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LUIS DE LA CALLE

**“Liberating” Territory: An Empirical Examination of the
Determinants of Local Control By Sendero Luminoso**



Importante

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México.
www.cide.edu

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Dirección de Publicaciones
publicaciones@cide.edu
Tel. 5081 4003

Abstract

One of the most influential independent variables in the contemporary analysis of civil war is rebels' territorial control. And yet, few research efforts have dealt directly with its determinants. In this paper I offer a systematic analysis of the dynamics of territorial control by Shining Path (Sendero Luminoso) during the Peruvian civil war, 1980-1995. I model control by investigating the capacity of the insurgents to boycott the local elections. Whereas the state had a strong interest in showing that the rebels were weak and therefore unable to derail the elections, Shining Path used them to show its capacity to subvert the regime. I test three main arguments on territorial control. First, state capacity. Poverty and the size of youth cohorts contribute to increasing rebel recruitment, which may facilitate the seizure of territory. Second, control may also be related to geography. Insurgents may only aspire to control territory in areas that are not easily reachable by state forces, such as mountains and dense forests. Finally, politics may also affect control. The public support for the rebels' aims can help them boast their armed capabilities and therefore capture territory. Another indicator is state repression. The level of repression the security forces are willing to take on have an impact on the capacity of rebels to withhold their liberated areas, if repression encourages locals to switch sides. I use a unique dataset with district-year observations to test these hypotheses. Keeping geographic factors constant, preliminary results show political loyalties and state weakness are both relevant predictors of rebel control.

Keywords: civil war, territorial control, Peru, Shining Path

Resumen

La capacidad de los grupos insurgentes para controlar territorio y así limitar el alcance de la acción del Estado es uno de los factores explicativos más relevantes en los conflictos domésticos. Sin embargo, apenas se ha hecho investigación sobre qué explica que los rebeldes “liberen” territorio. Propongo en éste trabajo una primera aproximación empírica a los patrones de control territorial por parte de Sendero Luminoso durante la Guerra Civil peruana. Mido el control territorial a través de la capacidad de Sendero para boicotear las elecciones locales. Como el voto era obligatorio, altos porcentajes de abstención indicarían una fuerte presencia de la guerrilla. Discuto tres hipótesis. Primero, la capacidad estatal: cuanto menos presente está el Estado en una localidad, mayor posibilidades de que sea capturada por los rebeldes. En segundo lugar, la geografía: zonas más agrestes del país darán más facilidades a los rebeldes para establecer campamentos e imponer su ley. En tercer lugar, es posible que los rebeldes tengan más posibilidades de liberar territorio en áreas donde cuentan con más apoyo popular. Este apoyo puede ser exógeno (anterior al inicio del conflicto) o endógeno (exacerbado por la represión estatal). Compruebo empíricamente estas hipótesis con una base de datos original que incluye observaciones anuales para todos los distritos del Perú desde 1980 hasta 1995. Si mantenemos constantes los factores geográficos, los resultados preliminares muestran que las lealtades políticas y la fortaleza del Estado son los dos factores que más impacto tienen sobre la capacidad de los rebeldes para controlar territorio.

Palabras clave: Guerra civil, control territorial, Perú, Sendero Luminoso

Introduction

Countries such as Somalia, Yemen, Mali, Nigeria, Pakistan, Syria and even Ukraine are currently confronting rebel groups. These insurgencies regularly hit the news when they carry out terrorist attacks, most of the time in the countries' capital cities. But one common feature these groups share is that they have also been able to seize and hold some portions of the territory under which they are fighting. Al Shabab rules over parts of Central Somalia. In Northern Mali, Tuareg separatists have driven out government forces from large towns such as Kidal. The infamous Boko Haram has no rival in the deepest forests of Northeastern Nigeria. Although controlling territory is an obvious source of strength for insurgent groups, it has attracted less attention than media-catching terrorism.

This omission is more puzzling if we consider that the most influential works on conflict during the last decade bear the role of territorial control at their core. Thus, Kalyvas' account of targeting during civil wars heavily relies on the distribution of territory between armed actors. Still, in his encyclopedic book, territorial control remains out of the focus. On the other hand, Fearon and Laitin (2003) put the blame for the onset of civil wars on state weakness, which strongly helps rebels capturing areas from where the latter wage the war. But again, there is nothing in their empirical account about the mechanisms driving territorial capture beyond the intuitive suggestion that weaker state presence would ease rebel activities.

Territorial control has become a sort of conventional independent variable in many investigations on conflict. It is not only relevant for targeting, but also for tactic choice, lethality and duration. A growing literature looking at postconflict outcomes (such as electoral turnout and crime rates) also takes into account the patterns of territorial conflict by armed actors during the conflict. Many studies on terrorist events now also consider whether the group carrying out the attacks has some safe haven somewhere within its country of reference or abroad. In a nutshell, territorial control is tantamount to conflict in many ways.

And yet, there is no research specifically focusing on the conditions that favor territorial control by insurgent groups. The easiest culprit is data availability, since gathering information about the variation in rebels presence in a war zone is no mean feat, for obvious reasons. Given this data collection issue, most empirical works either rely on one “territorial control” observation by conflict, missing temporal and spatial variation within the conflict, or depend on the occurrence of violent events to infer the existence of control, which overlooks the fact that rebel control is sometimes the best guarantee for the lack of violence.

There have been nonetheless various efforts to come up with better time-variant, intra-conflict indicators of territorial control. The best example is Kocher, Pepinsky and Kalyvas (2011) reliance on US Army data for the Vietnam war –the so-called HAMLET Evaluation System. The HES collected monthly information about the actors (insurgent or government) who were controlling every district in South Vietnam since

July 1969. This astonishing dataset allowed the authors to test hypotheses about the impact of aerial bombing on insurgent control.

However, the article was not as much about the determinants of territorial control as about the impact on control of a counterinsurgency policy, with no effort to unpack the foundations of territorial control during the Vietnam war.

Alternative, less satisfactory, methods to operationalize territorial control have relied on counts of incidents (García 2009, Findley and Young 2012, Findley et al. 2013) or administrative borders (Bhavnani, Midownik and Choi 2011a, 2011b). Reliance on attack figures can mask the fact that insurgents sometimes hold their sway in areas with low-level incidence of violence. On the other hand, the use of administrative borders as an indicator for control exogenously fixes the conflict zones, which is an obstacle to understand the dynamics of violence and control.

There are also a number of studies which use control in a narrative way, without the necessary systematization of the analysis (Ziemke 2008, Koc-Menard 2007). A good exception is Vargas (2012). In his test of Kalyvas' theory of selective violence (2008), he combined the number of incidents in every precinct with his local knowledge about the distribution of rebel strength to gauge control in the Colombian city of Barrancabermeja. Unfortunately, this micro-focus, although highly informative, is difficult to replicate in a larger scale.

This paper suggests a new way to instrument insurgent control. I leverage the capacity of rebels to boycott elections as a surrogate for control. If rebels are able to stop the normal functioning of democracy in a specific district, we can be confident that rebels are very strong in the area. To the contrary, if the rebel call for boycotting the election goes unheard and people effectively vote, it is safe to claim that the area remains under government control. In between, there may be areas where rebels have some success (out of fear and/or ideological affinity) in their call, but still the election is carried out and produces some legal winner. These cases resemble war zones with some level of contested authority.

This approach has two obvious scope conditions: we need elections, and we need rebels boycotting them. Although this scenario may have been an exception in the past, good news is that it is becoming very common for authoritarian regimes to call for elections, and for rebels to boycott them. Both quite similarly pursue the same rationale: to make a show of force, and convince their supporters that are stronger than thought. Recent elections in Iraq, Afghanistan, Syria, Ukraine and Mali prove the point: governments want to run elections to show the weakness of the rebellion, and the latter want to boycott them to show the weakness of the regime.

In this paper I operationalize insurgent control with data from local elections in Peru, from 1980 to 1995. I use the capacity of Sendero Luminoso to boycott the election at the district level as a proxy for its strength in the area. Intuitively, several so-called Senderologos working on the Peruvian internal conflict had already suggested this strategy to gauge the strength of the Maoists (McClintock 1999?). Still, as far as I know, nobody has systematically applied this indicator to investigate the determinants of the conflict.

The results portray a neat geography of Sendero rebellion: high, secluded districts, populated by poor, culturally alienated denizens who mobilized in favor of their peasant identity and voted for leftwing parties were the hotspots for rebel control.

Hypotheses

Territorial control by rebel groups is one of the most common predictors of conflict features such as onset (De la Calle & Sanchez-Cuenca 2012), targeting (Kalyvas 2006) and tactic choice (De la Calle & Sanchez-Cuenca 2014). Still, control is usually used –if not in theory at least in practice- as a random shock affecting an endogenous outcome. Obviously, it is not. In this section I discuss four accounts of territorial control: state weakness, geography, politics and the dynamics of violence. The first account refers to the absence of the state from certain areas of the country. The existence of regions where the state is unable to impose its writ makes it easier for the rebels to seize and hold territory. Second, geographical barriers may facilitate the capacity of rebels to keep remote areas under their control. Deep forests and rough terrain are the best havens to hide from the government and set up camps. And third, control may be determined by rebel’s popularity. In the absence of the right geographic conditions, rebels still may be able to seize territory if they display a large command over the population. In a nutshell, rebels control territory when (i) either the state is too weak to impede it, or it is too difficult because of (ii) the geographical conditions of the country or (iii) the popular appeal of the insurgency. Let’s develop these points in more detail.

First, it is customary to claim in the literature on conflict that state capacity drives the occurrence of political violence. When the state is very strong, no matter how many indictments the aggrieved population may have against the government, there will be rarely episodes of violence. As the argument goes, a strong state has the capacity to preempt and smash down potential rebellions. To the contrary, when the state is very weak, even the smallest number of rebels will be large enough as to topple the government and “liberate” territory. Although the argument seems pretty straightforward, its mechanisms remain more obscure. The standard mechanism poses that state capacity is reflected in the coercive strength of the regime. Thus, the number of soldiers, the military equipment, and the amount of money spent in the production of armed security would be all good indicators of the strength of a state. A well-armed government leaves no room for rebels.

A complementary understanding would claim that the concept of state capacity also captures something that goes beyond military strength, being bureaucratic power or welfare prodigality. Bureaucratic strength signals the reach of the political institutions over the peoples inhabiting within the borders of the territory belonging to the state. States with a well-greased bureaucratic machine keep track of all their citizens, force them to contribute with taxes and work, and in exchange produce public goods with huge scale economies that rarely admit alternative competitors. On

the other side, large welfare spending strengthens the ability of the state to buy off potentially aggrieved constituencies, and therefore dries out internal rebellions.¹ Both factors -bureaucratic power and welfare prodigality- usually go together with ethnic homogeneity, which guarantee a larger state provision of public goods (Humphreys et al. 2007).

H1: the less Spanish speakers in the district, as a measure of state incapacity to spread the country's official language, the more odds of rebel control

An alternative understanding of state capacity comes from the wealth of the country. In this account, the existence of a large pool of poor citizens makes state institutions fragile and prone to rebel capture. As it is usually put, poverty lowers considerably the cost of opportunity of becoming a rebel. A seemingly risk factor driven by opportunity costs is the existence of large young cohorts (Urdal 2006), which also triggers the manpower feeding the conflict. Inevitably, as Hendrix (2010) shows, the two dimensions highly correlate, and countries with weak states that give a lot of opportunities for rebel entrepreneurs to challenge their power (poorly-financed army, low bureaucratic apparatus, no welfare programs) are the ones with a large pool of poor potential recruits.

H2: the poorer the district, the more odds the rebels will take it over

H3: the more youngsters in the district, as a measure of opportunity, the more odds of rebel control

Secondly, geography matters when dealing with domestic rebellions. Some of the longest, most protracted conflicts in the world involve some measure of rugged geography (think of the PKK in Turkey, the Lord's Resistance Army in Uganda and the Karen Liberation Army in Burma). As long time ago hypothesized by practitioners of rebellion such as Abraham Guillén and Carlos Marighela, it is a non-starter to try to carry out a rural guerrilla war in a flat country with few inhabitants living in the countryside. In contrast, insurgencies thrive more easily in countries with deep forests and rough terrain. It is not only that rebels have more opportunities to hide and operate freely, but also that counter-insurgency costs skyrocket when the terrain is uneven. Most large-n, cross-state studies have found that measures of geographic ruggedness correlate with conflict. Still, few works have tried to map the actual existence of the rebels with local measures of rough terrain. In this paper I do exactly that.

H4: the more rugged the district is (measured as the average altitude of the district), the more chances of being controlled by the rebels

¹ Arguably, this connection may be milder if the main source of welfare spending is primary commodity's remits.

H5: the further the district is from the provincial capital city, the more odds of rebel control

H6: the more populated the district is, the lower odds of falling under rebel control

Finally, control may also depend on political loyalties. Regardless of the capacity of the state to prevent rebel activities, and of the geographical conditions of the theater of war, it could still be the case that rebels can rely on the power in supporters' numbers to liberate territory. It is safe to claim that it is better to trigger the conflict in areas where rebels can recall some initial supporters to help generating new structures of government. In the same vein, many Latin American countries experienced land reforms with the goal of drying off the support for insurgent movements. In the particular case of Peru, the so-called revolutionary government headed by Gen. Velasco purposely tried to cut the grass under the rebels' feet by passing a very ambitious land reform that empowered thousands of landless peasants.

H7: the more initial political support for left-wing politics in the district, the more odds of being controlled by the rebels

H8: the better distributed the land, the less odds for rebels taking the district under control

There is, however, an ongoing debate on the impact of violence on political loyalties. For some authors, rather than being prompted by political support, violence is usually a consequence of areas of control and the dynamics of violence (Kalyvas and Kocher 2007). State repression is typically a main driver of loyalties not only during the conflict but also after its end. Thus, those districts most affected by indiscriminate military raids could be the ones offering more ripe opportunities for rebel capture.

H9: the larger the number of people killed by the military in a district, the more odds of rebel control in the near future

A growing literature that draws on the legacies of the past has also pointed out the building of “bad” institutions during the colonial times may have deleterious effects over contemporary outcomes. Thus, Dell (2010) has claimed that the Peruvian districts suffering the mita –a structure of mine exploitation based on indigenous forced labor– during the Spanish period experience contemporary lags in household consumption and prevalence of stunted growth in children. According to her, this effect works through a lower provision of public goods and a more unequal distribution of land tenure. The second path may have affected the long-term local inheritance of weak state infrastructure; the first one may have affected long-term grievances and the consequent support for leftwing politics and demand for rebellion.

H10: districts with past exploitative structures of resource extraction should be more prone to being controlled by rebels

In what follows, I introduce the Peruvian conflict. I then define rebel control and how to instrument it in Peru. Finally, I discuss the results and close with some preliminary conclusions.

Background

The Civil War in Peru started in 17 May 1980, when several SP cadres broke the ballot boxes in Chuschi, a small town in Cangallo, in Central Ayacucho. Driven by a fanatical understanding of marxism, in its maoist branch, SP took advantage of decades of failed sociopolitical mobilization to redress the political and economic grievances of the indigenous peoples of the Sierra (CVR 2003: volume VIII; Koc-Menard 2007).

Violence initially spread quickly in the Andean triangle (Huancavelica-Ayacucho-Apurímac), with the region of Northern Ayacucho as the SP's stronghold (Degregori 1986). The initial reluctance of Fernando Belaúnde's administration, the first democratic government since 1968, to give exceptional powers to the Military to deal with the rebellion contributed to quickening the growth of SP (Gorriti 1990). When the Army was called in, in 1982, its tactics of indiscriminate repression jeopardized even further the low levels of state legitimacy in the area (McClintock 1998). SP also took savagely on local populations that stood against its rule, as the Lucanamarca massacre, in which SP guerrillas slaughtered 69 farmers in reaction to the killing of two local SP cadres by local dwellers, exemplifies.

After consolidating its strongholds in the countryside, Sendero moved towards the Lima-Callao conurbation, site of one third of the country population, where they were also able to recruit many youngsters disappointed with the lack of opportunities and secular racial discrimination of the politico-economic establishment.² Taking advantage of the growing arrival of immigrants to Lima and the creation of new shantytowns from the scratch, Sendero set up urban commandos that carried out a permanent terrorist campaign against politicians and security forces in the safest areas of the country (Burt 1998).

During Alan Garcia's term (1985-1990), the Army got full powers to deal with the rebellion, declaring the government numerous provinces under emergency law (Palmer 1995). Broadly damaged for the introduction of self-defense anti-sendero militias in the rural areas (Degregori 1998, Starn 1998), SP launched the "final offensive", which pretended to encircle Lima to force the downfall of the capital by cutting all supply lines from the countryside.

² According to Chávez (1989, 26), 80 percent of 183 Sendero prisoners sentenced in Lima before 1986 were 30 year-old or younger.

SP's final efforts to bring down the regime failed. The “offensive” was a last attempt to mask SP's increasing weaknesses in the countryside, where many communities had set up government-backed self-defense squads. A higher reliance on terrorist tactics in Lima was countered by Fujimori's “autogolpe”. In April 5, 1992 Fujimori, president since July 1990, dissolved Congress and empowered the military with all the resources to smash Sendero. A few months later, the arrest in Lima of the longtime leader of the group, Abimael Guzmán (*Comrade Gonzalo*), gave Fujimori a tremendous success and large popularity. By the end of 1993, only one year after the fall of Guzmán, Sendero was largely over. His arrest had dramatic effects over the morale of the Sendero militants, and many gave up weapons and had recourse to the repentance law passed in 1992 (Bermúdez 1995). Guzman's later call for surrender simply fastened the process.

The war took 69,000 victims, between Sendero, state repression and the actions of other minor groups such as the MRTA and the far right-wing Commandos Rodrigo Franco. Most of the violence was concentrated around the central Sierra region, with Ayacucho, Huancavelica and Apurímac as the deadliest departments, plus the Hualлага corridor in Huánuco. Not by chance, these areas experienced the largest presence of the insurgency. Only Lima showed a different pattern, with many attacks but no open control by the rebels.

What is rebel control and how to measure it

It is time to define rebel control. By control I understand the capacity of the rebels to stop the normal functioning of state institutions in some specific areas of the country. Typical manifestations of this downfall are the impossibility for local dwellers to move freely, the incapacity of officials to levy taxes and the end of the state writ on imparting justice locally and policing the district. We best understand what control means if we look at conflicts where rebels clearly do not hold territory. Thus, terrorist groups are quintessentially clandestine, with their members carrying parallel lives that switch from legality to cover operations only when their unit is required to do so. In contrast, the prototypical guerrilla member dresses in military fatigue, is a professional of rebellion and gets involved in proto-state tasks –besides the purely armed activities (De la Calle & Sanchez-Cuenca 2012).

In practice, rebels have also to operate under the constraints of clandestinity in intermediate areas, in addition to holding safe rearguards where the insurgency is the new authority in town. Kalyvas' five-zone map of territorial control captures this idea very well. He defined territorial control by specifying a five-zone continuum: zone 1 is overwhelmingly controlled by the state; zone 2 is an area under the control of the state, but where rebels can operate clandestinely; zone 3 is the prototypical area under dispute, with contested authority over the district (usually, the army rules during the day, and the rebels during the night); zone 4 is an area of rebel control, where the army can still make inroads; and finally, zone 5 is an area far from the reach of the state forces.

Drawing on previous authors (McClintock 1998; Pareja & Torres 1989)³, I exploit in this paper the variation in electoral outcomes at the district level to operationalize SP's presence. As the Senderista leadership always called to boycott the elections in order to denounce the "democratic farce", local elections in many districts were either never held or annulled afterwards because of low turnout or failure of state authorities to oversee the election.

Besides, the number of spoiled votes is extraordinarily high in many districts. Given that during the civil war, seven local elections were called (1980, 1983, 1986, 1989, 1993 and 1995), we have enough data points as to generate a credible proxy for territorial control.⁴

I apply Kalyvas' five-zone continuum to the Peruvian civil war, but with some differences. Some scholars have argued that SP never had a sort of safe rearguard, where the state could not penetrate (CVR 2003), and my data prove it, since there was not even a town where the rebels were in charge during the whole cycle of violence. If there is no zone 5 in the data, this means that we will be only looking at the first four zones. For the sake of symmetry, I use a three-zone scale, where 1 is a safe/slightly contested state area, 2 is a contested area and 3 is an area under SP's hegemony (but not fully under its control).

I consider a district as under SP's hegemony (zone 3 in my scale) when the election was annulled (or never held). I consider a district as contested (zone 2 in my scale) when the election was held, but the number of spoiled votes was larger than 50 per cent of the votes cast. If the state is as strong as to run the election, but not strong enough as to prevent SP from forcing (or encouraging) local citizens to cast a spoiled ballot, the situation resembles one of contested power. Finally, if the election was run smoothly, and few spoiled votes were cast then the district belongs to zone 1 and is considered under safe state control. For inter-election years, the district maintains the value of the immediately previous election.

³ There are very thick accounts of control in some specific regions (such as Ayacucho, Puno and the Huallaga Valley), but they are hardly generalizable (see the regional narratives of the CVR, and Koc-Menard 2007).

⁴ I also gathered information about the local election held in 1966, just before the start of the Velasco dictatorship in 1968. It can be appreciated in table 2 that the number of annulled elections or with a high number of spoiled votes was very low.

TABLE I. REGIONAL VARIATION IN SP'S TERRITORIAL CONTROL

DEPARTMENT	STATE CONTROL	CONTESTED CONTROL	SENDERO CONTROL	TOTAL (#)
AMAZONAS	86.5	7.7	5.8	1,263
ANCASH	74.6	15.0	10.4	2,556
APURIMAC	43.5	30.6	25.9	1,169
AREQUIPA	83.6	12.3	4.1	1,684
AYACUCHO	39.8	25.0	35.2	1,592
CAJAMARCA	85.6	6.7	7.7	1,897
CALLAO	100			96
CUSCO	82.8	11.7	5.5	1,654
HUANCAVELICA	55.3	28.0	16.7	1,363
HUANUCO	68.3	16.4	15.3	1,078
ICA	98.2	1.4	0.5	668
JUNIN	77.4	12.4	10.3	1,903
LA LIBERTAD	74.9	7.0	18.2	1,250
LAMBAYEQUE	96.9	1.2	1.9	523
LIMA	85.2	7.0	7.9	2,606
LORETO	90.5	4.1	5.4	704
MADRE DE DIOS	70.1	1.5	28.5	137
MOQUEGUA	88.8	10.0	1.3	311
PASCO	68.3	23.2	8.5	422
PIURA	97.5	1.9	0.6	1,011
PUNO	78.2	14.6	7.2	1,654
SAN MARTIN	88.8	5.7	5.5	1,194
TACNA	84.5	3.5	12.0	399
TUMBES	98.4	0.0	1.6	189
UCAYALI	79.1	0.0	20.9	177
N (#)	21,220	3,344	2,936	27,500
N (%)	77.2	12.2	10.7	100

TABLE 2. TEMPORAL VARIATION IN SP'S TERRITORIAL CONTROL

DEPARTMENT	STATE CONTROL	CONTESTED CONTROL	SENDERO CONTROL	TOTAL ROW (#)
1966*	98.6	0.6	0.8	1,558
1980	85.0	11.2	3.8	1,603
1981	88.1	11.1	0.8	1,648
1982	85.0	11.2	3.8	1,603
1983	77.1	11.0	11.9	1,752
1984	77.1	11.0	11.9	1,752
1985	79.0	12.3	8.7	1,803
1986	83.5	6.0	10.5	1,779
1987	84.4	6.5	9.0	1,803
1988	83.5	6.0	10.5	1,780
1989	59.9	14.5	25.7	1,719
1990	59.9	14.5	25.7	1,719
1991	62.7	17.9	19.4	1,802
1992	59.9	14.5	25.6	1,718
1993	77.2	22.8	0.0	1,624
1994	77.2	22.8	0.0	1,624
1995	95.9	3.1	1.1	1,771
TOTAL COLUMN (#)	22,756	3,354	2,948	29,058
(% COLUMN)	78.3	11.5	10.2	100

*this year corresponds to the last local election before the onset of the military dictatorship headed by Velasco.

Tables 1 and 2 show variation in territorial control. On average, 20 percent of the districts were either contested or under rebel control, with a peak in the three most affected war areas: Ayacucho, Apurímac and Huancavelica (56, 52 and 41 percent, respectively). The temporal variation also fits the narrative about the war, since Sendero triggered its last offensive in the late 1980s, bringing the democracy to the brink of breakdown in 1992. The successful arrest of Abimael Guzmán, Sendero's founder and single leader, in September of 1992 ended the campaign and caused the quick defeat and collapse of the insurgency.

To test the hypotheses, I gathered information on state capacity (H1: the number of non-Spanish speakers in the district; H2: the number of poor families in the province by 1972; and H3: the percentage of the local population included in the interval 20-29 year old), geography (H4: the average altitude of the district; H5: the average euclidian distance of the district to the closest capital province; and H6: the logarithm of the

population of the district) and politics (H7: the share of votes for the APRA⁵ in the 1966 local election; H8: the number of hectares adjudicated by the revolutionary government over the total number of hectares as recollected in the Agrarian Census;⁶ H9: the number of killings by the military in the district; and H10: if the district had a mita-like extraction system during the colony).⁷

The result of all these sources of information is a dataset with around 30,000 observations (district-years), including 1,835 current districts and 16 years (from 1980 to 1995). In this paper, I use this dataset to investigate the distribution of rebel control during the Peruvian internal conflict.

Results

In this section I discuss two sets of models. I first run a multinomial model, where 0 denotes a district under state control, 1 a contested district, and 2 a district controlled by the rebels. Instead of utilizing an ordinal approach, I think the change from contested to rebel control goes beyond a simple additive function, as it is reasonable to expect that factors making a district contestable may differ from those turning it into a safe rebel haven.

Table 3 displays the models. I control for the lagged dependent variable, as well as for temporal effects.⁸ The observations are clustered by district to model the interdependence between observations belonging to the same district. There are two models. The first one includes all districts in Peru; the second includes only the sample of districts analyzed by Dell in her study of the impact of Mita structures on contemporary economic outcomes. Although the number of observations drops dramatically, the results do not vary relevantly, and what it is more relevant, districts with mita structures of economic production do not seem to have favored the emergence of Sendero. Therefore, in what follows I focus on Model 1.

⁵ Although the APRA (Alianza Popular Revolucionaria Americana) had already lost some of its radical appeal by the late 1960s, it was still the largest representative party of the left.

⁶ I also investigate whether the district was officially recognized as a “peasant community.” Trivelli (1992) documents the institutional recognition of “peasant communities” for a district as the end of a process of land-driven social mobilization. This binding title legally protected the lands encircled in the community as being the property of the district inhabitants.

⁷ Data for H1 (Spanish speakers), H3 (youngsters), H6 (population) come from the 1981 Peruvian Census. Data for H2 (poverty) from the 1972 Census (unfortunately, these data are aggregated to the provincial level, so this variable does not capture district-level variation). Data for H4 (altitude) and H5 (distance to closest city) have been elaborated from geo-referenced maps of the country. Data for H7 (apra voting) come from the 1966 local election. Data for H8 (land reform) come from the 1972 Agrarian census, as recollected by Guardado (2014). Finally, data for H9 (repression) come from the DTV dataset, and for H10 (mita) from Dell (2012).

⁸ I played with cubic splines and a time control for the presidency tenure (Fernando Belaúnde 1980-1985, Alan García 1985-1990, Alberto Fujimori 1990-1995). Tables report the splines models, but the ones with president tenures do not alter the results.

TABLE 3. MULTINOMIAL MODELS OF TERRITORIAL CONTROL.

	STATE V. CONTESTED	MODEL 1 STATE V. REBEL	CONTESTED V. REBEL	ST V. CONT	MODEL 2 ST V. REB	CONT V. REB
LAG CONTESTED	3.763*** (55.24)	1.706*** (13.11)	-2.058*** (-15.06)	3.511*** (29.31)	1.327*** (5.33)	-2.184*** (-8.48)
LAG REBEL CONTROL	2.342*** (22.30)	4.355*** (32.34)	2.013*** (14.17)	2.180*** (9.96)	4.402*** (17.17)	2.221*** (8.83)
ALTITUDE	0.503*** (6.18)	0.165* (2.32)	-0.338** (-3.25)	-1.063* (-2.16)	0.375 (0.67)	1.439* (2.43)
DISTANCE	0.00696*** (5.13)	0.00509** (2.80)	-0.00188 (-1.03)	0.0253*** (7.34)	0.0198** (3.08)	-0.00556 (-0.89)
SIZE OF DISTRICT	0.0162 (0.78)	-0.0288 (-1.06)	-0.0450 (-1.45)	0.0602 (1.29)	-0.0991 (-1.57)	-0.159* (-2.30)
20-29 YOUNGSTERS	-0.0256* (-2.42)	-0.0512*** (-4.03)	-0.0257+ (-1.80)	-0.0532 (-1.93)	-0.0743* (-2.13)	-0.0211 (-0.57)
POPULATION	-0.00256 (-0.09)	-0.0394 (-1.13)	-0.0369 (-0.89)	-0.138* (-2.47)	-0.00930 (-0.12)	-0.147+ (-1.75)
SPANISH SPEAKERS	-0.00601*** (-7.22)	-0.0034*** (-3.69)	0.00266* (2.49)	-0.00845* (-2.33)	-0.0129** (-3.29)	0.0213*** (5.15)
PROVINCIAL AFFLUENCE	-0.157*** (-6.23)	-0.209*** (-6.74)	-0.0522 (-1.47)	-0.205** (-2.94)	-0.602*** (-5.20)	-0.398*** (-3.62)
LAND REFORM	-0.265 (-1.53)	0.206 (0.97)	0.471* (2.07)	-0.710* (-2.51)	-2.001* (-2.26)	-1.292 (-1.56)
PEASANT DISTRICT	-0.209** (-3.09)	0.324*** (3.66)	0.533*** (5.15)	-0.563*** (-3.76)	0.236 (1.28)	0.799*** (3.77)
REPRESSION	0.0520+ (1.68)	0.0356 (1.25)	-0.0164* (-2.18)	0.207* (2.42)	0.215* (2.37)	0.00779 (0.18)
APRA66	0.0922 (1.57)	0.190** (2.82)	0.0980 (1.28)	0.129 (0.87)	0.0963 (0.58)	-0.0323 (-0.19)
MITA				-0.117 (-0.76)	-0.112 (-0.49)	0.00514 (0.02)
CONSTANT	-5.938*** (-7.81)	-3.152*** (-4.61)	2.786** (2.90)	6.403 (1.63)	-3.852 (-0.87)	-10.26* (-2.18)
CHI2		11697.55			2856.12	
P		0.000			0.000	
N		22945			4193	

T STATISTICS IN PARENTHESES; + < 0.1, * P < 0.05, ** P < 0.01, *** P < 0.001

I will discuss first the results on state capacity –I leave aside the lags for territorial control, which are rightly signed. The number of Spanish speakers in the district is a powerful predictor of the two types of control. However, areas under safe rebel control seem to have more Spanish speakers, when compared to contested areas. Although apparently puzzling, this could refer to the fact that Sendero’s rise took advantage of the increasing access to primary and secondary education taking place during the revolutionary government. Poor districts also enhanced rebel’s strength. As for the number of youngsters in the district, my results do not replicate the “youth bulge” hypothesis, since a larger proportion of youngsters in town meant a lower chance for Sendero disputing the district.

Part of this counterintuitive result comes, I argue, from the geographical features of the Sendero rebellion. Sendero did well in districts with a large altitude, and very

distant from the provincial capitals. These are usually very sparsely populated districts, with a subsistence economy that forces many locals to migrate out. Another interesting feature of altitude is the negative coefficient for the comparison between contested and rebel districts. Rebels may concentrate their operations in areas that are high-altitude but nonetheless suitable to gathering support from locals.

Finally, politics also offers some interesting cues about territorial control. State repression seems to affect the prospects of turning a state district into a contested one, but it has no effect on the district becoming rebel. There may be a nonlinear relationship between state repression and support for rebellion, by which military killings prompt some endogenous support for rebellion but a lot of repression prevents the district from falling into the rebels' hands.

The share of votes cast for the APRA in the 1966 local election is a good predictor of rebel control (although not of contested areas). Similarly, peasant communities were more akin to Sendero control, and the districts with a large number of land adjudications were also more prone to rebel control, compared to contestation.

This analysis draws a neat geography of Sendero rebellion: high, secluded districts, populated by poor, culturally alienated denizens who mobilized in favor of their peasant identity and voted for leftwing parties were the hotspots for rebel control. I run an additional test in Table 4, where I check the time passed by until the district came under sendero control –as this never happened in some districts, the dependent variable is truncated. This survival model takes duration into account, so it allows investigating why some districts join the rebellion earlier.

TABLE 4. SURVIVAL MODELS OF REBEL CONTROL.

	(1)	(2)
	WITHOUT MITA	WITH MITA
ALTITUDE	0.33**	-0.05
	(0.12)	(0.85)
DISTANCE TO CAPITAL	0.01**	0.00
	(0.00)	(0.01)
DISTRICT SIZE	-0.03	0.04
	(0.04)	(0.12)
SHARE OF 20-29 YOUNGSTERS	-0.11***	-0.21**
	(0.02)	(0.07)
POPULATION	-0.08+	-0.02
	(0.05)	(0.10)
SHARE OF SPANISH SPEAKERS	-0.00*	-0.01*
	(0.00)	(0.01)
AFFLUENCE	-0.20***	-0.59***
	(0.05)	(0.17)
LAND REFORM	-0.10	-2.58
	(0.32)	(1.49)
PEASANT COMMUNITY	0.16	-0.43
	(0.13)	(0.29)
REPRESSION	0.02+	0.27***
	(0.01)	(0.04)
SHARE OF APRA VOTES 1966	0.27**	0.16
	(0.10)	(0.23)
MITA DISTRICT		0.33
		(0.29)
CONSTANT	-5.44***	-1.54
	(1.14)	(6.86)
LN_P CONSTANT	0.44***	0.55***
	(0.04)	(0.09)
OBSERVATIONS	19163	3296
LOG LIKELIHOOD	-1120.01	-215.54
WALD TEST	136.90	106.48

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Standard errors in brackets.

Table 4 largely confirms the previous findings. Geography matters (altitude and distance to capital), but also so do state capacity (share of Spanish speakers in the district) and political loyalties (share of vote for APRA and the number of victims killed by the military). To tease out the different impact of the main determinants of rebel control, I estimated the predicted probabilities of having a district under Sendero control after running Model 1 in Table 3. Table 5 includes the probabilities.

TABLE 5. PREDICTED PROBABILITIES OF REBEL CONTROL.

VARIABLES	MARGINAL EFFECT	STANDARD ERROR
LAG OF CONTESTED	.0265***	.005
LAG OF REBEL	.167***	.005
ALTITUDE	.001	.003
DISTANCE	.0001+	.0001
SIZE	-.002	.001
SHARE OF YOUNGSTERS	-.002***	.001
POPULATION	-.002	.002
SPANISH SPEAKERS	-.0001+	.000
AFFLUENCE	-.007***	.001
LAND REFORM	.0130	.009
PEASANT COMMUNITY	.018***	.004
REPRESSION	.001	.001
SHARE OF APRA VOTE 1966	.007**	.003

If we calculate the predicted effects of the key variables on the odds of rebel control, we see that the largest effect, leaving aside the lag of the dependent variable, corresponds to APRA voting: a town with the average APRA voting in the 1966 local election (around 30 percent) has a 46 percent chance of being under sendero control. The impact other factors, such as altitude, Spanish speakers, poverty, peasant community, land reform and share of youngsters in the district are much smaller.

Conclusions

Rebels who do not control territory have barely a chance of achieving their political aims. In contrast, those insurgencies that seize and hold areas previously under the state hands can bring the state to the point of collapse, as we are witnessing these days in Iraq and Ukraine. Territorial control completely changes the dynamics of a conflict, since it produces an almost mechanical increase in recruitment and lethality.

Although it is wise to assume that different conflicts have different constellations of predictors, this paper has found that a combination of political loyalties with state weakness and geographical factors may explain why rebels sometimes are able to liberate territory. Against the idea that territorial conflict is mainly driven by structural factors such as geography and state capacity, the Peruvian case shows us that political loyalties have a large effect on the ability of rebels to seize territory. Even if the Sendero rebellion has been routinely portrayed as the work of ideological fanatics untied to the masses, there is an increasing body of local studies about the conflict reflecting the commonalities and connections between the Sendero rank and file and the indigenous communities (see, for instance, La Serna 2012).

The paths through which voting patterns in 1966 may have impacted on the geography of rebellion decades later remain to be investigated. A better proxy for ideological loyalties would be to use the electoral returns from leftwing parties in the 1980 local election. However, this is far from perfect for two reasons: first, the United Left coalition that grouped all parties to the left of APRA –but with no link to Sendero– only fielded lists after 1983, which makes it very difficult to figure out what platforms were leftwing in the 1980 election; and second, even if it would be possible to ascertain the ideological leanings of the candidacies, Sendero already boycotted the election in some districts. An alternative solution is to trace the genealogy of the self-defence groups, originally set up in the 1970s to fight against cattle rustlers, but with a social and political identity. It is worth investigating whether districts that surmounted issues of collective action before the rise of Sendero were able to stop (or ignite) the rebellion.

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