Organizational legacies of violence: Conditions favoring insurgency onset in Colombia, 1964–1984

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Abstract

Why do insurgencies erupt in some places and not in others? This article exploits an original violent event database of 274,428 municipality-month observations in Colombia to determine the conditions favoring organized violence at the subnational level. The data cast doubt on the conventional correlates of war: poverty, rough terrain, lootable natural resources, and large, sparsely distributed populations. The evidence suggests that rebellions begin not in localities that afford sanctuaries, impoverished recruits, and abundant finances, but instead in regions providing receptacles of collective action: the organizational legacies of war. Specifically, the data indicate that regions affected by past mobilization are six times more likely to experience rebellion than those without a tradition of armed organized action. The significant correlation between prior and future mobilization is robust across different measurements of the concepts, levels of aggregations of the data, units of analysis, and specifications of the model. These include rare events and spatial lag analyses. These results highlight the need for micro conflict data, theory disentangling the causes of war onset from those of war recurrence, and a reorientation away from physical geography and back to the human and social geography that determines if rebellion is organizationally feasible. The findings suggest new avenues of research on the post-war trajectories of armed organizations, the causes of repeated war, and the micro-foundations of rebellion.

Keywords

civil war, Colombia, disaggregation, geography, onset, violence

Introduction

Why do insurgencies erupt in some places and not in others? The traditional view of civil war onset argues that where grievances are high, organized violence is likely. Set against this view, Fearon & Laitin (2003) and Collier, Hoeffler & Rohner (2009) argue that motivations for rebellion exist everywhere and yet insurgency breaks out only in some places. They conclude that 'what is critical is not whether people actually have reason to commit violence, but what enables them to carry it out in particular circumstances ... feasibility is a rare phenomenon'.[1] Combined, these circumstances confer rebels access to recruits, a sanctuary, and material and financial resources: the requisites of rebel viability. The circumstances include poverty, rough terrain, weak states, lootable natural resources, and large, sparsely distributed populations. These have become the conventional correlates of civil war onset (Blattman & Miguel, 2010; Hegre & Sambanis, 2006).

These pieces along with scores of empirical studies of civil war primarily analyze cross-national variation.[2] They aggregate to the national level political, economic, social, and physical variables, which generally vary

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[1] Sherman (2001: 28) summarizes the remarks of Paul Collier.

[2] See, for example, Gleditsch et al. (2002), Humphreys (2005), Lujala, Rød & Thieme (2007), Walter (2004).

substantially at the subnational level. Additionally, especially at their outset, armed mobilization rarely spans the state's entire territory; rather, it concentrates in very specific geographic locations. Thus, there arises an ecological inference problem: catalysts of violence are captured at the country level while the violence and hypothesized logic are highly localized. It follows that there is a mismatch; to correctly identify the correlates of insurgency, we must look at the conditions in the areas where the insurgencies began. If the rebels were active only in the flat plains, the country's rough topography may have little to do with facilitating mobilization. If insurgency began only in resource-poor regions, the existence of gems and drugs may be unrelated to civil war onset. Geographically disaggregated data are required on both the incidence of insurgency and the factors predicted to cause it.

This article contributes such a subnational analysis of conflict. Colombia, as one of the 'feasibility' theories' stated prototypes, offers a valuable case. According to these theories, the insurgencies should have arisen in the regions where the feasibility conditions were strongest. Instead, the micro data cast doubt on the conventional wisdom concerning the causes of civil war. Specifically, one would expect mountainous areas, inaccessible by road and adjoining an international border, to be most challenging to counterinsurgency and thus prone to armed mobilization. One would further anticipate regions of resource extraction, susceptible to taxation and extortion, to witness higher levels of insurgency than regions without such opportunities for rebel financing. Finally, one would expect impoverished areas to be at higher risk of rebellion. None of these expectations is borne out in the data. The only cross-national correlate of war that survives at the subnational level is previous civil conflict. This, however, is the most underexplored and under-theorized of the civil war risk factors, usually employed in regressions only as a control variable to address problems of temporal dependence rather than as an object of inquiry. Exploiting rich, violent event data, this article finds that regions plagued by the organizational legacies of past violence prove six times more likely to experience rebellion than areas without co-optable receptacles of prior collective action. These regions afford the rebels robust, pre-existing networks and structures, which can be appropriated for future mobilization, thereby rendering high-risk organized action relatively easy to achieve and sustain. Surely mountain refuge, financial support, and weak and inept local policing help insurgents. However, these conditions alone cannot produce organizations with the disciplined action, command and control, and recruitment webs necessary to wage war and withstand counterinsurgent campaigns.

These findings underscore the need for several broad conceptual revisions to our study of intrastate war. First, it is necessary to collect micro conflict data on all countries around the world in order to accurately test the correlates of war. While a subnational study of a single country cannot disprove cross-national research, the analysis suggests that the conventional wisdom may not survive scrutiny when evaluated with the appropriate research design and data. Second, that past mobilization proves the most robust predictor of rebellion suggests that the causes of recurrent war may diverge from those of initial war onset. The conventional approach groups the two together and codes them as 1, 'peace incidents' as 0. Our datasets need to disaggregate and disentangle these types of violence and seek to understand chronic violence and the mechanisms by which wars recommence. The findings further highlight an important new research agenda on the post-demobilization trajectories of armed groups: why do they dissolve, endure, and redeploy for war or peaceful politics? Why is the organizational residue of violence reactivated in certain cases while it remains dormant and unexploited in others? Third, the results emphasize the explanatory leverage of human and social geography, contesting the causal priority afforded physical terrain and natural resources in the civil war scholarship. To understand spatial variation in insurgency onset, it is necessary to map and analyze variation in pre-existing sources of collective action. The geography of these sources does not necessarily correlate with that of rough topography, poverty, and loot. Fourth, by imposing battle-related death thresholds on the study of conflict, existing works investigate only successful armed organizations, those which have launched prolonged insurgencies. To understand the *onset* of rebellion, we must also examine the groups that fail and understand why they do so.

This article adds to the new exciting literature that disaggregates conflicts to the level of the conflict zone, administrative region, armed organization, dyad, or individual and seeks to understand the micro-dynamics of violence.[3] The article quantitatively analyzes an original dataset of 274,428 municipality-month observations to determine the correlates of civil war. These data include detailed, geo-referenced information on the victims and perpetrators (state, rebel, paramilitary, criminal) and on

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[3] Barron, Kaiser & Pradhan (2004) use administrative regions as the units of analysis; Buhaug & Gates (2002) conflict zones; Cunningham, Gleditsch & Salehyan (2009) dyads; and Oyefusi (2008) individuals. This trend warranted a *Journal of Conflict Resolution* special issue on disaggregating conflict.

the kind and intensity of 7,729 violent events. This project constitutes the first disaggregated study of civil war onset in Latin America. It seeks to overcome measurement errors in the existing cross-national and subnational datasets. Specifically, it introduces new, fine-grained measures which better proxy our theoretical concepts and enable causal identification to parse out divergent causal stories. The project takes great effort to collect new data in order to measure the variables in an ex-ante and longitudinal fashion.[4] Cross-sectional correlations with variables measured *after* fighting has begun cannot help us disentangle the theoretically complex interpretations of the causes of war. In contrast to other existing databases on civil conflict and violence, this research relies not on Western, English-language news sources, but on Colombian, Spanish-language ones to avoid selection bias.[5]

The correlates of war: Loot, refuge, poverty, and prior violence

'Where a rebellion is financially and militarily feasible it will occur' (Collier, Hoeffler & Rohner, 2009: 1). This conventional wisdom holds that the conditions favoring insurgency include lootable natural resources, complex topography, and poverty. I discuss each of these inputs into the insurgent production function and how I operationalize them using micro subnational data. I then introduce the concept of organizational capital and the causal process linking pre-existing sources of collective action with rebellion.

Resources
First, civil war scholars posit that rebel groups require substantial financial revenues to purchase armaments and material. They can derive funding from high value, low-weight goods, from extortion/'protection' of primary commodity extraction, or from voluntary donations from the civilian population.

> H_1: Insurgents, seeking to capture lucrative resources, should be more likely to emerge in regions of coca cultivation.
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> H_2: Emerald, gold, aquamarine, and sapphire extraction sites should experience elevated guerrilla activity.[6]

H_3: The presence of oil fields, pipelines, and refineries should associate with a higher probability of insurgency.[7]

H_4: Rebel groups should prove more likely to emerge in areas of higher land value, which afford larger tax revenues.

These hypotheses should hold irrespective of the insurgency's end goals: profit maximization or political revolution (greed or grievance). Whether insurgents seek resources as a means to an end or as an end in themselves, the observable behavior is the same: rent-seeking.

To capture the 'availability of financial resources' and test these hypotheses, I evaluate several variables: For H_1, I create a continuous measure, *Drugs*, capturing peak coca cultivation and thus the regions *able* to grow drugs.[8] To test H_2, I employ a dummy variable, *Gems*, indicating emerald, sapphire, and aquamarine locations identified in the *Oxford Economic Atlas of the World* and the gold and emerald mine sites from CEDE data (Jones, 1972). For H_3, I create a measure *Oil* – coded 1 for municipalities with oil fields, pipelines, or refineries, 0 otherwise. US Department of Energy maps provide these data. Finally, for H_4, I construct a variable, *Landvalue*, which reports the average quality of each municipality's land on a 100-point scale based on Instituto Geográfico Agustín Codazzi (IGAC)'s Department of Cadastre data, 1971–81.[9]

Refuge
Second, civil war scholars state that nascent insurgencies are numerically weak relative to the government (Kalyvas, 2008). This implies that, to survive, militants must be able to hide from counterinsurgent forces and avoid denunciation. Dense forests and jungles and mountainous terrain provide insurgents camouflage against detection and aerial attack and facilitate free movement of their combatants and arms.[10] This rough terrain also confers on rebels local knowledge superior to that of the government, enabling them to credibly threaten inhabitants with retaliation for denunciation (DeRouen & Sobek, 2004).

Large municipal populations further make 'keep[ing] tabs on who is doing what at the local level' more difficult and the pool of potential recruits deeper (Fearon &

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[4] Most studies rely on 1999 forest data and 1990s population data for all observations dating back to 1945.

[5] ACLED data derive primarily from English-language sources. See Raleigh et al. (2010).

[6] Insurgencies in Angola, Sierra Leone, Burma, and Cambodia support this hypothesis. See Humphreys (2005).

[7] See Lujala, Rød & Thieme (2007).

[8] These data derive from the UNOCD and Colombian National Police Integrated System of Monitoring Illicit Crops 2000 report.

[9] This scale ranges from unproductive to excellent quality based on the land's geochemical and microbiological aspects – factors highly correlated with its valuation. See Caballero Quintero (2006).

[10] Roman Ortiz, interview by author, Bogotá, July 2006.

Laitin, 2003: 81), while geographic dispersion of the population, cross-border sanctuaries, and large countries with regions far removed from the states' administrative and military centers inhibit local policing. Finally, in the absence of adequate road systems, law enforcement and social services cannot penetrate, discipline, and win over rural areas, hindering counter-guerrilla efforts. It follows that:

> H_5: Insurgencies should be more likely to establish bases in thick forests and jungles.
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> H_6: Mountainous terrain should associate with an elevated risk of insurgency onset.
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> H_7: The presence of international borders should favor the emergence of illegal armies.
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> H_8: Holding all else constant, larger populations should correlate with a higher likelihood of civil war.
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> H_9: Areas with low population density should similarly prove vulnerable to illegal militarization.
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> H_{10}: Regions with low road density should witness a more robust guerrilla presence.
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> H_{11}: Zones more removed from the state's capital should be more prone to rebellion.

To measure and evaluate H_5, I use an IGAC map series of each Colombian department's vegetation and forests.[11] For mountainous terrain (H_6), I exploit an elevation variable from IGAC maps 1971, which report the average altitude of each municipality. I also construct a more detailed measure of topography, which captures if the municipality's terrain is 'strongly inclined' or 'very steep'. This ensures that high elevation plateaus are not coded as mountainous, and low altitude rough terrain is not coded as flat. At elevations exceeding 3,000 meters airplanes used for counterinsurgent raids become inoperative.[12] I thus construct a dummy which measures if the municipality's average elevation surpasses this critical level. I further include a dummy variable for municipalities adjoining an international border to test H_7. For population size (H_8), I employ Colombian census data from 1951, 1964, and 1973. I also consider the number of residents per square kilometer to test H_9, using the longitudinal census data and municipal land area data from Law (1999). For H_{10}, I rely on IGAC political-geographic maps from 1949, 1970, and 1980. I consider the total logged kilometers of railroads, primary and secondary roads (paved and unpaved), and navigable rivers

per municipality. Finally, to evaluate $H_{11,}$ I use the natural logarithm of the distance between the municipality's center and the capital, calculated using latitudinal and longitudinal data.

Recruits

The third most robust correlate of war is poverty. There are two interpretations of the significance of per capita income: (1) it proxies for the ease of recruitment, and (2) it captures the state's counterinsurgent capabilities. I discuss each interpretation in turn.

The recruitment argument proposes that, to achieve fighting capacity, a rebel group requires a dependable source of recruits joining at a rate in excess of the combatant death, desertion, and retirement rates. Walter (2004: 4) articulates this fact: 'Civil wars will have little chance to get off the ground unless individual farmers, shopkeepers, and workers voluntarily choose to man the rebel armies'. To proxy for participation, empirical studies of violence use per capita GDP according to the following logic: (1) a prospective insurgent will weigh the benefits of 'rebel life' – the income offered by the rebel organization through looting, access to land, and appropriation of taxing powers – against his/her best economic alternative (Oyefusi, 2008). And (2) this type of guerrilla enlistment avoids collective action, free-rider, and time-consistency problems (Collier & Hoeffler, 1999).

> H_{12}: The lower the economic opportunities available in the local economy, the higher the likelihood of insurgency.

I use per capita income and also a poverty measure – 'Unsatisfied Basic Needs (NBI)'[13] – to gauge the size of the population with a low threshold for joining a rebel movement. The latter proves a better measure of enlistment because the insurgents did not pay their recruits salaries and thus even a very low per capita income would exceed the negligible one offered by the guerrillas. They did, however, provide their combatants food, shelter, medicine, and social security, commodities highly valued by those living below the poverty line.[14]

The second interpretation of per capita GDP, set forth by Fearon & Laitin (2003: 76), conceives of income as a proxy for the 'state's overall financial, administrative, police, and military capabilities'. While this interpretation is plausible at the cross-national level, it

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[11] *Mapa de Bosques de Colombia*, 1960.
[12] Ortiz, interview.

[13] Per capita income data derive from the 1973 Colombian Census; NBI data, measuring the percentage of each municipality's population with 'Unsatisfied Basic Needs', were collected in 1985.
[14] Ex-combatants, interviews by author, Colombia, June–August 2006.

does not make sense on a geographically disaggregated scale given the centralized nature of armed forces and tax revenues to the national level. Nonetheless, the measures of infrastructure, distance to the state capital, and rough terrain described above better capture the reach of the state and its counterinsurgent and administrative capacities.

Previous war

The final robust correlate of civil war onset is prior war. In the cross-national datasets, 36% of civil wars that ended between 1945 and 1996 erupted in subsequent war (Walter, 2004). This significant result has been interpreted principally as a dynamic by which war increases the risk of further war; peace reduces this risk. It is operationalized with a continuous variable that captures the time that has passed since previous conflict, and with natural cubic splines that measure the decay function of time at peace. These variables have proven statistically significant across nearly all studies and yet, they are deemed technical fixes for temporal dependence rather than interesting objects of inquiry.[15] It is believed unsurprising that civil wars' legacy is a heightened risk of future war.

I test the legacies of past violence at the micro level to see if certain geographic locations are plagued by chronic violence while others benefit from peace dividends. I propose that the mechanism linking previous and future conflict centers on organizational and social capital, which can be mobilized for subsequent militarization. In this sense, past war renders the conditions favoring insurgency distinct from those that led to war in the first place. Specifically, it alters prospective rebels' ability to act collectively. As Selznick (1952) indicates, organizations are receptacles of collective action that can be appropriated for any future forms of cooperation.

To mount an insurgency, militants often co-opt existing structures and networks in order to overcome collective action, commitment, and monitoring problems (Granovetter, 1973; Coleman, 1988). They may co-opt peaceful protest movements, tribes, political parties, religious groups or, very efficiently, a previous armed structure. Where 'strong' and sustained post-conflict, ex-militant ties constrain each ex-combatant in three ways: (1) they apply social pressure to 'follow' those to whom s/he is densely connected; (2) they link his/her identity and status to that of the network; and (3) they provide the reassurance that, if a faction of the web mobilizes, others will follow and that it will be safe to follow (Petersen, 2001). If preserved post-demobilization, the network thus pulls its former members down the path of the armed organization: back to rebellion, towards violent crime, or into peaceful activities. In this way, the network serves as a latent structure, which can be redeployed in the future for good or for ill. The availability of these co-optable receptacles varies across space and can account for why insurgencies break out in some places and not in others. It follows that:

> H_{13}: Areas affected by past mobilization should be more likely to experience insurgency than regions untouched by prior collective action.

I use two measures of 'organizational capital'. The first records the presence of liberal and communist guerrillas 1948–58. The second measure captures where violence occurred 1948–58. These data derive from the 'truth commission' of Guzmán, Borda & Umaña (1962).[16] Through the Office of Rehabilitation, these violentologists collected testimonies to weave a narrative of *La Violencia*.[17] I also rely on ethnographies including those of Ortiz (1985), Roldán (2002), and Henderson (1985); the former FARC commanders' writings; and the National Police's *Revista de Criminalidad*. I further employ the method proposed by Beck, Katz & Tucker (1998) and include the months since prior violence and natural cubic splines that approximate the discrete time hazard function of conflict onset during the peace periods.[18] Doing so addresses the likely strong temporal dependence between observations and evaluates the hypothesis that conflict increases the risk of further conflict.

Modeling patterns of violence and control during civil war onset

To evaluate the correlates of civil war, I analyze a newly assembled, longitudinal dataset of violent events in Colombia. For the statistical analyses, I measure the dependent variable in two ways: first, as the incidence of insurgent

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[15] See, for example, Hegre & Sambanis (2006). Collier, Hoeffler & Rohner (2009) also evaluate a dummy for prior conflict to test for an unobserved fixed effect. They find the dummy insignificant.

[16] Scholars have criticized Guzmán et al. for over-estimation of casualties. Unless the exaggeration is not just in violence intensity, but also in its occurrence and geographic spread, the binary nature of the past violence variable used here mitigates this issue.

[17] I am grateful to Fabio Sánchez and Mario Chacón for the digitalized version of these data. See Sánchez & Chacón (2007).

[18] These are jointly significant, resulting in a statistically significant improvement in the model fit. I therefore employ the natural splines in all panel models.

violence in municipality *m* in month *t* during the initial years of rebellion (*Violence*).[19] The original dataset consists of 274,428 municipality-month observations. There are 4,109 violent events involving guerrillas derived from daily news reports, which collapse into 2,094 municipality-month observations.[20] This outcome variable captures the ability of an insurgency to carry out *violence* in a specific geographic space. This is not to suggest that every rebel incident after a period of calm is a new onset; rather, this variable tracks the presence of violence during the early period of Colombia's violent conflict.

Second, I seek to capture where rebellion was successful in its initial phase (*Control*). Doing so enables me to overcome the problem of 'if a tree falls in the forest and no one is around to hear it, does it make a sound?' Violence is not a perfect indicator of rebel success as insurgents in the forest do not need to carry out violence if they have no competition or counterinsurgent pressures. In these cases, they retain only 'latent' structures. As Kalyvas (2008: 401–402) writes, 'The dynamics of violence and the dynamics of war are analytically distinct'. The absence of fatalities from a particular location does not imply anarchy and rampant violence; rather, it often signals the emergence 'of an alternative state, one fully controlled and administered by rebels in so-called liberated zones – or "base areas."' This second measure thus addresses the issue of problematic proxies (Kalyvas, 2008). For this analysis, I collapse the data and measure the dependent variable dichotomously as 1 if a rebellion had a consolidated presence in municipality *m*, 0 otherwise, relying on qualitative data on the insurgencies' fronts (battalions).[21]

This study examines the period from the insurgencies' inceptions in 1964 to the civil war literature's coding of Colombia as 'civil war positive' in 1984.[22] Nearly all empirical studies of violence measure rebellion onset according to a threshold of battle-related deaths.[23] Relying only on English-language sources, these thresholds

and thus the war onsets are often erroneously determined. In the Colombian case, the rebellions were underway for 20 years before Colombia became coded 1 – presence of an insurgency – in these datasets in 1984. Measuring violence only once it has already reached high intensity increases endogeneity problems.[24] The causality may be flowing from violence to demography, preferences, and economic, social, and political indicators, rather than the other way around. To address this issue, I exploit Colombian, Spanish-language sources and do not rely on high death tolls to measure onset.

Given the article's focus on the receptacles of past collective action, it merits expanding briefly on how I code the termination of prior conflict. There is some dispute over the precise end of *La Violencia*. Most analysts and the Colombian historiography place it in 1958 with the amnesty and National Front peace pact. At this moment, the guerrillas 'silenced their rifles and abandoned all military activity' (Calvo, 1987: 44). They called themselves 'ex-combatants' and stated, 'We are not interested in armed struggles' (Sánchez, 1985: 271–273). Accordingly, this period has become known as an interlude of peace. Low-level, criminal violence continued for several years, but the political guerrilla organizations became, according to the US and Colombian governments, 'latent' zones, amenable to the state's accommodation strategies (Rempe, 2002). Nonetheless, I tried using alternative start dates to the dataset – 1966 and 1970 – to ensure that the results are not sensitive to this coding. They proved not to be.

The data for this project derive from the Colombian newspaper *El Tiempo*, taken from *La Biblioteca Luis Angel Arrango* archives.[25] The articles, amounting to 7,665 newspaper-days, were photographed and then coded.[26] The rebel battalion data come from military intelligence reports and the Presidential Observatory of Human Rights and International Humanitarian Law.[27] This project's dataset is the first of its kind on this under-analyzed period in Colombian historiography. Existing subnational datasets such as ACLED do not cover Latin America, and Colombian datasets do not cover 1964–84. The

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[19] In 1964, Colombia had 873 municipalities and in 1993 it was divided into 1,056 municipalities. I coded the insurgency data according to the latter divisions to gain greater geographic precision.

[20] There are 7,729 total violent events in the dataset, including non-rebel ones.

[21] A 'front' consists of at least 110 guerrillas, but 'is determined not by the quantity of men, but by the physical area occupied ... the "area of operations"' (Estatuto de las FARC-EP, Chapter 2, Article 3).

[22] Extensive interviews by the author confirm the appropriateness of these dates.

[23] There are three commonly-used thresholds: Correlates of War's 1,000 combat-related deaths per year; Fearon & Laitin's 1,000 deaths over the conflict's course; and the Uppsala/PRIO's annual threshold of 25 battle deaths.

[24] The ACLED data, for example, code Angola's war from 1997 to 2009 when the war endured from 1975 to 2002.

[25] To check potential selection bias from relying on *El Tiempo*, I randomly select several month-years and code violent events in *El Espectador* (allied with the left-leaning, Liberal Party faction) and *El Colombiano* (allied with the Conservative Party). The correlation is high. While Colombian sources may improve upon international news, they are still likely susceptible to reporting biases and coverage error.

[26] Approximately 240 days had newspaper pages missing or damaged.

[27] I am grateful to Camilo Echandía Castilla for these data. See also Echandía Castilla (1999).

Table I. Descriptive statistics for insurgent violence models

Variable	Obs	Mean	Std. Dev	Min	Max
Organizational capital1 (Guerrillas 1948–58)	194796	0.13	0.34	0	1
Organizational capital2 (Violence 1948–58)	194796	0.46	0.50	0	1
Drugs (Hectares)	262841	57.80	499.29	0	9081
Gems	274452	0.13	0.33	0	1
Oil	262841	0.11	0.32	0	1
Land value	187992	35.43	61.37	0	1690.91
Poverty1 (NBI)	269151	64.45	18.28	13	100
Poverty2 (Per capita GDP)	230580	10363.39	15277.19	97.89	345256
Population	236125	21858.62	90893.00	72	2571548
Population density	189252	0.86	2.69	0.01	57.87
Border	262841	0.05	0.22	0	1
Mountains1 (Altitude)	194796	1327.18	878.08	2	3087
Mountains2 (Steep terrain)	187992	0.86	0.34	0	1
Mountains3 (Altitudes > 3,000 m.)	194796	0.01	0.10	0	1
Forest	91729	31975.98	99086.40	1.59	1307181
Road density	206834	30909.77	43705.34	33.3	963252.6
Roads & rivers (Kilometers)	81554	97830.84	139350.20	612.9	1140529
State presence (Distance to capital, miles)	202865	190.98	113.81	11.47	499.70

qualitative data which underlie the research derive from guerrilla autobiographies and social histories and my interviews between 2006 and 2009 of over 100 former guerrillas, victims, clergy, journalists, military personnel, civil society leaders, and academics.

By exploiting these data, the analysis addresses several biases, which affect existing conflict studies. Rather than exploiting data at the country or first-order administrative level, this article uses data at a disaggregated level, in this case, the smallest administrative unit: the municipality. Theoretically, this is the appropriate unit of analysis as opportunity costs of participation, availability of war financing, refuge, and receptacles of past mobilization all vary significantly across regions of a country. Using municipality-level data enables me to gain precise locations of violence and also to obtain accurate measures of the explanatory variables, which are collected by these administrative units.[28] Additionally, the project's data define rebellion not narrowly as battles, but instead as the entire repertoire of violence and threats of violence that suggest the presence of a militarized organization. Before discussing the findings, I describe the data and highlight several data challenges.

Data description
Thirty-nine percent of Colombian municipalities experienced rebel events between 1964 and 1984; 61% did not. Meanwhile, 10% of municipalities witnessed the establishment of insurgent bases. Figures 1 and 2 illustrate these dynamics. Of the rebel events, 24% were carried out by the FARC; 10% by the ELN; 7% by the EPL; and 22% by other guerrilla groups.[29] The remaining events involved army, police, or intelligence services' clashes with or captures of rebels. In terms of the repertoires of total violence, there were 2,260 combats, 1,103 assassinations, 778 ambushes, 405 terrorist bombings, 388 captures of towns, 173 massacres, and 121 attacks on infrastructure and pipelines, among other violent events. The violence resulted in 8,733 deaths and 3,177 injuries over the course of the period under investigation.[30] The analyses exclude the elements of this unrest perpetrated by unidentified actors or by narco-trafficking gangs, militant students, criminals, or individuals. The focus is only on the events explicitly involving rebels.

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[28] Studies relying on the 100 km² grid cell format admittedly lack subnational data on income levels, inequality, elections, and other variables measured by administrative units. See Buhaug & Gates, (2002).

[29] These include the M19, MOA, FALCO, and ORP.
[30] The violence involving rebels resulted in 5,101 deaths and 1,637 injuries. Not all events left known casualties. The database includes rapes, disappearances, and seizures of rebel arsenals, which resulted in no deaths. This article focuses not exclusively on lethal force, but also on the understudied, but important, aspects of rebellion such as guerrilla control and non-lethal violence.
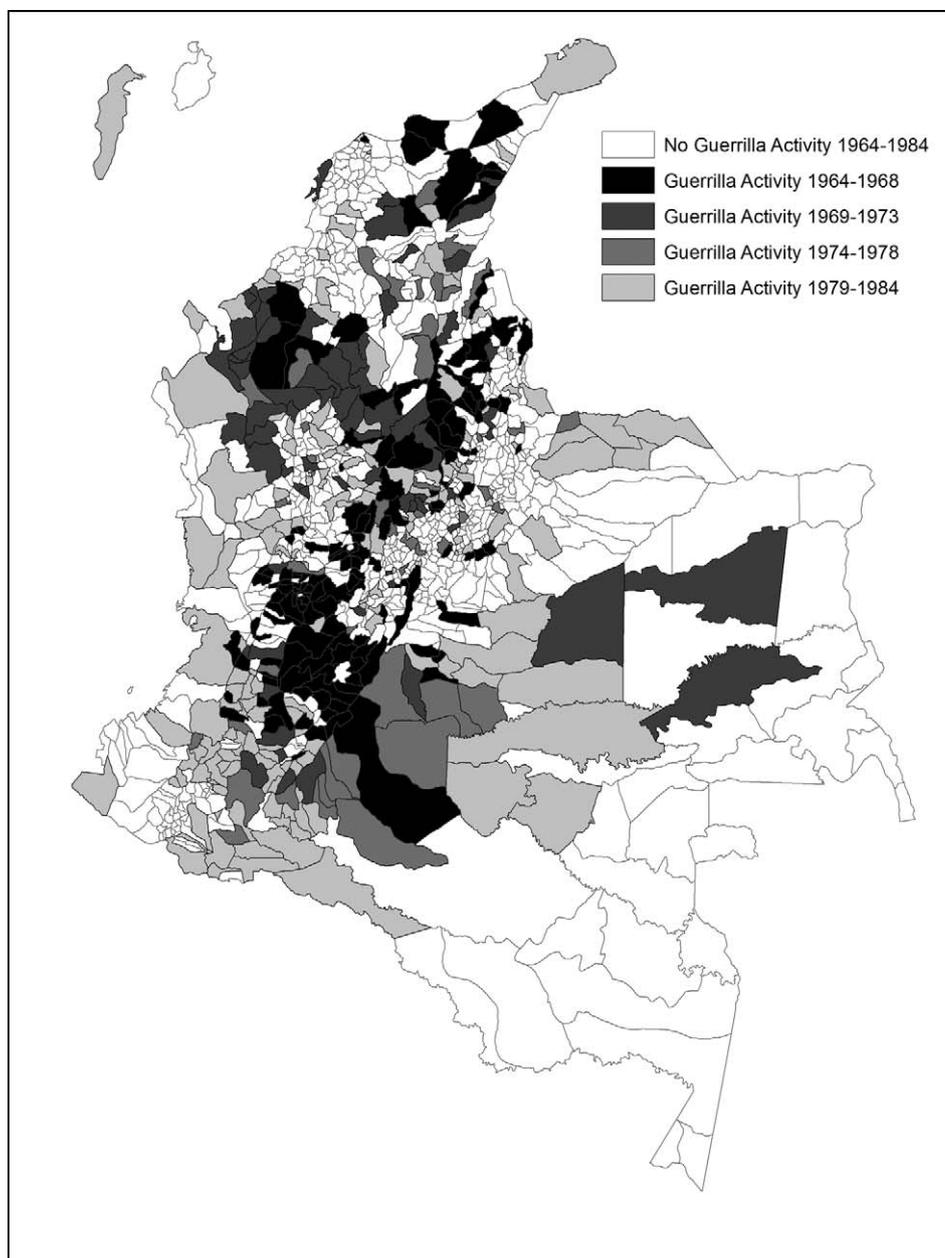
Figure 1. Insurgent activity, 1964–84

Data challenges

As becomes clear in Figures 1 and 2, 'insurgency' episodes may spatially autocorrelate. The likelihood of violence in a municipality may depend not only on the characteristics of that municipality, but also on the characteristics of contiguous municipalities (LeSage & Pace, 2009). To test for this, I calculated the Moran I statistic, which compares the dependent variable in municipality x with the weighted average of the dependent variable in the other municipalities. The Moran I measure is statistically significant at the 1% confidence level and thus I can reject the null hypothesis

of zero spatial autocorrelation. Accordingly, I employ spatial econometrics, estimating the spatial lag model $Y = \rho WY + X\beta + \epsilon$ where ρ is the spatial dependence parameter and W is an n^*n spatial weight matrix that contains information on the inverse distances between each pair of municipalities. I tested different degrees of contiguity and the important results remained.

Empirical analysis

Why does insurgency emerge in some regions of a country and not in others? Table II shows the results of logit
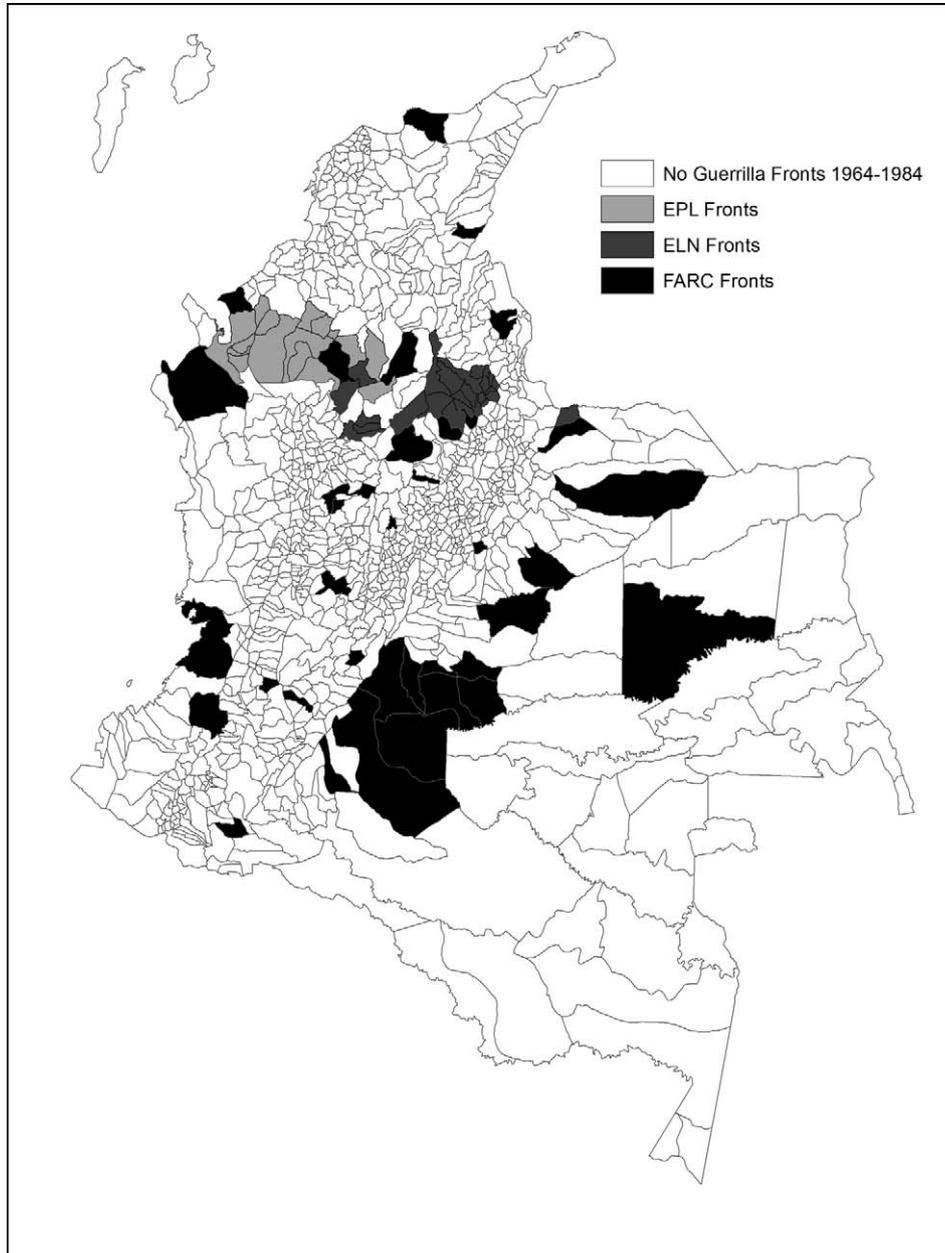
Figure 2. Insurgent control, 1964–84

multivariate analyses using *Insurgent Violence* as the outcome variable and the conceptually optimal measures of the explanatory factors.[31] Again, this dependent variable captures the ability of a rebellion to carry out violence in geographic space m in month t. Model 1 tests the resources hypotheses (H_1–H_4); Model 2, the refuge predictions (H_5–H_{10}); Model 3, the poverty correlate (H_{12}); Model 4 the organizational capital theory (H_{13}), and Model 5 the combined equation. Theories explaining *when* onset will occur are quite poor relative to those explaining *where* it will occur. As a result of the causal priority afforded geography, demographics, infrastructure, and income, many of the variables in the model are slow-moving. I therefore collapse the violent events into cross-sectional data to see if the proposed theory holds. Model 6 shows this test employing spatial lags and maximum likelihood estimation.[32]

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[31] The tables present estimated coefficients. I convert these into odds ratios in the text.

[32] Additional robustness checks – rare events analysis and inclusion of additional controls – can be found at http://www.prio.no/jpr/datasets.

Table III presents the same analyses as Table II, but instead uses *Insurgent Control* as the dependent variable. This outcome measures rebels' ability to establish bases in municipality *m*. Models 1–5 employ spatial lags. Model 6 estimates the regression without lags.

The central finding is that the conventional correlates of war perform relatively poorly when evaluated with subnational data. Feasibility conditions cannot predict insurgency onset. Instead, the condition favoring rebellion is co-optable organizational capital from previous mobilization.

Resources

The descriptive statistics support the 'financial feasibility' thesis; insurgency episodes, on average, had higher levels of coca cultivation than did non-insurgency episodes (H_1). However, when I control for receptacles of collective action, this effect disappears across most specifications of the model and measurements of the variables. Only in the spatial lag model of insurgent violence (Model 6 of Table II) is the coefficient significant, but not substantively so.[33] Partially confirming H_2, *Gems* proves positively correlated with guerrilla bases in Table III, but there is no significant correlation between the presence of gemstones and rebel violence (Table II). The former finding may reflect a form of organizational capital upon which rebels built: that of the miners' unions.[34] As demonstrated in Tables II and III, while the direction of the coefficient is consistent with H_3, the presence of oil fields, refineries, and pipelines is not significantly associated with higher risks of insurgency onset in any of the analyses, which control for demographic, terrain, and organizational variables. Finally, the estimated sign on *Land Value* proves inconsistent with H_4 – areas affording elevated land values were less likely to witness insurgency – though the coefficient's 95% confidence interval includes the possibility of no effect in most of the models.

The relative insignificance of *Drugs*, *Gems*, *Oil*, and *Land Value* undermines the profit-maximizing thesis, both derivative of and applied to the case of Colombia (Collier & Hoeffler, 1999: 1). It follows that finances are not the binding constraint on insurgency; 'soldiers never go hungry'. The insignificance of loot

even in Colombia points to a misconception about rebel financing. During my fieldwork, I observed the diversity of armed organizations' financing. Nearly everything can be taxed, from bananas to cows to buses (that is how governments run!). Thus even small-scale business owners and peasants can provide sufficient extortion fees or 'voluntary donations' to support an incipient armed group. Add to these finances the resources derived from theft and kidnapping and, in the absence of high-value goods, there is still sufficient funding for insurgency.

Refuge

Scholars of civil war conceive of Colombia as the natural habitat for insurgency – high mountains, poor infrastructure, and unmonitored borders – which complicate counterinsurgency and provide rebels ample refuge. Contrary to the prediction of H_6, insurgent groups prove *less* likely to establish a presence and perform operations in mountainous terrain, though the effect is not substantively meaningful or significant across all models. The results are the same if I measure rough topography as the average altitude of the municipality, as 'steeply inclined' terrain, or as altitudes exceeding 3,000 meters. Figure 3 demonstrates the relationship between Colombia's three mountain ranges and rebel violence. Meanwhile, as demonstrated in Table III and in contrast to H_7, municipalities adjoining an international border are not systematically correlated with a risk of insurgent bases. The coefficient on *Border* proves positively and significantly associated with rebel violence in the spatial lag Model 6 of Table II, but this effect depends on which variables are included in the regression. Similarly, armed groups did not prove more likely to operate in densely forested municipalities (H_5)[35] and, against H_{11}, are less likely to emerge in areas far removed from the state's administrative and military center.[36] Finally, as illustrated in Figure 4 and inconsistent with hypothesis H_{10}, higher road density favors guerrilla presence though the substantive effect again proves small. These counterintuitive results suggest that terrain, geography, and infrastructure have been given undue emphasis in the civil war literature.

Holding the other measures constant, population level correlates in a highly significant statistical, but not

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[33] I also code qualitative sources on marijuana and cocaine plantings in the 1960s and 1970s. The marginal significance of *Drugs* remains.
[34] Expert on the guerrilla organizations, interview by author, Bogotá, January 2008.

[35] The forest data are only available for a fraction of the municipalities. I therefore exclude *Forest* from most of the models.
[36] This measure proved highly correlated with many of the demographic and infrastructure variables and thus I exclude it from most of the multivariate analyses.

Table II. Logit analyses of determinants of insurgent violence, 1964–84

Variables	(1) Resources	(2) Refuge	(3) Recruits	(4) Organizational capital	(5) Complete model	(6) Spatial lag cross-sectional model
Organizational capital				0.819*** (0.234)	0.855*** (0.202)	0.257*** (0.0525)
Drugs	0.0002*** (4.91e-05)				0.0002 (0.0005)	0.0003** (0.0002)
Gems	0.775 (0.494)				−0.230 (0.238)	0.0860 (0.0689)
Oil	1.022*** (0.343)				0.177 (0.285)	0.0147 (0.0487)
Land value	0.0094 (0.0097)				−0.0007 (0.0064)	−0.0043** (0.002)
Ln population					0.903*** (0.0967)	0.181*** (0.0211)
Population density		0.127*** (0.0355)			−0.0027 (0.0168)	−0.0009 (0.0047)
Border		0.271 (0.305)			−0.0924 (0.363)	0.329*** (0.0971)
Mountains		−0.0002** (0.0001)			−0.0002 (0.0001)	−5.97e-05*** (1.89e-05)
Ln road density		0.501*** (0.189)			0.0135 (0.122)	0.0633*** (0.0232)
Poverty					−0.0071 (0.0053)	0.0004 (0.001)
Peace years			−0.0248*** (0.0086)	−0.501*** (0.0814)	−0.402*** (0.0595)	
ρ						0.0045*** (0.0012)
Constant	−5.611*** (0.351)	−4.966*** (0.188)	−3.382*** (0.544)	−3.691*** (0.342)	−12.57*** (1.319)	−1.924*** (0.306)
Observations	194,045	152,364	273,691	202,865	117,636	773

Huber robust standard errors are in parentheses. Observations are clustered at the municipality level.
*significant at 10%; ** significant at 5%; *** significant at 1%.
Three natural cubic splines estimated but not shown in Models 1–5.

Table III. Maximum likelihood spatial lag analyses of determinants of insurgent control, 1964–84

Variables	(1) Resources	(2) Refuge	(3) Recruits	(4) Organizational capital	(5) Complete model	(6) Complete model w/o spatial lags
Organizational capital				0.119*** (0.0408)	0.0992** (0.0420)	1.118*** (0.328)
Drugs	−1.14e-05 (5.76e-05)				−3.91e-05 (7.26e-05)	−0.0016 (0.0019)
Gems	0.147** (0.0643)				0.156** (0.0613)	1.475*** (0.399)
Oil	0.0634* (0.0373)				0.0199 (0.0368)	0.0687 (0.382)
Land value	0.0006 (0.0008)				−6.56e-05 (0.000878)	0.0011 (0.0103)
Population density		0.0178*** (0.0059)			0.0201*** (0.0062)	0.125* (0.0704)
Border		−0.0494 (0.0686)			−0.0308 (0.0712)	−0.363 (0.923)
Mountains		−1.54e-05 (9.84e-06)			−1.22e-05 (1.07e-05)	−0.0003 (0.0002)
Ln road density		0.0529*** (0.0189)			0.0502*** (0.0186)	0.697** (0.275)
Poverty			−0.0003 (0.0007)		0.0008 (0.0006)	0.0035 (0.0083)
ρ	0.0094*** (0.0025)	0.718*** (0.083)	0.0091*** (0.0027)	0.008*** (0.0023)	0.689*** (0.107)	
Constant	−0.0041 (0.0325)	−0.4868*** (0.1497)	0.0507 (0.0555)	0.025 (0.016)	−0.535*** (0.192)	−9.725*** (2.878)
Observations	773	773	773	773	773	773

Huber robust standard errors are in parentheses. Observations are clustered at the municipality level.
*significant at 10%; ** significant at 5%; *** significant at 1%.

Figure 3. Mountainous terrain and insurgency

substantive, sense, partially confirming H_8.[37] A one-unit increase in population size multiplies the odds of experiencing an insurgency by 1; in other words, it leaves the odds unchanged. Theoretically, the direction of this coefficient makes sense. To keep tabs on a larger number of people, counter-insurgency forces

must literally spread themselves thin. However, when I omit population size from the analysis, the coefficient on population density suggests that rebels are actually more likely to engage in offensive activity and control regions with less dispersed populations. A 1% increase in population density increases the odds of rebel violence by 22%.

Together, these refuge variables indicate that insurgents do not seek out inaccessible territories with sparse settlement. They do not aim only to hide; rather, they seek to exercise influence and gain

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[37] It should be noted that the correlation coefficient between population and population density is 0.38. When I use just one of the population variables, the key results remain, but the significance of several of the refuge variables decreases.
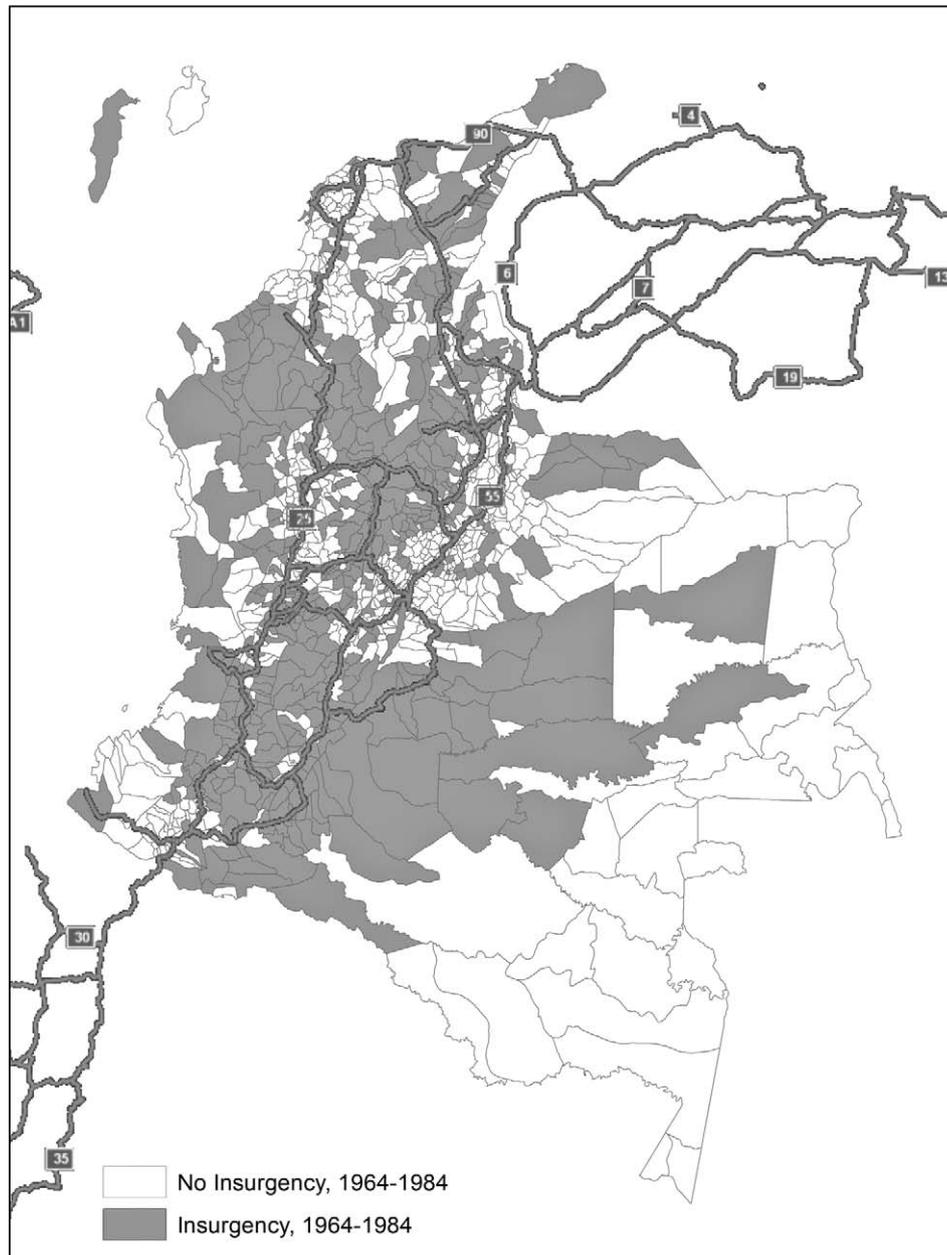
Figure 4. Road density and rebellion

support. Regions with higher populations, closer to the country's political and economic heartland, represent strategic areas; these are generally centers of power worth controlling, especially for guerrilla armies aimed at state-takeover. Rebel strategy is of course dynamic. A FARC member explained:

> 70% of the Colombian population was in the country-side and 30% were in the cities ... [but now] the majority of the population [70%] is concentrated in the cities ... This meant that the strategy of the FARC

logically had to change and become directed at where the majority of the population was.[38]

An ex-M19 commander similarly stated, 'We thought that cities were where the problems were and that we had to be politically where the people were in order to win over the population.'[39]

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[38] Interview with ex-FARC, quoted in Ferro Medina & Uribe Ramón (2002: 63).
[39] Interview by author, Bogotá, July 2006.

Recruits

Insurgency should be higher, on average, in impoverished areas. Contrary to H_{12}, rebel organizations are less likely to gain a foothold in areas of high poverty, as demonstrated by the negative, statistically significant coefficient on *NBI* – the percentage of the municipal population with unsatisfied basic needs – in Table II. Per capita income measures, meanwhile, generate similar results; they are significantly and positively associated with insurgent violence.[40] I tested for a quadratic effect for poverty where, at middle levels, collective action becomes more likely. There is no evidence of this relationship.

The negative link between poverty and insurgent violence, while not substantively large,[41] suggests that economic opportunity costs factor into prospective insurgents' calculations, but so do a variety of other variables. Motives for rebel participation are complex and multiple and include social network, revenge, resentment, and security motivations.[42] These are not necessarily correlated with poverty.

In sum, the correlates of war have very low explanatory power in the Colombian case. As Bailey writes, 'We have seen that the violence, as a social phenomenon, did not respect race or economic status, and that it took place in regions of *minifundia* and of *latifundia*, among the prosperous and the miserable, in desert and plain, in burning valley and Andean crags' (1967: 3).

Organizational capital

Instead, the data suggest that where a rebellion is *organizationally* feasible, it will occur. Consistent with H_{13}, the measures of past organization are positive and highly significantly correlated with insurgency. The odds of rebels effectively establishing a presence are six times greater in areas affected by guerrilla groups during *La Violencia* than in areas that had not experienced past organized mobilization.[43] Holding other variables at their median values, a municipality with no history of high risk collective action has a 26% chance of an outbreak of insurgent violence compared with an 82% chance for a municipality with a tradition of mobilization. Figure 5 illustrates this

relationship with the overlap between the two periods of mobilization shaded in black. This result is significant across *all* specifications of the model, measurements of the concepts, levels of aggregations of the data, and units of analysis. It remains robust irrespective of which variables are included in the model.

These significant effects highlight a different story of insurgency's beginnings than that provided by contemporary civil war scholars. Insurgency does not begin in the municipalities which confer rough terrain, cross-border sanctuaries, exploitable natural resources, and abundant impoverished recruits. Instead, insurgency proves most successful in municipalities affording receptacles of collective action – organizational and social capital that can be appropriated for future mobilization.[44] These findings reorient the analysis back to the population that picks up arms and fights and the organizations that structure their action.

This is not to say that sanctuaries afforded by inaccessible mountains and abundant finances are not of use to upcoming rebels. However, it is necessary to overlay this physical geography atop the human one – mobilization requires human and social capital, networks, and organization – dense jungles and gems do not provide these. Prospective insurgents scan the topography of collective action that they may co-opt. This may take many forms from ethnic, family, veteran or prisoner webs; patronage or political party relationships; or religious group memberships. Where multifaceted and embedded in their communities, these networks are likely to prove effective sources of mobilization fodder, which can withstand counterinsurgent campaigns and provide a deep supply of recruits and a potential source of rebel funding. In places that have experienced a previous war, demobilized structures often persist as latent political entities. Collective action is already achieved, it must merely be reactivated. In these cases, the other correlates of war come to matter less. The literature often assumes that violence recurs because it exacerbates the conditions favoring initial civil war: dampened incomes and illicit economies

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[40] This is consistent with other recent findings (Barron, Kaiser & Pradhan, 2004).

[41] A 1% increase in the percentage of the population below the poverty line translates into a 3% decrease in the likelihood of rebellion.

[42] Interviews by author of over 200 ex-combatants.

[43] These results hold when I instead measure organized capital as 'prior violence 1948–58'.

[44] Daly (2011) rigorously evaluates alternative processes, which may link past and future violence. It finds that vengeance and cemented identities offer little explanatory leverage. Rather than violence recurring on the scale and partisan patterns of the prior war, the reconciliation process between Liberal and Conservative enemies effectively deactivated the tradition of 'hereditary hatreds'. Contrary to security dilemma theories, the commitments between these adversaries were upheld. Finally, accentuated socio-economic and political grievances do not appear the principal causal link as demonstrated by *poverty*'s insignificance and fact that the 'excluded' political left successfully participated in elections.
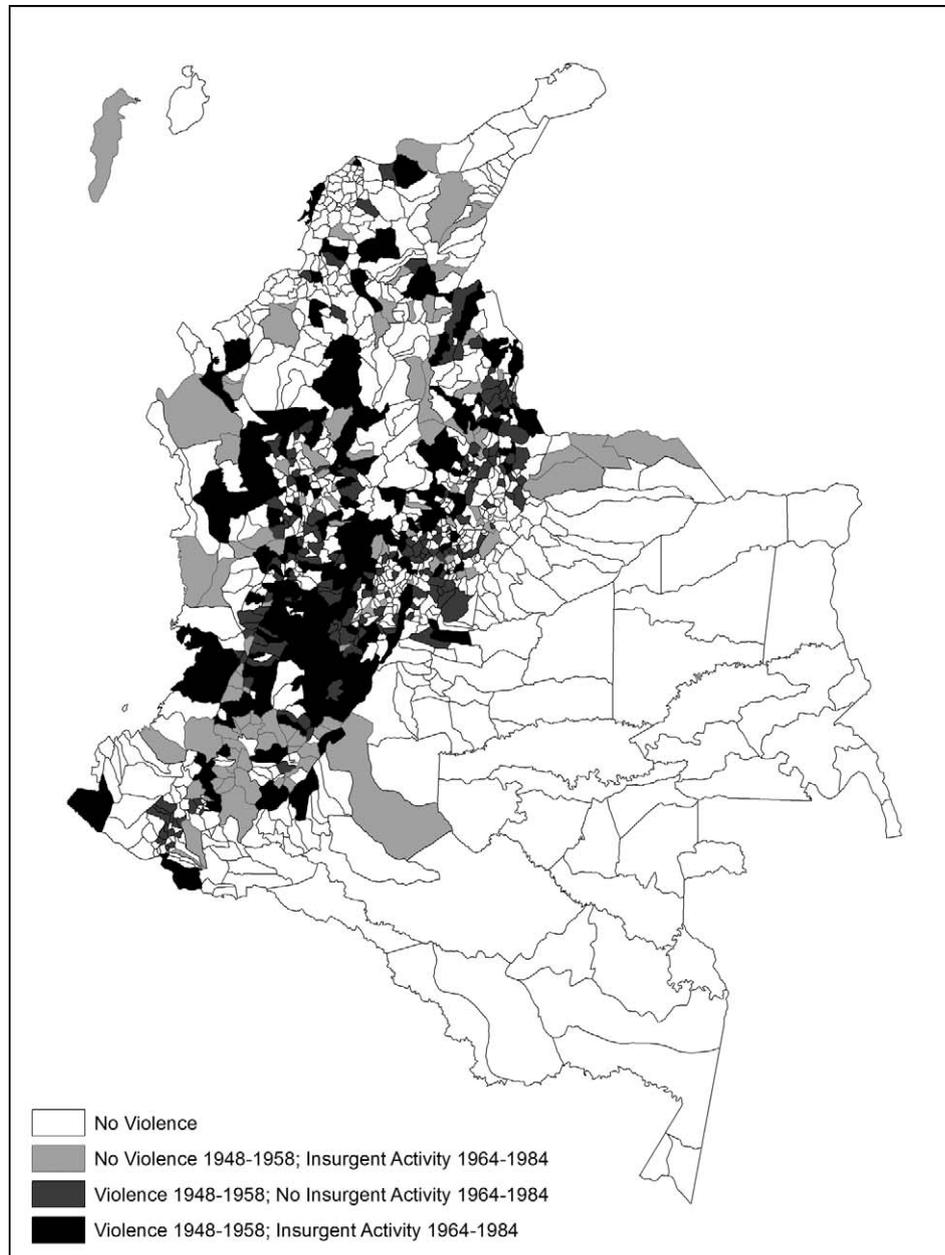
Figure 5. Legacies of violence

(Collier, Hoeffler & Rohner, 2009). However, violence also leaves in its path robust organizations and durable social capital that future entrepreneurs of violence can exploit.

In Colombia, the National Liberation Army (ELN) in Magdalena Medio emerged out of the demilitarized remains of Rafael Rangel's *Violencia*-era guerrilla army.[45]

Its fighters were descendents of families who had participated in the uprisings as far back as 1929 in Santander (Vargas Velásquez, 1989). Similarly, a Liberal politician, Julio Guerra, raised a self-defense army from 1948 to 1958 (Zuluaga, 1993). Nearly a decade later, his organization reactivated to form the insurgent People's Liberation Army (EPL).[46] The Revolutionary Armed Forces of

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[45] Alvaro Villarraga (ex-EPL guerrilla), interview by author, Santa Marta, 9 May 2009.

[46] Hernando Corral (Journalist), interview by author, Bogotá, August 2006.

Colombia (FARC) also constituted a remilitarized rebel army commanded by leaders of the liberal battalions of the 1940s and 1950s and comprised of the nonviolent 'independent republics' that formed in the aftermath of the National Front.[47] In a parallel fashion, the Peasant Student Workers Movement (MOEC) drew on former guerrilla officers to fill its cadres and Quintín Lame founded itself on an organization created years earlier by the indigenous leader, Manuel Quintín Lame.

Former leaders of these movements remained densely connected to their participants and foot soldiers and were thus able to remobilize them; they retained the normative authority to exert pressure on their ex-subordinates. The pressures to join were also horizontal; the recruits entered the new rebel movements because of their friendships, familial ties, and social webs. These armies thus capitalized on 'multiple generations of guerrillas [and activists] in the zones'[48] and drew upon 'a long tradition of struggle and organization' (Pizarro Leongómez, 1991: 29).[49]

If past guerrilla movements active during *La Violencia* provided the organizational fodder for Colombia's insurgencies in the 1960s and 1970s, what led to the movements of *La Violencia*? Holding constant the standard 'correlates of war', I find past agrarian conflicts 1870–1931 to be the strongest predictor of violence during the 1948–58 war, increasing its likelihood sevenfold.[50] These agrarian struggles created the human and organizational capital among the *campesinos* that *Violencia*-era guerrillas exploited (Pécaut, 2001). In fact, there is a geo-spatial relationship between organization in the 1930s, 1950s, and 1960s–1980s.[51]

The importance of this collective residue in facilitating subsequent violence applies not only to Colombia's leftist insurgencies, but also has causal weight in accounting for the rise of its right-wing paramilitaries. Commander Goyeneche explained to me:

> There is a strong relationship between the paramilitaries [in 2005] and the former self-defense forces in the 1950s ... the people who were in the Bloque Tolima were the

children, grandchildren, nephews ... of these people that began in the 1950s in ... southern Tolima.[52]

The findings also apply to the present-day 'emerging criminal gangs' (BACRIM) that surfaced in the aftermath of the demobilization 2003–06 and drew on the former AUC structures.

Looking beyond Colombia, we observe that the pattern may recur across other civil wars. The evidence is only exploratory, but it suggests the potential importance of investigating this phenomenon in other contexts. The Free Aceh Movement (GAM) built itself around family and veterans' networks from the earlier Darul Islam revolt aimed at changing Indonesia's government in the 1950s (Aspinall, 2009). Similarly, the New People's Army in the Philippines drew its cadres from former members of the Hukbalahap insurgency. French veterans of the American Revolution reactivated to help incite the French Revolution (Jha & Wilkinson, 2011). In Guatemala, powerful, collective vigilantism derives from the human and social capital of the wartime Civil Defense Forces.[53] And in Ireland, the Provisional IRA drew on an ex-combatant web to fill its ranks. Of course, pre-existing sources of disciplined action need not be armed. The guerrilla movements in El Salvador co-opted protest organizations. In Georgia, the Ossetians drew on their former self-rule as an oblast to mobilize rebellion. However, in all of these cases, receptacles of robust collective action varied across regions of the countries and may be able to account for the geographic variation in the civil war onsets.

Conclusion

This article's insights into the organizational residue of violence provide a new lens into why wars occur in some places and not in others. The applications of the theory are potentially reaching to wars far beyond Colombia's borders and several mechanisms of the model may be amenable to human action. The theory has implications for social scientists interested in micro and macro processes of violence and war-to-peace transitions.

Implications for future research

This article suggests several avenues for future investigation. First, the original database provides an opportunity to disaggregate the data further and explore additional

[47] Fernán González (Scholar), interview by author, Bogotá, July 2006.
[48] González, interview.
[49] Reactivation was not inevitable. The Cauca Valley guerrilla armies, for example, disappeared after *La Violencia*.
[50] LeGrand (1986) provides data on territorial concessions and agrarian conflicts 1870–1931. I am grateful to Fabio Sánchez for the digital data.
[51] The results in Table II and III hold when I instead use land conflicts to proxy for organizational capital though the coefficient size decreases.

[52] Interview by author, La Picota prison, Bogotá, 15 September 2008.
[53] Regina Bateson (Yale University), interview by author, Cambridge, MA, May 2010.

micro-mechanisms of conflict and peace. Specifically, how do insurgent and counterinsurgent forces interact in a dynamic fashion? Why do some rebel groups succeed at launching a prolonged insurgency while others dissipate after only a short fight? And are the conditions favoring paramilitarism similar to those facilitating rebellion? Additionally, the rich data on the repertoire of incidents facilitate an analysis of the strategic use of lethal and non-lethal violence: when and why do armed actors engage in massacres, terrorism, sexual violence, or forced displacement?

Second, the analysis invites a more rigorous theory of variation in the trajectories of demobilized organizations. Specifically, why do some armed groups retain a capacity for collective action while others go bankrupt? Why, when, and how do some former insurgent organizations return to fighting while others fully demilitarize?

A final research agenda derives from this project. The move away from cross-national research is critical to gaining purchase on the causes, dynamics, and aftermath of violence. However, the meso- and micro-dynamics of civil war agenda risks generating a plethora of theories with high levels of internal but not external validity, accuracy in the climates in which they are developed but inapplicability to other contexts, and great specificity of detailed mechanisms but no broader sense of how the pieces fit together. Clearly, the move to the micro level is necessary to collect data and process trace at the level of analysis at which the theory is operating. The next step, it would seem, is determining how we can combine our micro-level data on countries across Africa, Asia, and now Latin America to move back to the macro level and generate conclusions at this important level of analysis. From the perspective of this article, the question becomes, why does violence emerge in certain localities and not in others across the world? And why and how are violent legacies exploited in some places and left latent and eventually dissolved in others?

Policy implications
Although there are limits to what can be learned from a single case, the implications of this research are potentially important from a public policy perspective as well. The data cast doubt on the recommendations of the contemporary civil war literature, namely economic development (to provide higher opportunity costs for potential recruits) and reducing the economic benefits of violence (through international governance of extractable resources and drug eradication). This does not mean that these agendas should be abandoned; they are desirable in

and of themselves and may help extinguish advanced insurgencies. However, with respect to war onset, the analysis suggests that these policies would not pre-empt insurgency. The findings further indicate that counterinsurgency efforts should focus not principally on extending policing to rough terrain and border areas, but rather on neutralizing the social, political, military, and economic capital of former insurgent organizations and redeploying them for peaceful purposes. It therefore affirms the centrality of successful disarmament, demobilization, and rehabilitation of ex-soldiers and pacification of armed organizations in averting renewed violence.

Data replication

The dataset, codebook, and do-files for the article's empirical analysis can be found at http://www.prio.no/jpr/datasets

Acknowledgements

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