro-democracy movement
- 2 Ethnically based organizations involved in pro-democracy forces
- 3 Ethnically based organizations lead pro-democracy forces

Political Institutions**FEDERAL****Is state federal?**

Taken from Saideman et al. (2002)

- 99 Missing/no information
- 0 No
- 1 Yes

FEDCONTROL**Is ethnic group plurality/majority population of federal unit?**

Coded independently

- 99 Missing/no information
- 0 No
- 1 Yes

ETHFED**Is ethnic group the titular group of a federal unit?**

Collected independently

- 99 Missing/no information
- 0 No
- 1 Yes

ETHFEDOUTPOP **Does more than 25% of the ethnic group live outside the titular unit?**
Collected independently
-99 Missing/no information
0 No
1 Yes

AUTONOMY **Does group have territorial autonomy?**
Collected independently
-99 Missing/no information
0 No
1 Yes

AUTONOUTPOP **Does more than 25% of the ethnic group live outside the autonomous region?**
Collected independently
-99 Missing/no information
0 No
1 Yes

ELECTORAL **Electoral system**
Taken from Saideman et al. (2002)
-99 Missing/no information
1 Majoritarian
2 Plurality
3 Semi-proportional
4 Proportional

PARLIAMENTARY **Is government parliamentary?**
Taken from Saideman et al. (2002)
-99 Missing/no information
0 No
1 Yes

PARLELECT **PARLIAMENTARY * ELECTORAL**

PRESIDENTIAL

Is government presidential?

Taken from Saideman et al. (2002)

- 99 Missing/no information
- 0 No
- 1 Yes

XCONST

Executive Constraints

Taken from Polity IV (2002)

- 99 Missing/no information
- 1 Unlimited authority
- 2 Intermediate category
- 3 Slight to moderate limitation on executive authority
- 4 Intermediate category
- 5 Substantial limitations on executive authority
- 6 Intermediate category
- 7 Executive parity or subordination

XRCOMP

Competitiveness of Executive Recruitment

Taken from Polity IV (2002)

- 99 Missing/no information
- 1 Selection
- 2 Dual/transitional
- 3 Election

PRESCONST

PRESIDENTIAL * XCONST

PRESCOMP

PRESIDENTIAL * XRCOMP

Uncertainty

STATEAGE

Number of years since state gained independence

Collected independently

REGIMEAGE

Number of years since last change in regime

Taken from Polity IV (2002)

Control Variables

GDPCAP	GDP per capita Taken from World Bank (2006)
GDPCHANGE	Change in GDP per capita Taken from World Bank (2006)
GOJPA	Group organization for joint political action Taken from Minorities at Risk (2005) -99 Missing/no information 0 No organizations 1 Represented by umbrella organizations only 2 Represented by conventional political organizations only 3 Represented primarily by conventional political organizations but also by less important militant organization(s) 4 Represented primarily by militant political organizations but also by less important conventional organizations 5 Represented by militant political organizations only
NUMSEGX	Number of kindred segments in adjoining countries Taken from Minorities at Risk (2005)
CULDIFXX	Cultural differentials index Taken from Minorities at Risk (2005) -99 Missing/no information 0 1 2 3 4

Appendix C: Time-Rebellion Plots for Subsamples

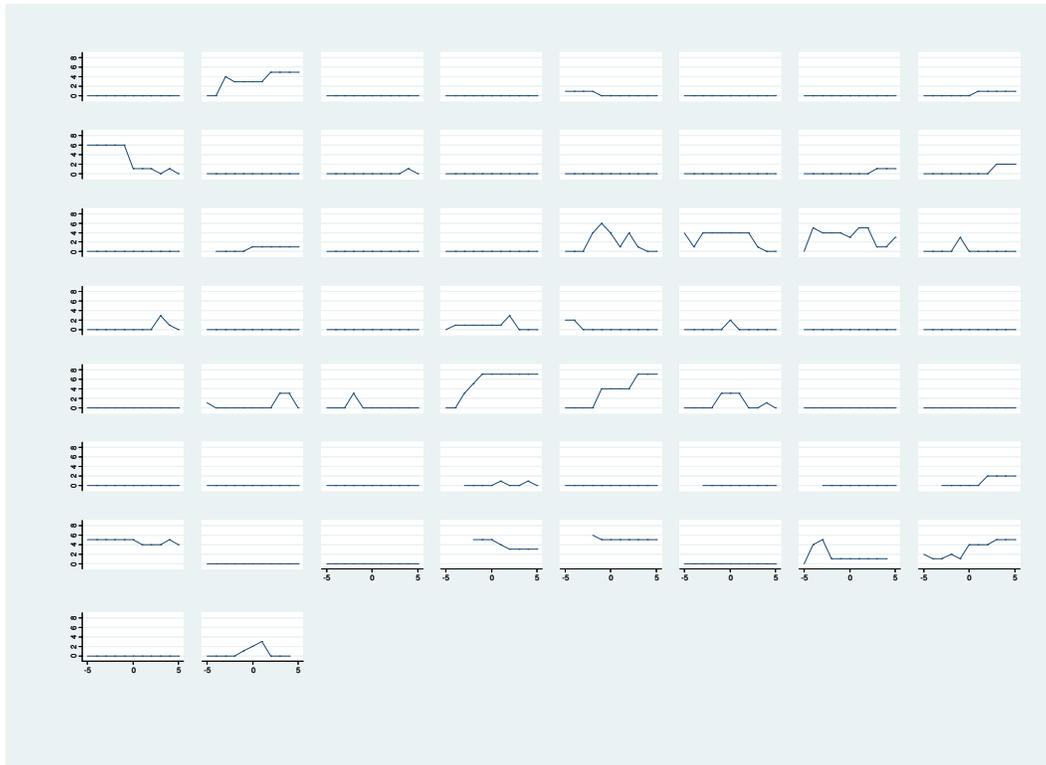


Figure C.1 Developing Sample

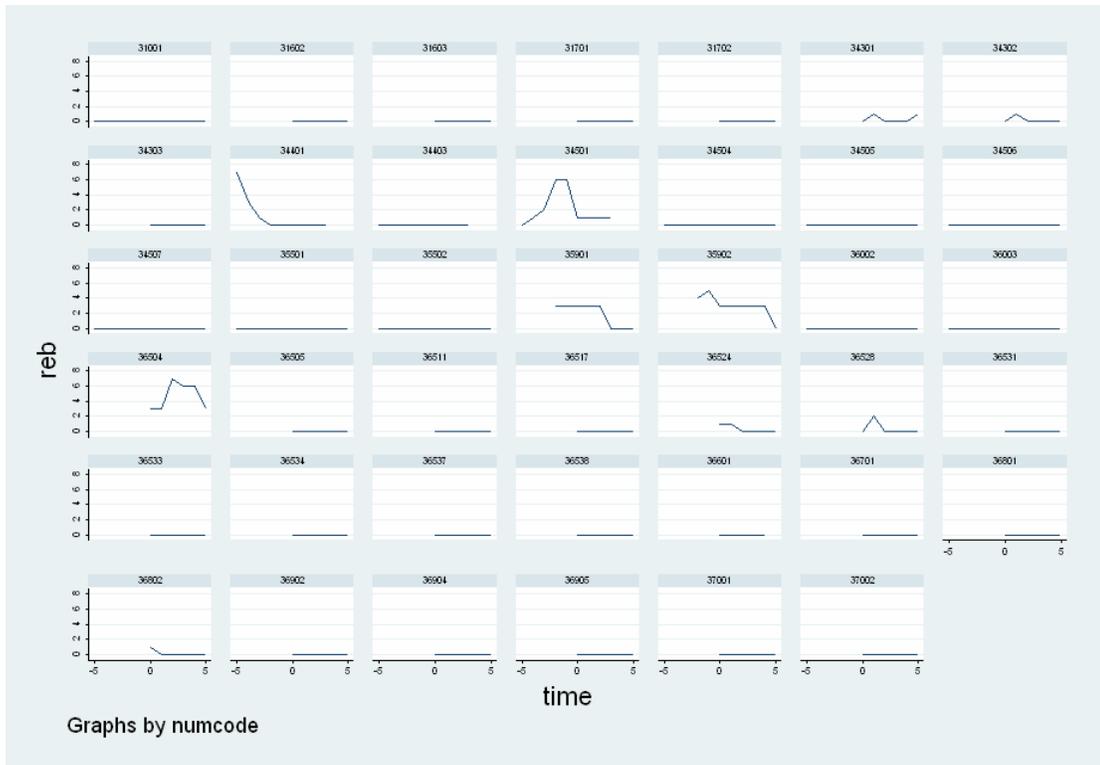


Figure C.1 Post-Communist Sample

Appendix D: Fixed Effect Vector Decomposition, Full Sample

Table D.1 Baseline Model with Fixed Effects

Variable	Coefficient (<i>Std. Error</i>)
Rebellion – lagged one year	.512*** (.072)
Economic discrimination	.076 (.105)
Political discrimination	.063 (.077)
Repression – civilian actors, lagged one year	.011 (.027)
Repression – nonviolent political actors, lagged one year	.031 (.025)
Repression – violent political actors, lagged one year	-.045 (.037)
Communal conflict	-.014 (.030)
State age	.006 (.019)
Regime age	-.003 (.003)
GDP/capita	.000** (.000)
Change in GDP/capita	-.015** (.006)
Polity	-.003 (.010)
Protest	.063 (.040)

Table D.2 Regression of Static Variables on Fixed Effects

Variable	Coefficient (Std. Error)
Lost autonomy	-.021 (.016)
Federal	.020 (.021)
Majority in federal unit	.029** (.011)
Ethnofederal	-.081*** (.015)
More than 25% outside ethnofederal unit	-.024 (.015)
Autonomy	.059 (.075)
More than 25% outside autonomous unit	.157* (.063)
Electoral	-.017 (.014)
Parliamentary	.029 (.033)
Parliamentary * Electoral	.023*** (.007)
Presidential system -- constrained executive	-.019*** (.005)
Presidential system -- competitive executive recruitment	.034*** (.010)
Transition type	-.152*** (.030)
Ethnic group involvement in transition	.028** (.011)
Post-Communist	.010 (.073)
Group concentration	.009 (.016)
Cultural differentials	.023*** (.007)
Constant	.845*** (.078)

Appendix E: Fixed-Effect Vector Decomposition, by Sub-Sample

Table E.1 Baseline Model with Fixed Effects

Variable	Post-Communist Coefficient (<i>Std. Error</i>)	Developing Coefficient (<i>Std. Error</i>)
Rebellion – lagged one year	.368** (.130)	.549*** (.085)
Economic discrimination	.034 (.164)	.117 (.141)
Political discrimination	.205 (.127)	-.019 (.101)
Repression – civilian actors, lagged one year	.012 (.023)	.007 (.041)
Repression – nonviolent political actors, lagged one year	-.021 (.062)	.041 (.026)
Repression – violent political actors, lagged one year	.090 (.080)	-.082 (.042)
Communal conflict	-.017 (.055)	-.014 (.035)
State age	.001 (.030)	.009 (.024)
Regime age	-.009 (.008)	-.001 (.003)
GDP/capita	.000 (.000)	.000 (.000)
Change in GDP/capita	-.015* (.008)	-.013 (.014)
Polity	.001 (.016)	-.006 (.012)
Protest	.007 (.042)	.091 (.056)

Table E.2 Regression of Static Variables on Fixed Effects

Variable	Post-Communist Coefficient (<i>Std. Error</i>)	Developing Coefficient (<i>Std. Error</i>)
Lost autonomy	.094** (.033)	-.030 (.022)
Federal	-.574** (.210)	.163*** (.036)
Majority in federal unit	-.089 (.056)	.095*** (.023)
Ethnofederal	-.920 ⁺ (.052)	-.088*** (.024)
More than 25% outside ethnofederal unit	.112** (.038)	-.046* (.021)
Autonomy	.265 (.168)	.003 (.062)
More than 25% outside autonomous unit	-- ¹	.125* (.053)
Electoral	.525** (.199)	-.055 (.010)
Parliamentary	.654 (.674)	.140** (.051)
Parliamentary * Electoral	-.383* (.156)	-.032 ⁺ (.018)
Presidential system -- constrained executive	-.160 ⁺ (.085)	-.024*** (.004)
Presidential system -- competitive executive recruitment	.163 (.186)	.056*** (.014)
Transition type	-.154 (.108)	.035 (.032)
Ethnic group involvement in transition	.009 (.039)	.018*** (.002)
Cultural differentials	.072*** (.017)	.028*** (.009)

¹ Dropped in order to achieve convergence

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