

Violent Corruption and Violent Lobbying: The Logic(s) of Cartel-State Conflict in Mexico, Brazil and Colombia

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Abstract

Why do drug traffickers fight states? In Mexico, Colombia and Rio de Janeiro, Brazil, cartel-state conflict has been just as lethal, disruptive, and prolonged as civil war. Yet rebel insurgents fight for and sometimes win formal concessions or outright victory. Why fight the state if, like cartels, you seek neither to topple nor secede from it? More puzzling, recent militarized state crackdowns on cartels have led to sharply divergent outcomes: on one hand, the conflagration that has engulfed Mexico since 2006, on the other, the surprising success of Rio de Janeiro's Pacification strategy. Why do some crackdowns lead to violent blowback, while others successfully curtail cartel-state conflict? I distinguish the logic of violent lobbying-direct pressure on leaders to change de jure policy-from violent corruption-epitomized by drug lord Pablo Escobar's phrase '*plata o plomo?*' (bribe or bullet?) and argue that the latter has been more central to cartel violence in Mexico and Brazil. A formal model illustrates how bribe negotiations can turn violent, and highlights a fundamental dilemma: states cannot crack down on traffickers without inadvertently giving corrupt enforcers additional leverage to extract illicit rents. I find that when corruption is rampant and repression is not conditional on cartels's use of violence, crackdowns give cartels increased incentive to fight back. I then draw on case study evidence to argue that Rio de Janeiro's recent turn to violence-reduction over eradication has induced cartels there to switch to more peaceful strategies, while Mexico's insistence on pursuing all cartels without distinction has driven sharp increases in cartel-state violence.

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1 Introduction

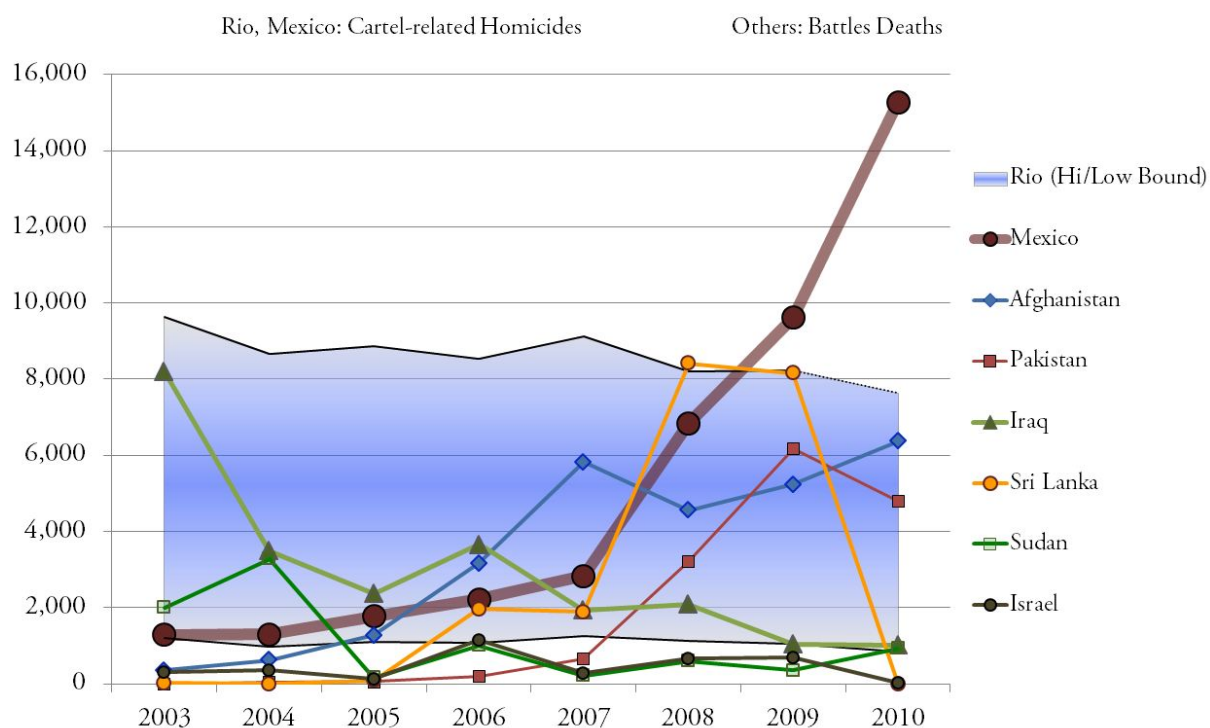
In December 2006, less than two weeks after his inauguration, President Felipe Calderón declared “war” on his country’s drug trade, launching what would soon become the largest non-humanitarian deployment of Mexico’s army in modern times. Drug violence had become an issue during the prior administration of Vicente Fox (2000-2006), doubling in intensity from about one to two thousand deaths per year. Calderón’s stated expectation was that the crackdown would quickly shatter the cartels and curtail both inter-cartel and then-incipient anti-state violence. Not even his most vocal critics anticipated that five years later, splintered cartels would be an order of magnitude *more* violent, with over 16,000 deaths in 2011 alone. And though much of the killing may be among drug traffickers, the most chilling aspect has been cartels’ willingness to go on the offensive against the Mexican state—thousands of direct attacks on army troops, dozens of mayors and gubernatorial candidates assassinated, police chiefs murdered in their homes and offices—coupled with the state’s conspicuous inability to rein them in.

In late November 2010, Governor Sérgio Cabral of Rio de Janeiro prepared to launch a massive invasion of Complexo do Alemão—an enormous urban zone that had been under militarized domination by the city’s largest drug syndicate for decades. Unlike Calderón, Cabral expected the worst. In 2007, a lethal but failed invasion under his command had left Alemão under the control of the traffickers and blood on the hands of the government. In the interim, and partly in response to this failure, Cabral unveiled a new policy. His ‘pacification’ strategy involved pre-announced military occupations of individual *favelas* (slums), followed by the installation of permanent community policing units known as UPPs.¹ It also involved an explicit shift in policing priorities away from eradicating the drug trade toward minimizing violence and the armed presence of traffickers. Pacification had a successful rollout: traffickers fled the first dozen occupations rather than stand and fight. But these were smaller favelas, with smaller local crews; the traffickers had beaten a tactical retreat, and were now gathered in Alemão, preparing, it seemed, to make a stand. As thousands of troops and dozens of armored vehicles swarmed around the entrance to Alemão, even the governor’s backers preemptively warned of a bloodbath. Instead, the traffickers mostly fled or turned themselves in. More surprising still, since the fall of Alemão, Rio’s syndicates have abandoned their traditional strategy of confrontation, allowing the state to rapidly recapture key swathes of territory without firing a shot. A corner seems to have been turned: the number of killings by police in armed confrontations, which averaged 1,000 per year between 2002 and 2008, fell to just 525 in 2011.

These vignettes capture both the terrifying scale that drug wars can reach, and our profound lack of understanding of the mechanisms that drive the violence. Police in Rio alone regularly kill enough civilians to put the conflict over the common 1,000 battle-deaths-per-year threshold for civil wars, while by some measures Mexico is now the most violent intra-state conflict of the 21st century (Figure 1.1). The overt war against the Colombian state waged by Pablo Escobar from 1984 until his death in 1993 remains unique in some ways, but sustained cartel-state conflict has now ravaged Latin America’s

¹Unidades de Polícia Pacificadora, literally Pacifying Police Units. The term ‘UPP’ has come to stand for the larger pacification strategy, and, due to the success of the program, become a kind of brand name: a raft of social programs implemented by the municipality, for example, was named “Social UPP.” Because the focus of my analysis is the interaction between cartels and states, I do not explore at length the community-policing, human-rights aspect of the UPP program, though it is of substantive and normative importance in its own right. As such, I usually refer to the program as ‘the pacification strategy’ or simply ‘pacification’ rather than ‘UPP,’ though the terms are often used interchangeably. See Stahlberg (2011) for a detailed description of the UPP program.

FIGURE I.1. Civil and Criminal War Death Tolls, 2003-2011



Sources: Civil wars: Gleditsch et al. (2002); Themnér and Wallensteen (2011); UCDP (2011); Mexico: Shirk and Ríos (2011); Rio: 'Lower bound' series are police killings of civilians in armed confrontations, from ISP-RJ (2012); 'Upper bound' data are corrected intentional homicide figures from Cerqueira (2011).

three largest countries, threatens to overrun Central America, and may even be spilling into US border regions. Yet the study of drug wars is in its infancy, and desperately lacks both the strong theoretical framework and comparative empirical findings that have been critical to the flurry of progress made on the study of civil war in the past two decades. As the still-worsening violence in Mexico makes clear, this knowledge gap has enormous real-world consequences.

The genuine surprise of decision-makers at the reactions of cartels² points to a fundamental puzzle: why do criminals take up arms against the state? By comparison, civil war is not nearly as puzzling: whether fighting for the political center or the periphery, insurgents actually stand a reasonable chance of winning formal concessions or scoring an outright victory.³ But why fight the state if, like cartels,

²An interesting debate surrounds the term 'cartel': economists maintain that no drug trafficking organization (DTO) or group thereof ever really engaged in successful price-fixing collusion, their definition of a cartel. Others point out that real cooperation occurred, and the fact that most 'cartels' are in fact made up of autonomous actors makes it a useful term. Grillo (2011) adds an interesting discussion of how the term has been useful to both journalists and drug warriors by reifying and making into a tangible enemy a rather diffuse group of actors. For my purposes, another layer of complexity arises across cases: Mexican and Colombian DTOs are commonly called 'cartels' by authorities, journalists, scholars, and the groups themselves, while the Brazilian DTOs I study are not. Yet they share the common characteristic of interest: they engage the state in armed confrontation. In this study, I use 'prison-based syndicate' or 'syndicate' when discussing Rio's DTOs in isolation, and, sometimes, 'cartel' when considering them together with the Mexican and Colombian cases. I use the term 'DTO' itself sparingly and generically to refer to the broader class of trafficking outfits, violent or not, of all sizes.

³Fearon and Laitin (2007) find that 24% of center-seeking and 17% of autonomy-seeking civil wars ended in outright

you seek neither to topple nor secede from it? Taken together, the vignettes above point to a related puzzle: Why do some crackdowns seem to produce violent blowback—a sharp increase in cartel-state conflict—while others appear to have successfully curtailed it? These are the questions this study seeks to answer.

The key to both puzzles, this study argues, is that cartel-state conflict is fundamentally different from insurgency. Cartels turn to brazen, anti-state violence, not in hopes of conquering mutually prized territory or resources, as in civil war, but to influence state policy outcomes. In some respects, cartels are not that different from most interest groups: expending resources to influence policy outcomes, sometimes at the level of policy formation, via lobbying, sometimes at the level of policy enforcement, via corruption. Yet licit interest groups are not targeted for destruction by the state, and generally possess no means of physical coercion. These factors can make violence an attractive pathway to policy influence for criminal groups, but there are high costs and risks to fighting as well. The decision to turn to violent forms of corruption and lobbying is thus highly sensitive to state policy itself. For this reason, policy shifts, and in particular state crackdowns, can trigger the sudden shifts in cartel-state conflict observed in Mexico, Brazil, and Colombia.

Building on Kalyvas' (2006) foundational argument that different forms of violence serve different purposes within civil war, I identify two principal 'logics' of anti-state violence in criminal war: *violent corruption* and *violent lobbying*. The larger study from which this paper is drawn discusses additional logics that may play a subsidiary role: competitive signaling, and what is known in Mexico as '*calentar la plaza*,' i.e. bringing down heat on rivals, as well as interactions among these dynamics (Lessing, 2012:30-35).⁴

This paper focuses on violent corruption, the use of violence to intimidate enforcers and lower the price of bribes—exemplified by Pablo Escobar's infamous offer to officials, "*Plata o plomo?*" ("the bribe or the bullet?"), as the most important of the logics at work. While Escobar's *violent lobbying*—in the form of car bombs and elite kidnappings—is often better remembered, his use of violent corruption, including targeted violence against state enforcers like police, investigators and sentencing judges and *fiscales*, preceded and perhaps outlived his open campaign against Colombia's leaders. In Mexico and Brazil, moreover violent corruption is clearly the dominant dynamic, though incidents of violent lobbying have occurred in both. Section 2 lays out the conceptual distinction between these two forms of policy influence and the relevant 'pieces' of the state they are directed at, and discusses the reasons why violent corruption has been more prominent across cases.

Section 3 presents a formal model of violent corruption (in the form of a bribe negotiation over the rents from the drug trade). The model captures a fundamental dilemma of the state: leaders cannot

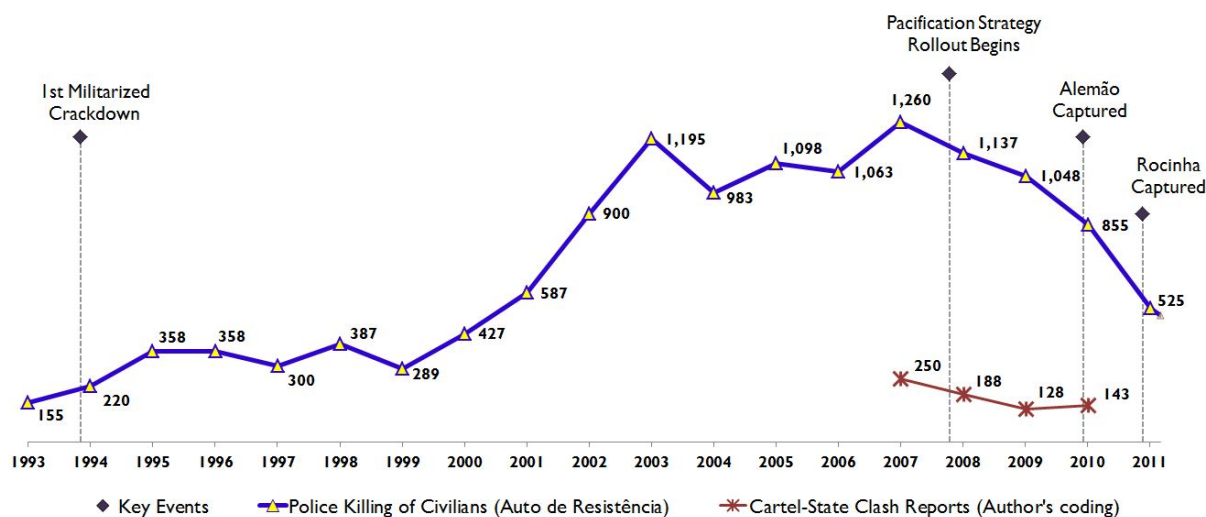
rebel military victory, while another 23% of the latter saw rebels win autonomy after fighting the state to a draw. On the flip side, states crush the rebels in roughly half of all civil wars; in drug wars, by contrast, states are frequently able to dismantle specific cartels, but have never successfully eradicated (or even seriously diminished) the drug trade within their borders. The one potential exception is the Taliban, which succeeded in virtually eliminating opium production in Afghanistan in 2001, but the long-term viability of this achievement is unclear since the regime was deposed by the US later that year, and opium production quickly returned to its historical trend (Farrell and Thorne, 2005).

⁴These logics are not intended to exhaust the universe of possible motivations; in particular, I do not consider the issue of 'expressive' or 'irrational' violence. Nor are these logics mutually exclusive: a single act of violence can achieve multiple ends, intimidating, say, both police and rivals. Finally, I do not claim that all or even most drug violence is cartel-state conflict (it is not), nor that fighting *among* cartels (what I call *turf war*) does not play a role in triggering cartel-state conflict. Rather, by delineating the different logics that lead cartels to go on the offensive against the state, I am able to make theoretical predictions about the effects of heightened turf war on cartel-state conflict: increased fragmentation and competition among cartels should exacerbate violent corruption, but attenuate violent lobbying.

crack down on traffickers without inadvertently giving corrupt enforcers (police, judges, etc.) additional leverage to extract bribes. In this sense, this synthesizes and formalizes two insights from the literature on organized crime and corruption. First, Fiorentini and Peltzman’s observation that “the greater the effectiveness of deterrence activities, the more they create incentives [for criminals] to invest in corruption and manipulation of the deterrence agencies themselves” (Fiorentini and Peltzman, 1997:27). Second, Dal Bó et al.’s argument that the ability to simultaneously make threats and offer bribes should lead to lower bribes in equilibrium. The model of violent corruption presented here shows how and when the increased incentives created by a crackdown can lead cartels to substitute additional violence for higher bribes.

To preview the results, state crackdowns provoke (additional) cartel-state violence when they 1) occur in a context of widespread police corruption (in the sense of non-enforcement in exchange for bribes);⁵ and 2) are not *conditional* on cartels’ behavior, i.e., do not explicitly target violent cartels for additional or differential repression. The intuition behind 1) is that crackdowns give corrupt enforcers more leverage over cartels, pushing up bribe demands. To avoid paying this higher price in full, cartels can increase spending on arms; the result is more frequent fighting but a smaller bribe when agreement is reached. This mechanism only works, though, when police are more ‘afraid’ of cartel violence than getting caught for bribe-taking—a realistic assumption when corruption is widespread and rarely punished. The model also shows that crackdowns exacerbate violence to the extent that they are unconditional, such that opting for violence does not expose cartels to additional levels of repression. Conversely, if repression is sufficiently conditional on cartels’ behavior, then they will never fight, and moreover, there will be no bribes in equilibrium.

FIGURE I.2. Rio’s Drug War: 1993–2011

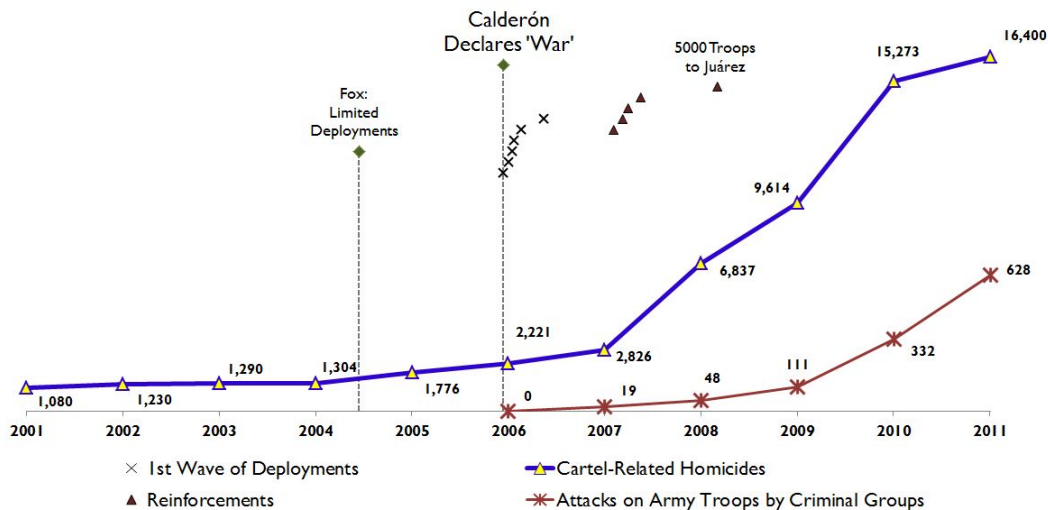


Sources: ISP-RJ (2012); SSP-RJ (2003); Author’s coding of media reports (NRI/OBIVAN)

The model thus provides a clear mechanism linking state crackdowns, police corruption, and violent blowback by cartels. It also points to *conditionality of repression*—the extent to which states apply

⁵In this setting, pure intimidation, in which enforcers simply choose not to enforce the law without actually accepting a bribe, is equivalent to a bribe priced at zero. This rests on the assumption that enforcers expected punishment for corruption is constant with respect to the price of the bribe. One future avenue of research would be to relax this assumption.

FIGURE 1.3. Mexico's Drug War: 2001–2011



Sources: Aranda (2011); Shirk and Ríos (2011)

additional repression to cartels that opt for violence—as a potentially critical variable in explaining the divergent response of cartels to crackdowns across cases. In Section 4, I use evidence from qualitative case studies to argue that it was the shift to a conditional repression in Rio de Janeiro—with the innovative ‘pacification’ policing program—that led cartels to shift away from confrontation and toward non-violent ‘hiding’ strategies (Figure 1.2). In Mexico, by contrast, the government insisted on a massive but unconditional crackdown, pursuing all cartels without distinction, leading to sharp increases in cartel-state violence (Figure 1.3). Section 5 concludes.

2 Conceptual Framework

This section situates the study at hand with respect to previous literature, then lays out a number of concepts that will be central to the analysis to follow.

2.1 Civil War vs. Criminal War

Over the last three decades, the study of war has increasingly consisted of the study of civil war. Substantively, international war declined in the second half of the 20th century while civil war was, until recently, on the rise (Fearon and Laitin, 2003). Analytically, studying sub-national violence has led scholars to move beyond abstract theories of international systems, in which states are taken to be unitary actors, toward topics such as the interplay of factions *within* states, the internal dynamics of insurgencies and revolutionary movements (Weinstein, 2006), and the conceptual and empirical distinctions among types of violence employed in civil wars (Kalyvas, 2006). Yet this approach may be coming up against important limits. Cross-national regressions have revealed a robust negative correlation between civil war prevalence and GDP, but are too coarse-grained to distinguish among leading interpretations of this fact, leaving the ‘greed vs. grievance’ debate deeply muddled (Blattman and Miguel, 2010:18). Key qualitative findings point to the importance of illicit rents to civil war

belligerents, many of whose originally ideological motivations have become ‘contaminated’ by the drug trade and other illicit activities (Labrousse, 2005). Above all, while civil wars in general (Blattman and Miguel, 2010), and insurgencies in particular (Kalyvas and Balcells, 2006), have been on the decline since the end of the Cold War, cartel-state violence has ravaged Latin America’s three largest countries, Brazil, Mexico and Colombia, and is now spilling into Central America and possibly the US. Precisely because cartel-state conflict is under-studied and -conceptualized, there is little systematic data on its prevalence, but it seems safe to say that it has surpassed armed insurgency as the most salient form of sub-national conflict in the Western Hemisphere.

The imbalance is illustrated by the fact that none of the case episodes in this study fall under the definitions of ‘state-based armed conflict’ employed in the UCDP/PRIO Armed Conflict Dataset (Gleditsch et al., 2002; Themnér and Wallensteen, 2011), probably the single most widely used quantitative source on armed conflict. The most recent version covers the period 1946-2010, but includes just two conflict-year observations pertaining to Mexico, involving the Zapatista (EZPN) uprising in 1994 and another involving the EPR in 1996. These conflicts had less than 150 and 50 battle deaths respectively. The dataset excludes Mexico’s current violence, although it has claimed some 47,000 lives since 2006. Similarly, Brazil is entirely absent from the dataset, though Rio de Janeiro’s military police alone have killed more than 1,000 people *per year* in armed confrontations since 2003. And although Colombia is well represented in the dataset, only conflict between the state and the country’s insurgent groups is included. This is not to fault the UCDP dataset. Its definition of state-based armed conflict is clear:

[A] contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths. (Themnér and Wallensteen, 2011:1)

Cartel-state conflict falls short of this definition because of the nature of what UCDP calls an ‘incompatibility’: cartels are generally not fighting “for the replacement of the central government, or the change of its composition,” nor for “the change of the state in control of a certain territory ...secession or autonomy.”(3) Echoing the UCDP definition, Fearon and Laitin (2007:1-2) observe that

The aim of the rebel side in almost all civil wars is to take over the central government or to take political control of a region of the country. Rebel groups rarely say ‘we are fighting in order to induce the government to change its policy on X, and once that is accomplished we will disband and leave politics.’

Yet this is *almost exactly* what cartels ‘say’ when they attack state forces. Consider the following communiqués from Pablo Escobar-led group Los Extraditables (“The Extraditables”), regarding its use of anti-state and terroristic violence:

We solemnly promise, before the Catholic Church and the Colombian people, that once extradition is legally prohibited, we will immediately suspend our military actions against the extraditers.

-- Open letter from Los Extraditables, December 22, 1986

Recognizing the position of the National Constitutional Assembly [to ban extradition in the new constitution], we have decided to disband our entire military organization.

-- Open letter from Los Extraditables, July 3, 1991

This case is uniquely clear-cut, as there was a piece of formal, de jure policy (extradition) which cartels explicitly set out to affect. More commonly, cartels focus their energy on changing the way policy is enforced, what I call de facto policy below. Following Scott (1969), efforts, even violent ones, to change policy outcomes can occur at both levels. And whichever level cartels aim their efforts at, they clearly do not share insurgents' interest in wresting formal political control from the state.

It is understandable that military and security scholars tend to see violent drug cartels as 'post-Cold War insurgencies' (Metz, 2007), 'criminal insurgencies' (Sullivan and Elkus, 2008), 'the new urban insurgency' (Manwaring, 2005) or 'criminal guerrillas' (Souza Pinheiro, 2009), given that criminal groups not only attack the state, but they often employ many of the tactics of classic guerrilla warfare (8). However, although Metz's *Rethinking Insurgency* (2007) clearly identifies the critical difference in the *reasons why* rebels as opposed to criminal groups attack the state, this has been lost somewhat in the proliferation of 'insurgency with adjectives' his book set off. Indeed, the conceptual stretching (Collier and Levitsky, 1997; Sartori, 1970) extends beyond 'insurgency' to 'territory,' 'space,' and even 'the state' itself (Sullivan, 2012:16-18), as scholars seek to make sense of a plethora of new cases (gangs, cartels, terrorists, and 'netwarriors' (18)) in terms of familiar, older ones.

Rather than 'rethink insurgency' to the point where it no longer implies an effort to topple or secede from a state, I treat the fundamental difference in 'aims of fighting' as a primitive, a key dimension along which conflicts vary. This leads to a distinction between 'criminal war'—of which cartel-state conflict is the leading example⁶—and revolutionary or secessionist insurgency. Unlike rebels, cartels fight not to topple or replace the state but to *constrain* it from interfering in their rent-producing activity, and would have no use for anti-state violence if the state got off their back. In this regard, cartels are often said to be 'apolitical,' but this misses the point: even an apolitical insurgency, driven entirely by 'greed' rather than 'grievance,' fights in order to take possession of something that the state currently has. Cartels do not want what the state has; conversely, while states fight rebels in order to recapture or consolidate political control over their own territory, states fight cartels to constrain, not capture, the illicit markets that cartels control.

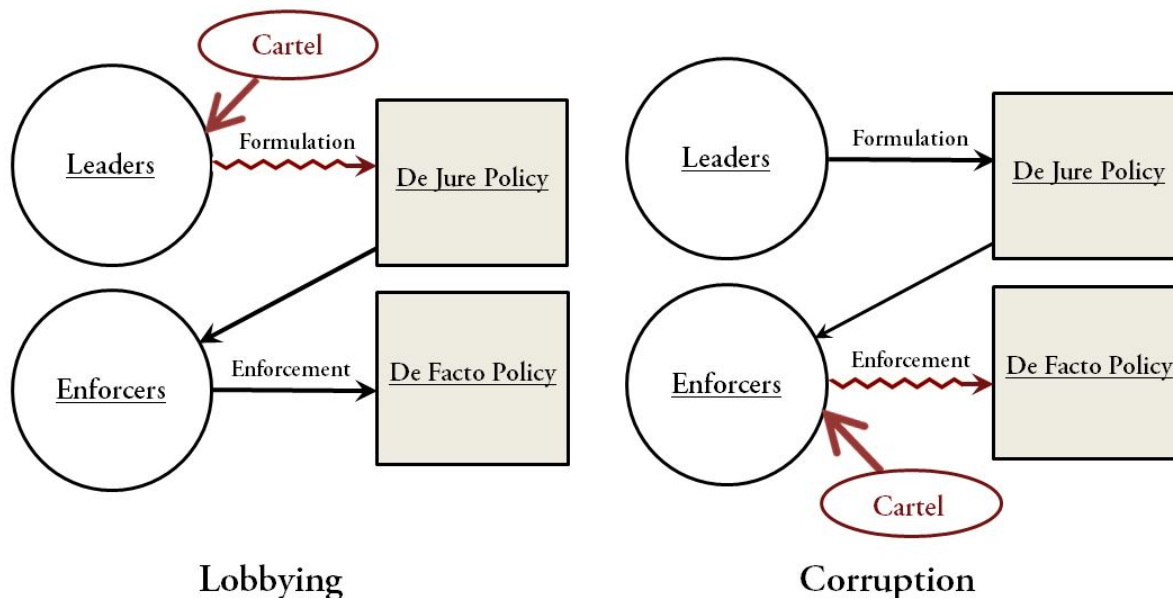
2.2 Levels of Policy Influence: Lobbying vs. Corruption

If criminal war is ultimately a form of policy influence, then there is a sense in which cartels are acting more like interest groups than insurgents. Like all interest groups, cartels may act to influence policy at two distinct levels (Scott, 1969). In general, cartels can only rarely hope to directly influence the formation of de jure drug policy (e.g. the legal status of certain substances, appropriations for and deployment of armed forces and police, extradition treaties). Rather, cartels know that in a context of corruption, the intensity and incidence of enforcement carried out on the ground—'de facto policy'—is malleable, even when de jure policy is not. Let us broadly denote efforts to influence the formulation of de jure policy as *lobbying*, an activity normally aimed at *leaders* (often presidents and governors, but also decision-making bureaucrats, legislators, and precedent-setting judges); and efforts to influence enforcement, or de facto policy, as *corruption*, which is usually aimed at *enforcers* (police, investigators, sentencing judges). The distinction is captured in Figure 2.1.

Consider, for concreteness, the case of one of my informants, a public prosecutor in Colombia who was assigned an investigation of a trafficker from the Medellín cartel, and soon thereafter received a call from a representative of the cartel offering him "money or bullets, your choice; there's plenty of

⁶The sustained campaign by the Sicilian mafia against the Italian state in the 1990s would be another.

FIGURE 2.1. Levels of Policy Influence



each to go around.”⁷ This was not an attempt to force a change in the state’s de jure policy of attacking the cartel; rather, it was an attempt to alter de facto policy, by pressuring the prosecutor to reduce or curtail entirely his enforcement of the de jure policy in question. At the root of such an action by the cartel is principal-agent problem between two ‘halves’ of the state. Bribery and intimidation exacerbate this principal-agent problem by raising enforcers’ payoffs to non-enforcement, thus driving a wedge between enforcers’ and leaders’ preferences and introducing slippage between de jure and de facto policy.

It bears pointing out that this disaggregation of the state highlights the differences between cartel-state conflict and civil war from another angle. It is perfectly reasonable and common to model civil wars as a simple clash between two actors, government, and rebels. One *could* focus one’s analysis on the principal-agent problem between leaders and the armed forces, in which case one would need to disaggregate the state, but such a focus is certainly not crucial to most accounts of the drivers of civil war. By contrast, it is simply not possible to usefully capture the logic of intimidatory cartel violence if we treat the state as a unitary actor.

2.3 Violent Corruption and Violent Lobbying

At the most general level, state crackdowns represent movement away from cartels’ ideal policy, and thus can increase cartels’ incentives to use the means at their disposal to shift policy back. Of course, non-state actors do not rely exclusively on violence to do this: strategies of state capture—including bribery, corruption, blackmail, vote buying, and (illicit) campaign contributions—are also ultimately aimed at constraining and influencing the state’s actions. Indeed, political state-capture strategies are

⁷ Author interview, former *fiscal sin rostro* (government investigator granted official anonymity during the narco-violence period), December 27, 2010.

often at odds with more violent strategies, which can lead to the demonization and increased scrutiny of perpetrating groups. The result is a rather sharp divide between a ‘hiding’ approach that seeks to corrupt state officials while minimizing confrontation and remaining out of public view, and a ‘fighting’ strategy in which criminal groups use violence to intimidate state actors and overcome resistance to bribe-taking. While ‘hiding’ may not seem like the opposite of ‘fighting,’ the nature of the enterprise makes the two approaches mutually exclusive, and the decision to take on the state often sends criminal groups down a path that is difficult to walk back. Bribery, corruption and, more broadly, state-capture are thus central to both approaches, but the relative advantages of fighting—increased leverage over state actors—can only be won at the cost of the low profile that hiding affords, and vice versa.

Crossing this dimension with the corruption/lobbying distinction yields the four distinct approaches seen in Figure 2.2. ‘Hiding’ strategies corresponds roughly to our conventional notions of corruption and lobbying.⁸ However, when cartels adopt fighting strategies, two new approaches arise: in *violent corruption*, cartels use violence to induce enforcers to change de facto policy. Generally speaking, this takes the form of some combination of threats and bribes in exchange for non-enforcement—the focus of the model of violent corruption presented in the next section. However, other variants are possible: a threat with no bribe offer (what we might think of as ‘pure intimidation’); a threat/bribe combination aimed at getting enforcers to inflict repression on rivals; or simply the elimination of an individual enforcer seen to be unusually tenacious or incorruptible. In *violent lobbying*, cartels use violence to induce leaders to change de jure policy, generally taking the form of a campaign of public attacks which cartels offer to curtail in exchange for reduced repression along a specific policy dimension.

FIGURE 2.2. Strategies of Policy Influence

		Level of Policy Influence	
		Enforcement (de facto)	Formulation (de jure)
Type of Cartel Strategy	Fighting	<u>Violent Corruption</u>	<u>Violent Lobbying</u>
	Medellín Cartel	“The bullet or the bribe?”	Narco-Terrorism
	Hiding	<u>Corruption</u>	<u>(Illicit) Lobbying</u>
	Cali Cartel	“Why kill judges when you can buy them?”	Narco-Politics

The divide between hiding and fighting, represented by the rows of Figure 2.2, is exemplified by

⁸Since bribery is always illegal, it is of secondary importance whether the actor engaging in it is involved in a strictly illicit business or a potentially legitimate business seeking to violate a law or regulation. Lobbying, on the other hand, can run the gamut from above-board to abjectly criminal, and in the case of cartels, is likely to tend toward the latter. Thus whereas it would make no sense to label the bottom-left cell ‘illicit corruption,’ the non-violent lobbying in the bottom-right cell is virtually guaranteed to be ‘illicit.’

Colombia's two principal mid-80s drug cartels. Rodrigo Orejuela, leader of the Cartel de Cali, contrasted his approach to corruption with that of Pablo Escobar's Cartel de Medellín thus: "Why kill judges when you can buy them?" (Lee, 1995, :280). Escobar, for his part, had nothing against buying judges; he simply found that by offering them the infamous choice between *plata o plomo* ('bribe or bullet') he could buy them more cheaply.⁹ Meanwhile, at the de jure level of policy influence, Escobar's campaigns of terroristic violence (public bombings, high-level assassinations, and elite kidnappings) typify violent lobbying, accompanied as they were by overt demands on the government to abolish extradition and negotiate an amnesty like those conceded to the country's guerilla insurgents. The Cali cartel, in contrast, forswore a frontal assault on leaders, seeking instead to influence them through material inducements. This led naturally to Orejuela's 'Champagne Project,' the goal of which was to elect a president who would agree to a de jure policy of amnesty. While the cartel offered to donate heavily to both major candidates in 1994, in the end only Ernesto Samper accepted, leading Miguel Orejuela to declare "We've already got ourselves a president." (Chepesiuk, 2003:190).

Note that while there is a sharp divide between hiding and fighting strategies—since it is hard to maintain a low-profile once one has engaged in anti-state violence—corruption and lobbying, the columns in Figure 2.2, are not mutually exclusive. Overall, though, violent corruption appears to be the primary mechanism driving cartel-state conflict. To be sure, violent lobbying is, by its nature, highly salient and disruptive—generally carried out by means of terror tactics calculated to generate a sense of crisis and attendant political costs for leaders. As such, it dominates headlines and histories, directly touching a broader swathe of the population than enforcer-directed violent corruption. However, the conditions under which the logic of violent lobbying makes sense are more restrictive. First, it requires an open question of de jure policy, such as extradition, to lobby over. Second, and perhaps more importantly, it is subject to a free-rider problem: de jure policy tends to be universal and non-excludable, while the gains from non-enforcement are by their nature particularistic. This explains why violent lobbying occurred prominently in Colombia, where cartels were united at its outset, but less so in Mexico and Brazil, where de jure policy was less open to debate and cartels were in competition with one another.

3 A Model of Violent Corruption

Discussing the economic aspects of organized crime, Schelling (1967) noted that an organization that controlled when and where police enforced the law could effectively extract rents from the direct providers of illicit goods and services. In the 1960s Miami he describes, the Mafia played this role, acting as what Reuter called "the licensed collector of the rents associated with the franchise held by the corrupt police department[.]" (2009:277). Because the mob held monopoly power in both directions, it successfully extorted half of bookmakers' profits while paying the police relatively small bribes. But, Schelling notes,

It could have been the other way around, with the police using the syndicate as their agency to negotiate and collect from the bookmakers, and if the police had been organized and disciplined as a monopoly, it would have been the police, not the syndicate, that we should put at the top of our organizational pyramid. From the testimony, though, it is evident that the initiative and

⁹The transformation of these two cartels from allies in the early 1980s into mortal enemies by the decade's end, culminating in Orejuela's decision to join the government in an all-out war on Escobar, was, I argue elsewhere, driven less by personal vendetta or even pure greed than the inexorable logic of their divergent strategies (Lessing, 2012:85-95).

entrepreneurship came from the syndicate, which had the talent and organization for this kind of business, and that the police lacked the centralized authority for exploiting to their own benefit the power they had over the bookmakers. (Schelling, 1967:119)

In settings where corruption is regularized and tacitly accepted, police—especially those in direct contact with illicit businesses—often possess precisely this “talent and organization”. In such cases, it is not merely the other way around; police may simply cut out the middleman and directly negotiate with cartels. The ability to selectively enforce the law gives corrupt police the ability to sell non-enforcement at the price of a bribe; this ability lays at the heart of what Snyder and Durán Martínez (2009) call ‘state-sponsored protection rackets’.

This presents a conundrum, one which lays at the heart of the model presented here. In the topsy-turvy world of regularized police corruption, enforcement of the law is simultaneously the preferred outcome from the perspective of leaders (and, perhaps, society as a whole), and the threat corrupt enforcers use to extract rents from illicit businesses. When leaders increase the level of the repression at the *de jure* level, it inadvertently but necessarily hands corrupt enforcers additional leverage over cartels at the *de facto* level.

Such a racket can be a very effective method for extracting the illicit rents from the drug trade: the kingpin of Rocinha, the largest favela in Rio, if not Latin America, said at his 2011 arrest that he had regularly paid 50% of his gross receipts in bribes to police, often leaving him without any profits at all (Werneck, 2011). One way for cartels to avoid being bargained down to their reservation value is to ‘threaten back’: if police know they will meet with armed resistance if an agreement is not reached, they are likely to settle for a smaller bribe. As an upper-level manager of the drug trade in one of Rio’s largest favelas explained to me:

There’s no way to pay [the police] everything they demand, because if we did we’d end up just working for them. [...] If there’s no money to pay them with, well then it’ll be with bullets.¹⁰

The idea that threats can make bribes cheaper is precisely the motivating logic behind Escobar’s practice of *plata o plomo*” as well as a model named in its honor by Dal Bó, Dal Bó, and Di Tella (2006). They show how access to a ‘punishment’ technology with which to threaten a potential bribe-taker lowers the equilibrium bribe price, and increases the total amount of bribery in the system. For our purposes, it is really only half the story. To be fair, the authors’ goal is not to explain anti-state drug violence, but rather to model more generally how the threat of violence affects bribe negotiations and interest group politics. It nonetheless fails to capture two key aspects of its motivating example. First, in their model, threats of violence are never acted on in equilibrium. In Colombia, as in Brazil and Mexico, we see a mixture of bribery *and* violence. This seems like more than just ‘noise’: some groups clearly opt for a ‘hide and bribe’ strategy that minimizes conflict with state forces, and in which there is no violence even off the equilibrium path. Second, whereas pressure groups have an outside option to simply refrain from bribe attempts, cartels are actively prosecuted by the state no matter what they do. Dal Bó et al. cannot explain violent blowback in the face of state crackdowns, because their bribers do not face state repression.

The model presented here formalizes the interaction between cartels and enforcers (police), while conceptualizing leaders as exogenously determining the level and conditionality of repression. The model reveals, first, an intuitive and sharp distinction between ‘fight and bribe’ vs. ‘hide and bribe’

¹⁰ Author interview, mid-level CV manager, Rio de Janeiro, March 29, 2010.

strategies. Within the context of a hiding strategy, crackdowns—an increase in the level of repression—lead to more and more expensive bribes. In the context of fighting, however, as long as corruption is not too risky, crackdowns drive increases in fighting. Finally, the more that crackdowns are *conditional*, such that the repressive force falls only on cartels engaged in anti-state violence, the more they push cartels toward hiding strategies. I also illustrate one channel by which the presence of ‘background’ turf war between cartels makes cartel-state violence more likely: cartels that have acquired an endowment of arms in order to fight turf wars need to spend little or no additional resources on armament in order to make fighting a credible threat (and reap the bribe-lowering rewards). Finally, the model formalizes the intuition that the threshold for switching to fighting strategies is lower when the drug trade is more territorial, such that the act of fighting itself is more effective in retaining illicit rents compared with hiding.

A word on modeling choices and the violence-generating mechanism. The opening scene of the film *Tropa de Elite* (2007) portrays a bribe negotiation gone awry, and explains the situation in surprisingly game-theoretic terms:

Every Friday [the Major] would go up the favela to collect the *arrego*. Traffickers live a life of war, but they also want to survive. Why exchange gunfire with the police if you can negotiate? [...] The truth is that in Rio, peace depends on a delicate equilibrium between the ammunition of the traffickers and the corruption of the police. It’s a fragile balancing act that can be upset by the slightest breeze.

The ‘breeze’ in this model—the mechanism that generates fighting along the equilibrium path—is similar to that employed in Powell and Dal Bó’s (2009) model of spoils politics: the exact size of the ‘pie’ is a random variable, the realized value of which is impossible to credibly communicate prior to bargaining. To avoid being low-balled by the offer-maker, the offer-taker must sometimes fight, with increasing frequency the worse the offer.¹¹ This mechanism highlights cartels’ concern with not being driven down to reservation values, but it can hardly account for every situation in which bribe negotiations fail. Further work could focus on other potential drivers, including commitment problems (how do parties know that the other will not renege?) and state-directed signaling (how else besides fighting occasionally can traffickers communicate to police how much firepower they have?).

3.1 Model

Setup and Timing

The game has two players: a drug trafficking organization D (he), and a street-level police officer or squad P (she). It is useful to think of a government leader G (it) as a third player who sets some of the parameter values prior to the interaction modeled here. However, rather than explicitly model G as a strategic actor, I treat the policy parameters under its control as exogenously given, then take comparative statics to show how policy shifts could alter the equilibrium strategies of the players. D moves first, choosing a level of armament a to spend on arms and soldiers; these are sunk costs, so that $-a$ appears in D ’s payoffs no matter what branch the game follows. Next, the illicit rents y from D ’s activities are realized, where $y \sim [\underline{y}, \bar{y}]$ is a random variable (I specify a distribution below); D

¹¹The difference is that in Powell and Dal Bó (2009), the offer-maker has private information, which the offer-taker’s threat of fighting forces him to reveal. It is a continuous-types signalling model, and they focus on a perfectly separating equilibrium. In my model, the offer-taker possesses the private information, so there is no signalling.

observes y but P does not. Since D chooses a prior to learning y , there is no signaling. Then P demands a bribe b . D then decides between three actions: pay the bribe (B), hide (H) or fight (F). A strategy for D is a choice of a and a mapping from realized values of y and P 's choice of b to actions:

$$\sigma^D : \{a; A : \{y, b\} \rightarrow \Delta\{B, H, F\}\}$$

A strategy for P is a mapping from a and parameter values to bribe demands:

$$\sigma^P : \{b(a, \cdot) : \{a, \cdot\} \rightarrow b\}$$

The solution concept is subgame perfect Nash equilibrium (SPNE).

Payoffs If D pays the bribe, he keeps all of the illicit rents y less the bribe b and his sunk costs a . P receives the bribe b minus the 'expected cost of corruption' d (discussed below). An important implicit assumption here is that P can commit to not enforcing should she receive b .

If D fights or hides, P enforces, causing D to lose a portion of realized drug profits. To gain tractability, I model this loss as a contest success function; some of the results generalize to a larger class of functional forms. Whether hiding or fighting, D 's loss depends in part on the amount of repression he faces. Let s represent the total amount of repressive force available to the state, which we can conceive of as a combination of sheer troop strength, equipment and jurisdiction to enforce laws and engage cartels. Then $\{s_h, s_f\} \leq s$ is the amount of repressive force directed at D conditional on hiding or fighting respectively. We can now give the concept of *conditionality of repression* a formal definition: repressive policy is conditional to the extent that $s_f > s_h$.¹² For concreteness, I assume that repression is 'maxed out' when D fights, so $s_f = s$, and that $s_h = s(1 - c)$, where $c \in [0, 1]$ parameterizes conditionality of repression.

Now, if D fights, he keeps a share of drug profits given by the function $\frac{a}{a+s}$. If he hides, a does not come into play. Rather, he retains $\frac{\eta}{\eta+s_h}$ of y , where η is a scaling parameter that captures the efficacy of hiding relative to fighting. Substantively, η can be seen as an inverse measure of the territoriality of the drug trade: when η is very low, territoriality is high, so that hiding forfeits a large share of profits.

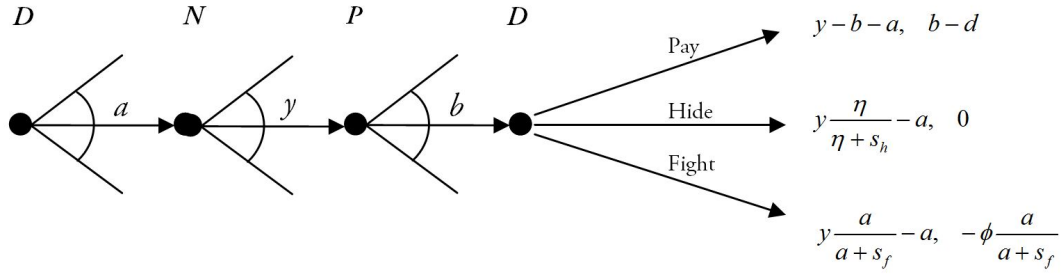
I normalize P 's payoff to enforcing when D hides to 0, and say that if D fights, P incurs disutility of $-\frac{a}{a+s}\phi$, where ϕ is a parameter value capturing P 's relative distaste for violence. The fact that, generically, $\phi \neq y$ reflects the idea that in cartel-state conflict, as in wars of constraint more generally, the two sides are not fighting for control over the same 'pie'. In this case, while the police in situations of regularized corruption are willing to take on the role of rent collector played by the Mafia in Schelling's Miami example (1967), they are not willing to physically administer the drug trade, and would get nothing from appropriating D 's turf. Figure 3.1 presents the game tree with these general-form payoffs:

A few characteristics of these contest functions, which more general forms should share:

1. $\frac{d}{da} \left(\frac{a}{a+s} \right) > 0$; $\frac{d}{da} \left(\frac{\eta}{\eta+s_h} \right) = 0$: arming raises D 's and lowers P 's payoffs to fighting (apart from the cost of arms) but has no effect on their payoff to hiding.
2. $\frac{d}{ds} \left(\frac{a}{a+s} \right) < 0$; $\frac{d}{ds} \left(\frac{\eta}{\eta+s_h} \right) < 0$: the more state repressive force applied in response to an action, the smaller share of y that D can retain.

¹²A key assumption throughout is that P cannot affect these variables, she can only decide to enforce or not.

FIGURE 3.1. Bribe Negotiation Game Tree



3. $\frac{d}{db} \left(\frac{a}{a+s} \right) = \frac{d}{db} \left(\frac{\eta}{\eta+s_b} \right) = 0$. Since no bribe is paid, the value of the bribe demand b has no effect on either players' payoffs to H or F .
4. $\exists \tilde{a}(\cdot) > 0 : \frac{\tilde{a}}{\tilde{a}+s} = \frac{\eta}{\eta+s_b}$: For any parameter values, there exists some level of armament such that by fighting D wins a larger share of y than by hiding. Fighting when $a = 0$ obtains a smaller share of y than hiding.

Drug profits (y) The size of the ‘drug pie’—the realized profits from drug trafficking—is a random variable y , and it is uncertainty over this variable that generates bargaining breakdown in equilibrium (i.e. hiding or fighting with positive probability, as opposed to always paying the equilibrium bribe demand). Although the model is fairly robust to different specifications for the distribution of y , when the degree of uncertainty is very small, P often prefers to make a low-ball demand that will always be accepted. To see this more clearly, I follow Powell and Dal Bó (2009) and specify $y = \mu + \varepsilon$, where μ is fixed and ε is a random variable with mean zero, distributed over $[\underline{\varepsilon}, \bar{\varepsilon}]$. For tractability, I further assume that ε is distributed uniformly, which implies that $\underline{\varepsilon} = -\bar{\varepsilon}$. Now, the low-ball outcome mentioned above is ruled out whenever $\bar{\varepsilon} > \frac{\mu}{3}$. Since the pie is always positive, it is natural to assume $\bar{\varepsilon} < \mu$. Thus, to pin down the model and rule out the low-ball outcome, I assume $\bar{\varepsilon} = \frac{\mu}{2}$, which yields $y \sim U \left[\frac{\mu}{2}, \frac{3\mu}{2} \right]$.

Expected sanction from non-enforcement (d) The parameter d represents, from the perspective of the enforcer, the sum of all expected consequences of non-enforcement net of any bribe received. It is a reduced-form way of capturing the complex (hence unmodeled) dynamics of police corruption. Although not crucial to the model’s findings, I interpret d as generally low when corruption is rampant, and high when corruption is rare. The logic is straightforward. First, decompose d thus:

$$d = z_d \cdot \pi_d + \psi; \quad \pi_d = f(e_d, \xi_d, \cdot)$$

where ψ represents the psychological or moral costs of bribe-taking, z_d is the punishment P will suffer conditional on being caught, and π_d is the probability of detection and successful prosecution. π_d is a function of, among other things, anti-corruption effort e_d . The government can set z_d and e_d directly, but a key determinant of π_d is how many other enforcers are taking bribes, represented here by ξ_d . From such a starting point, models of corruption and law-enforcement (e.g. Tirole, 1996) have derived multiple equilibria, a ‘good’ equilibrium in which there are few law-breakers, so that π_d and

hence d are high, giving each officer an incentive to obey; and a ‘bad’ equilibrium in which everybody breaks the law, so that any one enforcer faces a low π_d and hence a low d . Empirical work further supports the notion that corruption is a multiple-equilibrium game (Fisman and Miguel, 2007; Olken and Barron, 2007). Police departments do occasionally get cleaned up, suggesting that sufficient state pressure, via changes in z_d and e_d , can shift the equilibrium outcome. However, corruption remains an endemic problem in many places, and it is not clear that states face a simple choice over whether to have corrupt police or not. In other words, the empirical relationship between π_d and e_d is not at all clear; indeed, it constitutes an entire research agenda in its own right. This model does not address these questions, and treats d as essentially exogenous.¹³ The model does predict that a state that successfully eliminated a culture of corruption and shifted d from a low to a high value would also make progress against violent corruption. But the more relevant and salient finding is that state leaders can, through direct manipulation of the parameters they do control, s and c , eliminate violent corruption without any change in e or d .

This model abstracts away from issues of norms and individual police officers’ moral compunctions, hence no indexing of ψ . A different approach would be to let variation in ψ_i define multiple types of enforcers; it seems likely that private information about ψ_i could produce violent equilibria, functioning in a parallel manner to the private information about y in this model. In such a model, D would sometimes fight ‘high’, non-corruptible types to keep ‘low’, more corruptible types from bluffing.

Analysis

There is a sharp and immediate division between ‘hide and bribe’ equilibria and ‘fight and bribe’ equilibria, and a minimum level of armament \tilde{a} needed to make fighting a credible threat:

$$\tilde{a} = \eta \frac{s_f}{s_b} = \frac{\eta}{1 - c}$$

Note that \tilde{a} is decreasing in the territoriality of the drug trade (i.e. increasing in η) and increasing in the conditionality of repression (c).

Lemma 1 *In equilibrium, D never plays $a \in (0, \tilde{a})$.*¹⁴

This is because SPNE ensures that in the last round D will choose the action with the highest payoff; whether or not it is worth paying the bribe will depend on P ’s choice of b and the realization of y , but D ’s choice of a at the outset determines which ‘outside option’ payoff will be greater, hiding or fighting. Generically, her optimal choice of a will not be \tilde{a} , so there can be no mixing between hiding and fighting once a level of armament has been chosen. Substantively, D cannot credibly threaten to fight unless she has sufficient firepower ($a \geq \tilde{a}$), and once she has obtained sufficient firepower, cannot credibly threaten to hide should a bribe not be agreed to.

¹³An important assumption made here is that the total expected sanction d is not a function of the size b of the bribe taken. One potential objection to this assumption is that very large bribes might attract the attention of superiors and hence have a higher chance of detection. Another is that there might be an important discontinuity when $b = 0$, i.e. the law, the public, or both might distinguish between an enforcer who simply fails to enforce the law and one who has received money from criminals. Relaxing these assumptions by more explicitly modeling d would complicate the model, but make an interesting avenue for further research.

¹⁴Proofs for all formal results are given in Appendix A.

To further analyze the model, it is helpful to separately calculate, then compare D 's best-response payoffs for hiding ($a = 0$) and fighting ($a > \tilde{a}$) strategies. For clarity, I denote those best-response strategies a_b^* and a_f^* respectively. We then think of D 's equilibrium choice as

$$a^* = \arg \max_{\{a_b^*, a_f^*\}} E[U^D(a)]$$

Then by Lemma 1, $a_b^* = 0$ and $a_f^* \geq \tilde{a}$.

Case b : $a < \tilde{a}$ ('Hide and Bribe')

Given $a = 0$, for any b , D will hide if

$$y < y^* = b \left(1 + \frac{\eta}{s_b} \right) \quad (1)$$

and pay b otherwise. Note that there is a minimum (and maximum) bribe below (above) which D never (always) hides. These can be derived from the equation above, yielding:

$$b_b^m = \frac{\mu}{2} \frac{s_b}{s_b + \eta}, \quad b_b^M = \frac{3\mu}{2} \frac{s_b}{s_b + \eta}$$

P does not know the realized value of y when she chooses b , so the probability of D hiding conditional on b is:

$$\Pr_H(b) = \begin{cases} 1 & \text{for } b \geq b_b^M \\ \frac{b}{\mu} \left(1 + \frac{\eta}{s_b} \right) - \frac{1}{2} & \text{for } b \in (b_b^m, b_b^M) \\ 0 & \text{for } b \leq b_b^m \end{cases} \quad (2)$$

P 's expected utility is a function of \Pr_H

$$E[U_b^P(b)] = \Pr_H(b) \cdot 0 + (1 - \Pr_H(b))(b - d)$$

and so is kinked at b_b^m and b_b^M . To determine P 's best response, we can maximize an 'unconstrained' version of her utility function:

$$b_b^* = \arg \max_b \left[\frac{b \left(1 + \frac{\eta}{s_b} \right) - \frac{1}{2}\mu}{\frac{3}{2}\mu - \frac{1}{2}\mu} (0) + \left[1 - \frac{b \left(1 + \frac{\eta}{s_b} \right) - \frac{1}{2}\mu}{\frac{3}{2}\mu - \frac{1}{2}\mu} \right] (b - d) \right] \quad (3)$$

This yields:

$$b_b^* = \frac{s_b}{s_b + \eta} \frac{3}{4} \mu + \frac{1}{2} d \quad (4)$$

Then, we check what happens if b_b^* lies outside the interval (b_b^m, b_b^M) . First, note that the assumption on the distribution of y guarantees that $b_b^* > b_b^m$, ruling out a situation where P prefers to make a low-ball demand that will always be paid.¹⁵

¹⁵If we model the range of y as $[\mu - \varepsilon, \mu + \varepsilon]$, then $\varepsilon > \frac{\mu}{3}$ guarantees that $b_b^* > b_b^m$. The low-ball condition can only occur when the uncertainty over the size of the pie is relatively small. As noted, I have chosen $\varepsilon = \frac{\mu}{2}$ throughout.

Lemma 2 *If $b_h^* > b_h^M$, P is weakly better off playing b_h^M than any other b , and strictly better off than for any $b < b_h^M$.*

This yields the following strategy for P :

$$\widehat{b}_h^* = \begin{cases} b_h^M = \frac{s_b}{s_b + \eta} \frac{3}{2} \mu & \text{if } b_h^* \geq b_h^M & \text{and } \Pr_H = 1 \\ b_h^* = \frac{s_b}{s_b + \eta} \frac{3}{4} \mu + \frac{1}{2} d & \text{if } b_h^* \in (b_h^m, b_h^M) & \text{and } \Pr_H = \frac{1}{4} + \frac{1}{2} \frac{s_b + \eta}{s_b} \frac{d}{\mu} \\ b_h^m = \frac{s_b}{s_b + \eta} \frac{1}{2} \mu & \text{if } b_h^* \leq b_h^m & \text{and } \Pr_H = 0 \end{cases} \quad (5)$$

Thus there is an interior solution (i.e. $b_h^* < b_h^M$) whenever

$$d < \left(1 - \frac{\eta}{s(1-c) + \eta} \right) \frac{3}{2} \mu \quad (C_d)$$

This condition has a natural interpretation: the right hand side is the largest loss that P can impose on D if no bribe is paid. If this exceeds P 's reservation bribe price (d), then there is some room for mutually beneficial bribes. If d is above this cutpoint, then police lack sufficient leverage to extract a bribe large enough to compensate them for the expected punishment from bribe taking, and we get pure enforcement.

Recalling that $s_b = s(1-c)$ we can now see that allowing c to approach 1 not only makes fighting unviable, it also guarantees that no bribery will occur, as long as d is nonzero.

Proposition 3 *If C_d holds, and assuming $a = 0$, the equilibrium probability of hiding is $\frac{1}{4} + \frac{1}{2} \frac{s(1-c) + \eta}{s(1-c)} \frac{d}{\mu}$. The probability of bribe-taking ($1 - \Pr_H$) is thus increasing in μ and s , and decreasing in d and c .*

It is straightforward that the larger drug profits (μ) are, the easier it is for bribery to occur, and likewise that a higher expected punishment from bribe-taking (d) deters bribery. The other two results, however, are counter-intuitive: crackdowns (increases in s) increase the equilibrium probability of bribery, because they reduce D 's outside option, and thus make him more willing to pay a bribe. By the same token, increases in conditionality (c) reduce the effective level of force P can apply under a hiding strategy, thus giving D less incentive to reach a deal. This leads to the following

Corollary 4 *For any set of parameter values, $\exists c^{NB} \in (0, 1) : c > c^{NB} \implies b_h^* \geq b_h^M$, such that Inequality C_d does not hold, and if $a = 0$, no bribes are paid.*

Intuitively, as c approaches 1, we get a form of conditional decriminalization, where D faces next to no repression as long as he eschews violence. As his potential loss from law enforcement (the right-hand side of Inequality C_d) approaches zero, he is no longer willing to pay a bribe to avoid enforcement.

Case f : $a > \tilde{a}$ ('Fight and Bribe')

The first steps of the analysis are similar, since P takes a as given when he chooses b . As before, there are minimum and maximum bribes b_f^m, b_f^M which are now functions of a . As before, we can calculate an unconstrained b_f^* and show that P can do no better than to play $\widehat{b_f^*}(a) = \max \left[\min \left[b_f^*, b_f^M \right], b_f^m \right]$:

$$\widehat{b_f^*}(a) = \begin{cases} b_f^M(a) = \frac{s}{a+s} \frac{3}{2} \mu & \text{if } b_f^* \geq b_f^M & \text{and } \Pr_F = 1 \\ b_f^*(a) = \frac{s(\frac{3}{2}\mu + d) + a(d-\phi)}{2(a+s)} & \text{if } b_f^* \in (b_f^m, b_f^M) & \text{and } \Pr_F = \frac{1}{4} + \frac{a(d-\phi) + sd}{2s\mu} \\ b_f^m(a) = \frac{s}{a+s} \frac{1}{2} \mu & \text{if } b_f^* \leq b_f^m & \text{and } \Pr_F = 0 \end{cases} \quad (6)$$

Because a is a choice variable, a true interior solution is one in which $b_f^*(a_f^*) \in (b_f^m(a_f^*), b_f^M(a_f^*))$, where a_f^* generates the highest payoff to D 's conditional on $a > \tilde{a}$. Once again, it is simplest to calculate 'unconstrained' values for a_f^* , then check whether $b_f^*(a_f^*)$ lies within $(b_f^m(a_f^*), b_f^M(a_f^*))$. First, for any a , D will be indifferent between paying and fighting when $y - b_f^*(a) = y \frac{a}{a+s}$. Assuming an interior solution and plugging in b_f^* from Equation 6, we can define the cutpoint $y^*(a) = \frac{2ad+2ds+3s\mu-2a\phi}{4s}$ such that D fights when $y < y^*(a)$ and pays otherwise. D 's 'unconstrained' expected utility as a function of a is thus given by:

$$E[U_f^D(a)] = \int_{\frac{\mu}{2}}^{y^*(a)} \left(y \frac{a}{a+s} - a \right) \frac{1}{2\mu} dy + \int_{y^*(a)}^{\frac{3\mu}{2}} \left(y - \frac{s(\frac{3}{2}\mu + d) + a(d - \phi)}{2(a+s)} - a \right) \frac{1}{2\mu} dy \quad (7)$$

We can now maximize this 'unconstrained' function, which yields:

$$a_f^* = s \left(\frac{\sqrt{(8s\mu - (d - \phi)^2)(23\mu^2 + 12\mu\phi - 4\phi^2)}}{2(8s\mu - (d - \phi)^2)} - 1 \right) \quad (8)$$

To ease the notation, write $\Omega \equiv 8s\mu - (d - \phi)^2$ and $\Upsilon \equiv 23\mu^2 + 12\mu\phi - 4\phi^2$. Then, substitution into Equation 6 yields:

$$b_f^*(a_f^*) = \frac{d - \phi}{2} \Omega + \left(\frac{3}{2}\mu + \phi \right) \sqrt{\Omega \cdot \Upsilon} \quad (9)$$

Focusing on areas of the parameter space where an interior solution exists, we can now solve for $\Pr_F(a^*)$. This yields:

$$\Pr_F = \frac{1}{4} + \frac{\phi}{2\mu} + \frac{(d - \phi) \sqrt{\Omega \cdot \Upsilon}}{4\mu \Omega} \quad (10)$$

Taking comparative statics on $\Pr_F(a_f^*)$:

$$\frac{\partial \Pr_F}{\partial s} = (\phi - d) \frac{\sqrt{\Omega \cdot \Upsilon}}{\Omega} \quad (11)$$

Note that $a_f^* = s \frac{\sqrt{\Omega \cdot \Upsilon}}{\Omega} - s$, so if $a_f^* > 0$, which it must be to have fighting in equilibrium, then the sign of $\frac{\partial \Pr_F}{\partial s}$ depends directly on the relative size of d and ϕ . This is a key result of the paper.

Proposition 5 *Given an interior solution for a fighting strategy, crackdowns increase the probability of fighting whenever the cost of corruption is low ($d < \phi$), but decrease fighting when corruption is rare ($d > \phi$).*

In addition, we see that the probability of fighting is increasing in d , which is straightforward: higher expected costs of corruption leads to fewer bribes in equilibrium.

If $b_f^*(a_f^*) < b_f^m(a_f^*)$, then D does not 'need' to go 'all the way' to a_f^* ; rather, by playing $a_B < a_f^*$ he can induce P to demand a low-ball bribe that D is always willing to pay. With $\Pr_F = 0$, this is a

situation can be thought of as ‘corrupt coerced-peace,’ a ‘fight and bribe,’ with a real threat of violence off the equilibrium path, that nonetheless has no fighting in equilibrium. This too is an important finding: it constitutes another ‘path to violence,’ since an increase in s can push a_B above a_f^* . Below, I explore a simulation of such a coerced peace devolving into violence in response to a crackdown, and find that the dynamics echo the situation faced by Colombia’s judiciary as it expanded its fight against Pablo Escobar in the late 1980s.

The opposite situation can also occur if $b_f^*(a_f^*) > b_f^M(a_f^*)$, that is, the bribe which P ‘wants’ to demand is so high that D would never pay it. This is, in a sense, violent non-corruption, corresponding to a world where both sides simply prefer a fight to a ‘bargained solution’. For this to occur, d must be large relative to μ , suggesting a low-corruption equilibrium. At the same time, for this to be the true equilibrium outcome, D must prefer always fighting to some hide and bribe equilibrium. Thus in general c and η would need to be relatively small.

Determining D ’s equilibrium strategy

The analysis thus far has derived two potential payoffs for D : his payoff to setting $a = 0$, the best he can do under a ‘Hide and Bribe’ strategy, and to setting $a = a_f^*$, the best he can do under a ‘fight and bribe’ strategy. By comparing these two potential payoffs, we can determine which strategy D adopts in equilibrium.

Recalling that in this specification, $b_b^* > b_b^M$, D ’s equilibrium payoff to $a = 0$ is given by:

$$E[U_b^D] = \begin{cases} \mu \frac{\eta}{\eta + (1-c)} & \text{if } b_b^* \geq b_b^M \\ \frac{1}{32\mu} \left((2d - 3\mu)^2 + \frac{4d^2\eta}{s(1-c)} + \frac{23\eta\mu^2}{\eta + s(1-c)} \right) & \text{if } b_b^* \in (b_b^m, b_b^M) \end{cases}$$

Then we check what the best D can do by fighting. Assuming an interior solution, such that $b_f^*(a_f^*) < b_f^M$, we get:

$$E[U_f^D(a_f^*, b_f^*)] = \frac{8\mu(s + \mu) + 3\mu\phi - 2\phi^2 + d(-3\mu + 2\phi) - \sqrt{\Omega \cdot \Upsilon}}{8\mu}$$

Even assuming interior solutions for both potential strategies, which strategy is optimal is still largely a question of parameter values. One thing is clear, however: increasing the conditionality of repression strictly raises the payoff to hiding and has no effect on the payoff to fighting. Thus there is always some level of conditionality sufficient to induce hiding.

Lemma 6 $\lim_{c \rightarrow 1} E[U_b^D] = \mu$

Proposition 7 $\exists \tilde{c} \in (0, 1)$ such that if $c > \tilde{c}$, D plays $a = 0$, P plays $b \geq b_b^M$, and D always hides.

In words, Lemma 6 says that as we approach total conditionality (which we can think of as decriminalizing the non-violent trafficking of drugs), the payoff to hiding approaches the entire rents from the drug trade. Proposition 7 then establishes that there is some level of conditionality such that D never fights, and never pays bribes either. Although this may seem like an extreme result, contradicting the idea that the drug trade is inherently violent, it is an intuitive aspect of criminal war: if groups fight (and bribe) state forces to retain illicit rents, then there is no reason to fight (or bribe) when the state allows groups to retain a sufficient portion of those rents.

3.2 Numerical Simulations

The complexity of the model makes it helpful to use a numerical simulation to show how increases in s (i.e. crackdowns) affect the equilibrium strategies in the game under varying degrees of conditionality and parameter conditions. The first example illustrates how an unconditional crackdown alone can lead a cartel to switch from non-violent to violent corruption. The second explores the role of conditionality in curtailing violence. The third simulates a ‘coerced peace,’ in which cowed enforcers ask for only minimal bribes, until an increase in their repressive capacity ultimately leads to fighting.

In all the figures below, the horizontal axis shows D ’s choice of a , and the vertical axis shows D ’s expected utility assuming P plays according to equilibrium strategy. The two curves represent D ’s equilibrium payoffs. The downward sloping solid line is D ’s payoff to hiding; note that if he hides, he is always best off setting a to 0. The convex curve is his payoff to fighting; when there is an interior solution, the curve reaches its maximum at a_f^* . Thus D ’s decision about whether to hide (and bribe) or fight (and bribe) amounts to checking whether payoffs are higher at a_f^* or $a = 0$. For ease of visual comparison in these simulations, the payoff to $a = 0$ is shown as a dashed horizontal line.

For reference, key values are reported underneath each figure in three tables. The top table shows the ‘input’ parameter values, the middle table shows results for hiding, the bottom for fighting. Another way to see which strategy will hold in equilibrium is to simply compare the right-most value of the lower two boxes: U_b^D vs. U_f^D . Other key values are Pr_H and Pr_F , the probabilities of fighting and hiding respectively, b_b^* and b_f^* , the equilibrium bribe demands, and of course a_f^* , the amount of cartel armament.

Unconditional Crackdown and Blowback

In this example, $\phi > d$ (relatively high corruption), μ is large relative to d (plenty of room for mutually beneficial bribes) and repression is entirely *unconditional* ($c = 0$).

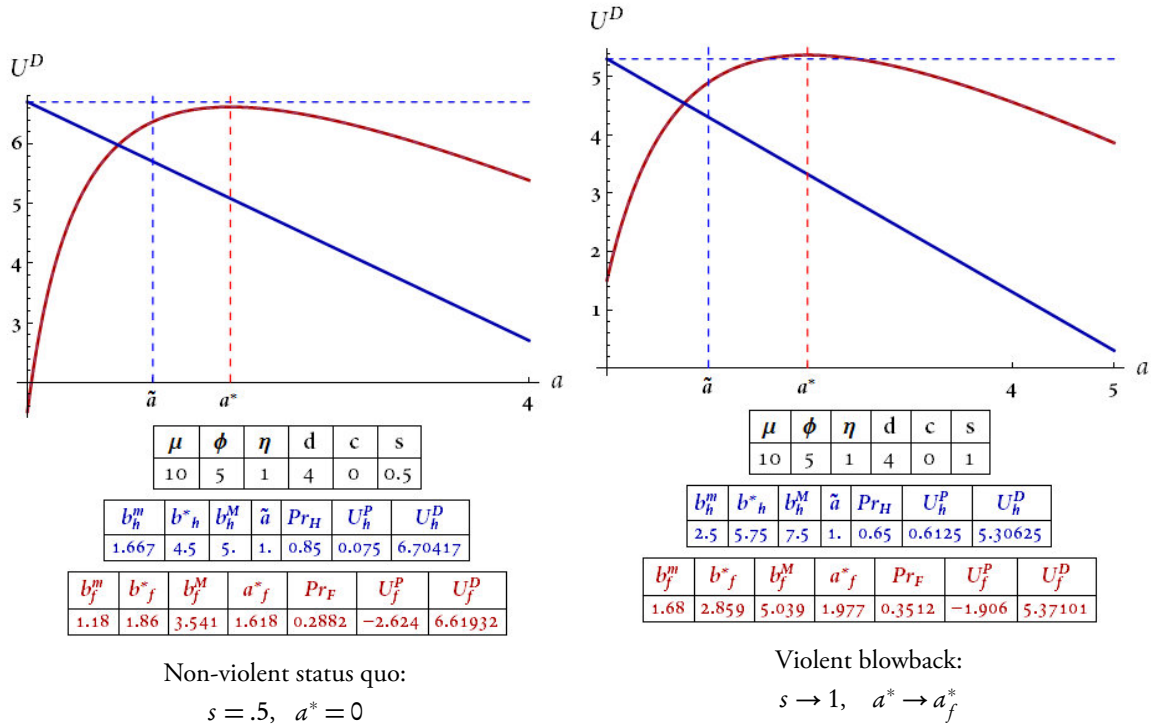
For concreteness, think of the left half of Figure 3.2 as a *status quo ante* in which the state has an only mildly repressive stance toward the drug trade: given $\eta = 1$, $s = .5$ implies that when police enforce the law and traffickers hide, police succeed in reducing drug profits by a third. Note, though, that if D plays $a = 0$, P demands a bribe of 4.5, which D will pay 15% of the time. D could try to use armed force to intimidate P into lowering her bribe demand. The best D could do under such a strategy would be to set $a = a_f^*$. While this would lower the bribe demand considerably (to about 1.8), the price of arming and occasionally fighting makes D worse off than under a ‘Hide and Bribe’ approach. However, were the state to crack down, and raise s to 1, as shown in the right-hand panel of Figure 3.2, the calculus would change: now D is better off playing $a = a_f^*$, and we get fighting with a probability of .35.

Note that there is deadweight loss associated with fighting: $U_f^D + U_f^P < U_b^D + U_b^P$. As in Powell (2004), intertemporal commitment problems play a role here: In theory, P could offer to demand a lower bribe if D chooses $a = 0$, but once D has done so (in the first round), he becomes weaker, and in the third round (when P chooses b) P would renege.

Conditional vs. Unconditional Crackdown

The previous example shows that it is possible for an increase in s alone to drive a shift from hiding to fighting strategies. However, beyond some point, increases in s drive cartels to hide. The question

FIGURE 3.2. Simulation #1: Unconditional Crackdown and Blowback



is how much force is needed, and in the next example, we can see that conditional crackdowns can be more effective. Figure 3.3 shows a drug market that is highly territorial, so that the payoff to hiding is relatively low ($\eta = .25$). Even with $s = .5$, the cartel will fight:

Now consider two alternative interventions aimed at eliminating the violence (Figure 3.4). In each case, let s^* be the cutpoint at which the cartel switches to a non-confrontational strategy.

The left half of Figure 3.4 represents an all-out, unconditional crackdown on the drug trade: an increase in s and no increase in c . The right half represents a conditional crackdown, with c rising to $\frac{3}{4}$. The amount of armed force necessary to induce hiding is far less under a conditional crackdown. Moreover, the expected probability of a bribe ($1 - Pr_H$), the equilibrium bribe price (b_h^*), and hence the total volume of bribes ($VolBr$) are all less under the conditional crackdown. This is because increased conditionality reduces P 's leverage over D when D is not fighting. One effect of this is to make P worse off and D better off than under an unconditional crackdown. The simulation thus captures some of the tradeoffs and political difficulties associated with a conditional policy: on the one hand, it requires less actual repressive force (and thus may be the only feasible solution if the state faces resources constraints on s) and leads to less corruption (by reducing enforcers' leverage). On the other, it leaves (corrupt) police worse off, possibly generating hostility or insubordination, and leaves cartels better off, exposing it to criticism as 'aiding and abetting the drug trade'.

FIGURE 3.3. Simulation #2: A Violent, Territorial Drug Market

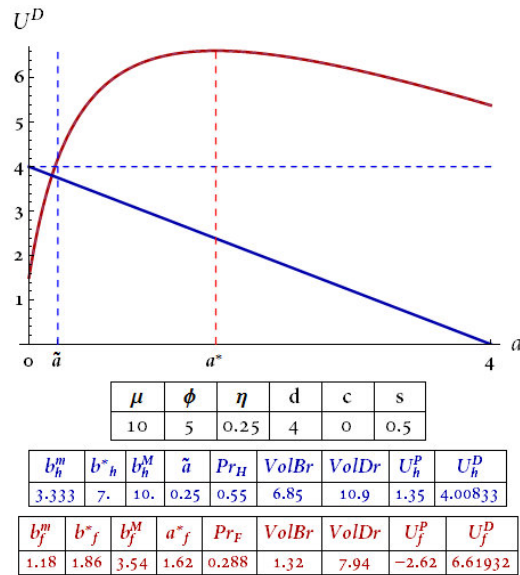
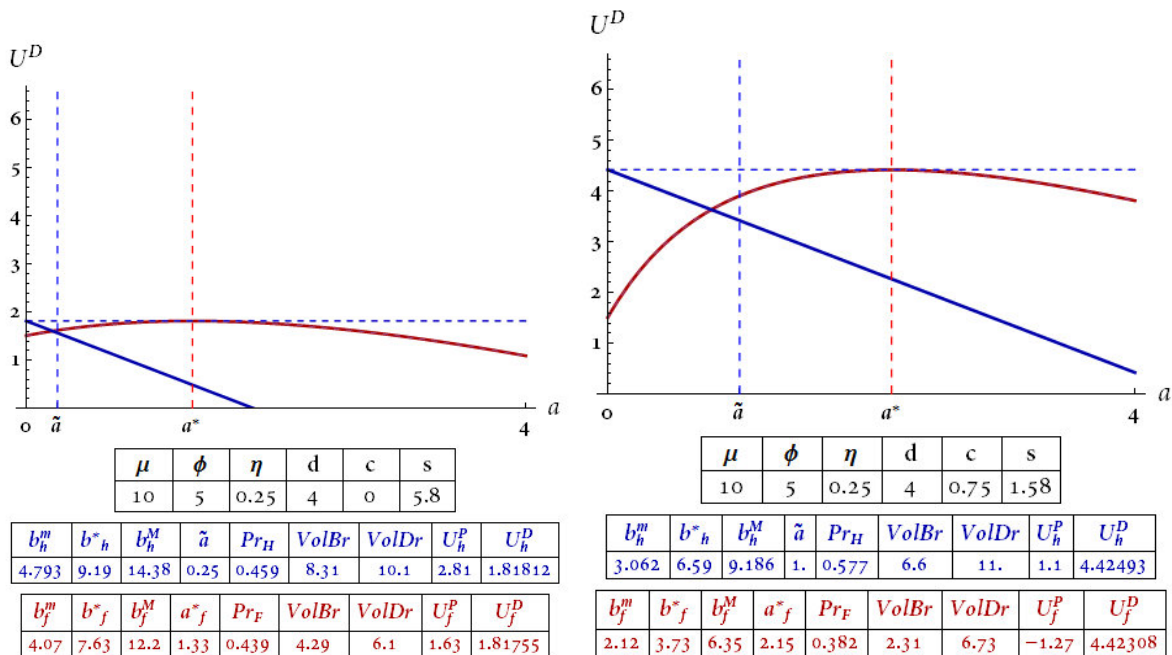


FIGURE 3.4. Simulation #2: Unconditional vs. Conditional Crackdown



Unconditional crackdown:

$$c = 0, s^* = 5.8$$

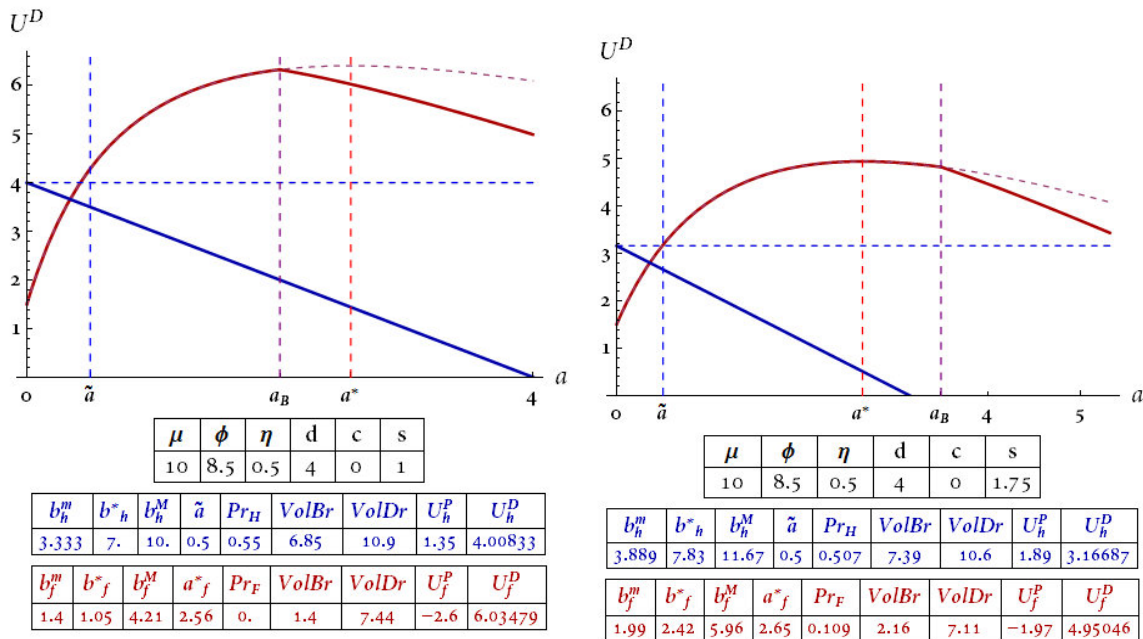
Conditional crackdown:

$$c = .75, s^* = 1.58$$

Corrupt Coerced Peace

A final simulation reveals a different mechanism by which an increase in s could cause an outbreak in violence, the ‘coerced-peace corruption’ discussed above. and illustrated in Figure 3.5. Recall that b_f^* is decreasing in a . Thus there is a cutpoint a_B such that for $a > a_B \Leftrightarrow b_f^*(a) < b_f^m(a)$; substantively, a_B is a level of cartel armament above which P prefers to make a low-ball offer that will always be accepted rather than risk fighting. If $a_f^* > a_B$, then $b_f^*(a_f^*) < b_f^m(a_f^*)$ and (assuming fighting is preferable to hiding) we get a ‘fight and bribe’ equilibrium with no fighting. This is the situation shown in the left panel of Figure 3.5. Note in this example P has a strong distaste for fighting ($\phi = 8.5$); this makes (the threat of) fighting a very effective lever for D to lower the bribe price. Indeed, P is actually being coerced into accepting a bribe $b = b_f^m$ that is lower than d , her expected punishment for bribe-taking, yielding negative expected utility ($U_f^P = -2.6$). She does this because it is still better than fighting the cartel, given her relatively high ϕ .

FIGURE 3.5. Simulation #3: ‘Corrupt Coerced Peace’ and its Breakdown



Corrupt, coerced peace:
 $Pr_F = 0, b_f^* < b_f^m, E[U^P] < 0$

Crackdown-induced violence:
 $s \rightarrow 1.75, Pr_F \rightarrow 0.1$

Substantively, this calls to mind the situation that judges faced in Colombia, simply too afraid of Pablo Escobar to risk fighting him, but receiving less than their uncoerced reservation price for bribe-taking. A threatening note from Los Extraditables to one of the presiding judges in a 1985 lawsuit against the extradition treaty, for example, explicitly acknowledges holding enforcers to below their reservation value:

“We will DEMAND a favorable decision... We will not except that you go sick. We will not accept that you go on holiday; and we will not accept that you resign.” (Bowden, 2001:70)

Coerced peace depends on the relative weakness of the state relative to enforcer's distaste for fighting. Under such circumstances, an increase in state capacity could actually trigger an outbreak of violence. The righthand panel shows the effect of an increase in s ; now $a_f^* < a_B$, and P now demands a bribe large enough that D will sometimes reject it, and fight. In terms of the Colombian example, we can interpret the increase in judicial personnel and equipment in the late 1980s as an increase in s , that may have pushed some officials to stand up to Escobar, leading to a spate of assassination of judges.

3.3 Extension: Effects of Turf Wars

The game as structured assumes that D 's only relevant strategic interaction is with police, but of course D may be competing for turf with other DTOs. Such turf wars, as I have argued in earlier chapters, are essentially wars of conquest in which players fight over a single 'pie,' and thus different from the interaction modeled here. Moreover, they are clearly multiplayer games and, based on the observed variation between periods of relative peace and those of intense inter-cartel fighting, capable of generating both violent and (potentially implicit) pacted equilibria.

Capturing the complex interaction between inter-cartel turf war and cartel-state conflict is beyond the scope of this model; here I examine one piece of it in a partial equilibrium setting. The intuition is that, due to an ongoing turf war, D may *already* have acquired a stock of armament, which is a sunk cost vis à vis his interaction with P . To formalize this, we let $a = a_v + a_\omega$, where a_ω is D 's endowment of arms, and a_v his investment in additional arms. When D fights he uses all his arms, a , only a_v appear in his payoffs since the costs of a_ω are sunk prior to the game. If we think of a_ω as an equilibrium outcome of the inter-cartel game, then all things equal, the more turf war that game is producing, the higher a_ω .¹⁶ So, in this reduced-form way, we can test the effects of an ongoing drug war by taking comparative statics on a_ω . First, assuming that $a_\omega < a_f^*$, note that since D still faces a constant marginal cost for a , the total equilibrium level of armament a_f^* does not change:

$$a_v^* = s \left(\frac{\sqrt{(8s\mu - (d - \phi)^2)(23\mu^2 + 12\mu\phi - 4\phi^2)}}{2(8s\mu - (d - \phi)^2)} - 1 \right) - a_\omega \quad (12)$$

$$a_v^* + a_\omega = a_f^* \quad (13)$$

This means that Pr_F also remains unchanged. However, D 's payoff to fighting relative to hiding increases by a_ω .

$$\widetilde{U}_f^D(a_f^*) = U_f^D(a_f^*) + a_\omega \quad (14)$$

This suggests a simple mechanism by which a turf war could trigger the onset of cartel-state conflict: imagine parameter conditions such that $U_b^D > U_f^D(a_f^*)$ in the absence of a turf war. As the turf war intensifies, cartels want to increase their armament levels in order to predate on other cartels and protect themselves from predation. When a_ω crosses the critical point $a_\omega^* \equiv U_b^D - U_f^D(a_f^*)$, D switches from a hiding strategy ($a_v = 0$) to a fighting strategy ($a_v = a_f^* - a_\omega$). In this case, then, turf wars do not affect

¹⁶The key bit of hand-waving here is in ignoring the reciprocal effects of the cartel-state interaction on the inter-cartel game. Fortunately, as we will see, the effects are reinforcing: a higher a_ω leads to more fighting in the cartel-state interaction, which, I argue, should lead to further intensification of turf war (in Chapter 2, I call this the 'punching the ref' effect).

the dynamics of cartel-state conflict once underway, but they make the switch from hiding to fighting more likely. In the more extreme case that $a_\omega > a_f^*$, $a_v^* = 0$ (assuming an interior solution) and we get more (less) fighting if $d > \phi$ ($d < \phi$). If $a_\omega > \frac{\eta}{1-c}$, then D can never hide, even if he sets $a_v^* = 0$.

Empirically, this path to cartel-state conflict fits the Mexican case well. There, non-violent corruption was the norm for decades, during which inter-cartel turf war was minimal. With the breakdown of the PRI, cartels began vying for turf, and an arms race began, culminating with the Gulf cartels' innovative recruitment of rogue special-forces soldiers as a private militia that came to be known as Los Zetas. The rival Sinaloa cartel responded by building its own armed wing. When the two cartels clashed in Nuevo Laredo between 2004 and 2005, some of the first sustained cartel-state violence occurred (Grillo, 2011:103-105).

4 Evidence from Case Studies

4.1 Pacification in Rio de Janeiro: The Conditional Crackdown

The drug war in Rio de Janeiro has many facets, all of them fascinating. One cannot hope to say even half of what could be said about a decades-long conflict involving multiple prison-based drug syndicates, a corrupt and unaccountable police force, a marginalized population of one million favela residents, and a complex political backdrop of returned leftist exiles, right-wing populists, patronage networks, technocrats, and a burgeoning civil society. In this section, I limit myself to making the case that that in Rio, unconditional repression has long driven cartel-state violence, primarily in the form of violent corruption, and that a recent shift to conditional repression, in the form of the Pacification program, has led syndicates to shift to less violent strategies. For clarity, I break this argument into four component claims:

1. Prior to pacification, repression was unconditional
2. Prior to pacification, syndicates engaged in violent corruption
3. Pacification represents a shift to conditional repression
4. In response to pacification, syndicates have shifted to non-violent strategies

One key piece of evidence is the GPAE¹⁷ pilot project, an early predecessor of the UPPs, installed on a pilot basis in a group of favelas in 2001 (Huguet, 2009). The guiding idea of GPAE was to establish a permanent police presence in the favelas, which would not attempt to eradicate the drug trade per se, but rather its armed presence. This translated into a change in tactics: rather than invade favelas in large coordinated actions aimed at capturing or killing drug dealers, the GPAE battalion was installed within the favela, maintaining a regular, preventive police presence that did not actively target drug dealers, as long as they followed a few simple rules: "Don't walk around openly armed, don't sell drugs near school, and don't employ children."¹⁸

The program was initially very successful: the homicide rate fell to zero during the first year, and residents overwhelmingly approved of the program. Unfortunately, the formulator and original commander of the GPAE program took a post in Brasilia. At the same time, the program came under

¹⁷GPAE stands for Grupamento de Policiamento em Áreas Especiais, or Policing in Special Areas Unit.

¹⁸Author's interview, Major Antonio Carballo Blanco, June 2003. See also Carballo Blanco (2003)

political fire from the mayor for constituting a “pact with the drug trade,” leading to the appointment of a more hard-line replacement commander and a return to traditional repressive approaches Fernandes, 2003:98. This sparked a wave of reprisals from the drug dealers, homicides rose again, and the program was eventually canceled. At inception, GPAE constituted a pacification-within-a-single-favela approach, and for a time successfully eliminated cartel violence, before a change in GPAE leadership led to a reversion to traditional police practice, and a resurgence of cartel-state conflict.

The ideas underlying the Pacification program are not new. While drawing on basic community- and proximity-policing practices and learning from the experiences of Medellín and Bogotá, Colombia (Stahlberg, 2011:7), much of the core approach of the program was directly adapted from earlier alternative policing projects in Rio. Key among these was the pioneering 1999 Mutirão pela Paz (Mobilization for Peace) project, which combined police occupation of a target favela with community outreach and a raft of new social programs (Soares, 2000:280-284), and the innovative successor program GPAE, which was

The GPAE episode is an object lesson in the political difficulties of implementing a policy of conditional repression, a theme I explore elsewhere (Lessing, 2012:109-112). For present purposes, the key point is that a move to a conditional approach—however localized and temporary—was successful in radically reducing cartel-related violence in general and cartel-police clashes in particular. Furthermore, when repressive policy reverted to a more unconditional form, violence returned. Overall, the GPAE experience can be seen as having shown that claims #1-4 are plausible, inspiring Governor Cabral and his staff to attempt a conditional approach on a much larger scale. The positive results of the Pacification strategy, discussed in detail below, add considerable confirmatory support.

Claim #1: Prior to the pacification strategy, crackdowns were unconditional

Repressive policy certainly varied over time in the pre-UPP period, as the political pendulum swung between reactionary, hard-line crackdowns and various reformist positions (Soares, 2000:100-114). With a few important exceptions, however, what varied was the overall *level* of repression, not its *conditionality*. Hard-line governments generally gave police ever-increasing leeway, capacity, and even incentives to use deadly force; progressive governments in turn attempted to restrict violent police practice. Traffickers rarely experienced a ‘crackdown on violence,’ i.e. a clear signal from the state that they would only face the full brunt of repression if they insisted on using violence.

On the contrary, police actions in favelas are extremely violent and to a large extent indiscriminate, with little effort made to distinguish actual traffickers from non-participants, much less hinge decisions about the use of lethal force on the behavior of traffickers. As a popular saying has it, “The only good criminal is a dead criminal.” A particularly stark but nonetheless familiar anecdote conveys the reality:

The young boys Welington Santiago Oliveira Lima, 11, and Luciano Rocha Tavares, 12, were killed by Rio Military Police during an operation in the Estado favela in Niterói (15km from Rio). Another two minors and a youth also died. The police claim the victims were drug dealers, including the two children. Residents, however, deny the accusation. [...] Welington’s mother... says that he had gone to buy a soda when the shootout started: “a policeman started shouting that he was a drug dealer, dragged him by the leg like a pig and killed him with a shot in the head.”

“History shows that children do participate in the drug trade. In May, we captured a 12-year-old boy who confessed to killing a PM sergeant. I am certain they were part [of the drug trade],” said the commanding officer.¹⁹

¹⁹“Polícia mata garotos de 11 e de 12 anos no Rio,” *Folha de S. Paulo* (São Paulo), December 6, 2005. Author’s translation.

This particular incident attracted attention because of the age of the youngest victims. But even granting the commanding officer's claim that these pre-adolescents were traffickers, his statement is quite telling: if simply being involved in the drug trade is enough to warrant summary execution at the hands of the police, then traffickers have every incentive to fight back when police enter the favela. Indeed, no effort was made to determine whether the children had actually shot at the police before being killed:

The bodies of the five dead -- among them four minors -- were released from the Legal Medical Institute [Instituto Médico-Legal, IML], without having been examined for gunpowder traces on their hands, which would have shown if in fact they participated in a shootout, as the police allege.²⁰

This suggests that police officers face little pressure to condition their use of lethal force on the behavior of traffickers, and, consequently, that traffickers—or even favela youth who might be mistaken for traffickers—cannot typically avoid facing the full brunt of police actions by eschewing violence.

More systematic assessments confirm this. Cano (1997, 2010) studied the universe of incidents involving police that ended with firearm deaths or wounds between over a 30 month period. Among many intriguing findings, he calculates *lethality indices*: the ratio, among all incidents in which police shot ‘opposers’ (not innocent bystanders), of deaths to woundings. Presumably, if police were trying to apprehend or incapacitate criminals, rather than kill them, this index would be less than one, and Cano reports that for most US cities, it is (1997:31). In Rio, however, it is significantly higher. Even for whites in non-favela areas, there were about two lethal shootings for every non-lethal shooting; for non-whites in favelas, there were more than eight (2010:40). Cano also reports that forensic examinations were carried out in only 26% of cases with civilian victims, and that even among those, tests for gunpowder on hands were rare (1997:57).

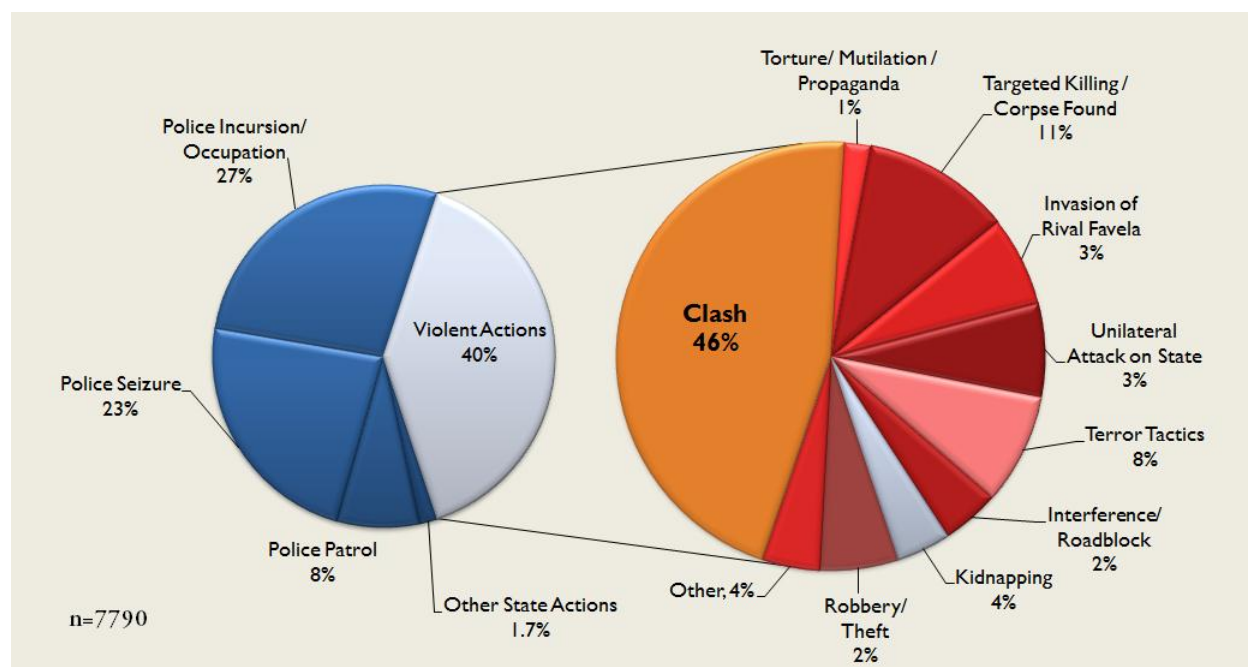
The title of a 2005 Amnesty International report vividly captured favela residents’ experience of police actions in their communities: “They come in shooting” (Amnesty International, 2005). Residents also consistently reported being treated by police with disrespect and suspicion as “accomplices of the criminals”. As the report points out, such police behavior often has some legal sanction in the form of collective search and seizure warrants handed out for entire favela communities. Comments like, “[The police] beat and beat and beat you, then say ‘Sorry, you’re not the one we’re looking for’” (25) make clear that for residents, even those not involved in the drug trade, violence at the hands of the police is hard to avoid. This is undoubtedly true for youth actually involved in the drug trade: of more than 200 traffickers interviewed in a 2004 study, 74% reported suffering violence at the hands of police, while only 53% reported having ever been arrested (Silva et al., 2004:35-37).

Claim #2: Prior to pacification, syndicates used ‘fight and bribe’ strategies

A key claim of this section is that, to a first approximation, Rio’s syndicates—particularly the largest and most important syndicate, the CV—operated under a ‘fight and bribe’ strategy. That is, they used armed force against state enforcers as part of a larger strategy to maximize profits, and in particular as a means of keeping police bribe demands reasonable. The most important piece of evidence is simply the aggressive and confrontational behavior of CV outfits throughout this period. Over and over again, traffickers showed themselves willing to engage not only Rio’s Military and Civil Police in armed battle but also Army and Navy troops, when these were deployed.

²⁰“Testemunhas contestam versão da PM,” *O Globo* (Rio de Janeiro), December 6, 2005. Author’s translation.

FIGURE 4.1. Newspaper Reports of Cartel-related Actions, Proportion of Total



Source: Author's coding of media reports (NRI/OBIVAN).

Preliminary results from violent-event datasets I produced for this study, presented in Figure 4.1, supports this claim as well. By far, the most prominent type of violent action is the *tiroteio*, a shootout, almost always occurring in favelas. Such clashes²¹ account for nearly half of all reports of drug violence in Rio coded. The violent-event datasets were coded so as to permit detailed analysis of the nature of drug violence; in Rio they provide further evidence that clashes arise from violent corruption dynamics. First, the vast majority of reported clashes are between police and syndicates, not among syndicates (Figure 4.2). Second, at least 75% of all clashes occur in favelas.²² Finally, half of all clash reports indicate that some police-initiated action preceded the outbreak of gunfire.²³ Evidence like this makes it clear that the vast majority of these clashes arise out of the *plata o plomo* logic of violent corruption.

Furthermore, while frequent enough at the city-wide level, confrontation between traffickers and police is actually rare. On any given day, hundreds of favelas patrolled by openly armed traffickers were *not* the scene of shootouts, even though police certainly knew where to find the traffickers. The most plausible explanation of this intermittent fighting is that it is part of an ongoing, repeated interaction in which violence is the result of bargaining breakdown, such as in the model of violent corruption presented above.

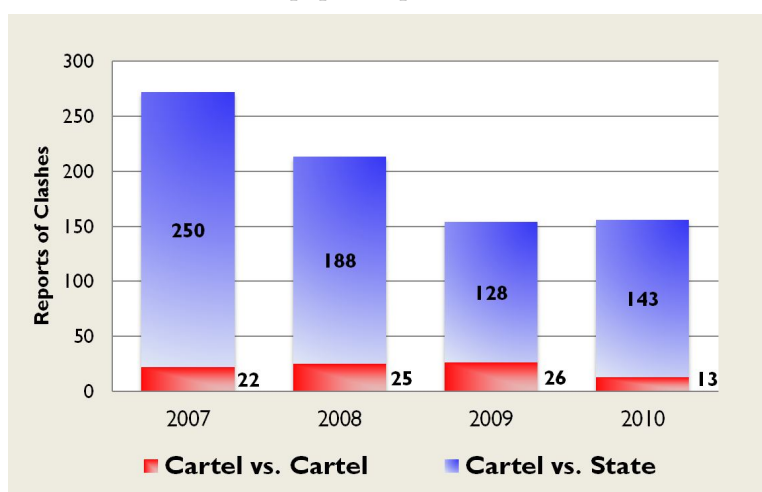
A second crucial piece of evidence is the overwhelming role that both bribe-paying and armed

²¹The methodology of the NRI/OBIVAN project involves coding reports of events by their component action. While there are many categories of action, some more tailored to the local reality of each country, across all three coding projects there is only one category of clash. *Any* situation in which two or more armed actors fired on one another is counted as a clash.

²²All events are coded for "Type of location," with categories for favelas in formal parts of the city (*asfalto*), non-urban areas, and roads. Among clashes, 75% took place in favelas, and another 16% lacked information.

²³Police incursions that were themselves in response to a violent event are counted as cartel-initiated.

FIGURE 4.2. Newspaper Reports of Clashes, 2007-2010



Source: Author's coding of media reports (NRI/OBIVAN).

confrontation with police play in traffickers' accounts of their business. In a longitudinal study of 230 drug traffickers, 54% reported having suffered extortion by police, while only 53% reported having been arrested and 28.5% had actually been imprisoned (Silva et al., 2004). This regularized corruption transpires in a context of mutual violence: a full 73.5% of the sample reported having suffered police violence, while 68% had been involved in at least one armed confrontation with police (compared to only 53% in confrontation with rival groups). In an earlier survey, traffickers were asked to name their main fear in their line of work; among those under 18, fear of death ranked first (35%) followed by fear of police extortion (30%), while among those over 18 fear of extortion ranked first; in both cases, fear of arrest was third. In terms of the model presented in Chapter 3, these results provide evidence that a 'fight and bribe' strategy predominates in Rio: contact with the police is more likely to result in either violent confrontation or a bribe payment than actual enforcement of the law.

Interviews and statements of higher-ups in the drug trade, like those quoted in Section 3.1, make a related point: police bribe demands are very large relative to drug profits, and violence can be the only recourse traffickers have to avoid being bargained down to or below their reservation value. Soares, Bill, and Athayde (2005) transcribes an interview with a syndicate member expressing a similar sentiment:

Say [a cop] is behind on his car payments, and he's no longer at the police post [in the favela], so he's not part of the *arrego* [bribe]. So he comes to ... arrest a dealer who has already paid the *arrego*. [...] When they break the *arrego*, they always arrest one of us. Then they want R\$15,000, R\$20,000 [US\$7.5-8,000], above and beyond the *arrego*. So, some of these guys get shot, and what happens when you shoot them, they call for reinforcements. And then the shit that has to go down goes down. (259-260)

These testimonies nicely captures both the presence of the *plata o plomo* logic in Rio de Janeiro, and also its very different cast from the Colombian case. Whereas Escobar reached out to judicial officials and police chiefs, pro-actively making his offer, Rio's traffickers are physically circumscribed within their favela bases, sitting ducks for well-armed police officers with the power to, if not permanently expel them, seriously disrupt their drug business. Bargaining theory tells us that in general, the player

who makes the offer has more bargaining power; in Rio it certainly seems as though police held the advantage in the negotiation of the *arrego*.

Claim #3: Pacification represents a shift to conditional repression

With the exception of localized experiments like GPAE, anti-syndicate repression was essentially unconditional, though often quite extreme. Two aspects of the pacification strategy make it clearly conditional. First, the state government announces pacification occupations ahead of time; it also generally maintains only loose perimeter patrolling between announcement and occupation, and declares the operational goal of the occupation itself the retaking of territory rather than the capture or killing of traffickers. In this way, the state essentially gives syndicates a ‘hiding option,’ i.e. a chance to flee or, for those unlikely to be identified by police, disarm and ‘melt’ into favela society. Second, once established, the UPP battalions, while not exactly tolerating the drug trade explicitly, make interdiction and arrest of traffickers as a minor priority.

Both of these aspects of the policy represent strong breaks with previous practice, and, as with GPAE before it, the UPP program has come under criticism for turning a blind eye to traffickers. But whereas GPAE’s backers often found themselves on the defensive, Secretary Beltrame has forthrightly defended both aspects of the UPP strategy. In an absolutely crucial piece of rhetorical innovation, he has repeatedly stressed that the primary goal of public security policy should be to establish state control and presence within the favelas, and that the goals of arresting kingpins and eradicating the drug trade *per se* should be considered secondary.

‘We cannot guarantee that we will put an end to drug trafficking nor do we have the pretension of doing so. [The idea is] to break the paradigm of territories that are controlled by traffickers with weapons of war.’ (Phillips, 2010).

Challenged on the policy of allowing kingpins to escape, he said:

‘What difference does the arrest of a drug lord make to the life of people who live in a given community? [...] Will it reduce crime rates? Arresting drug lords is important, but it isn’t the most important thing. Without territory, they are much less “lords” than they were before’ (Bastos, 2011).²⁴

When confronted by journalists with footage of drugs being sold in a UPP-occupied favela, Beltrame did not apologize for what is perhaps the most difficult-to-swallow aspect of conditional repression, the need to use less than the full brunt of the state’s repressive apparatus against non-violent traffickers:

‘The basic mission was to disarm the drug dealers and bring peace to the residents. The footage doesn’t appear to show anyone armed. [...] I can’t guarantee there is no drug dealing going on, in some dark corner, in a place as large as City of God.... That positive outcome is worth infinitely more than the sale of a half dozen packets [of cocaine]’ (Araújo, 2010).²⁵

²⁴ Author’s translation.

²⁵ Author’s translation.

Claim #4: Pacification has led syndicates to switch to hiding strategies

A confidential US diplomatic cable from 2009 makes clear that Beltrame had been planning to invade Alemão in 2010, and that he expected it to be a bloody and “traumatic” operation (US Consulate in Rio de Janeiro, 2009). This strongly suggests both that prior to the 2010 Alemão invasion, syndicates were understood to be entrenched in a fighting strategy, and that even the formulator of the pacification strategy did not anticipate (publically, at least) the extent to which the CV would switch to hiding strategies. Indeed, as state forces amassed on the periphery of Alemão, there was widespread concern from varied quarters that the impending invasion would result in a “bloodbath” – i.e. that the CV soldiers, now gathered in one place, would make their final stand. A coalition of eight prominent human rights and community groups released a public note on November 27th entitled “We will not accept another massacre,” making explicit reference to the 2007 ‘mega-operation’ in Alemão.²⁶ On November 28th, the commanding officer in charge of state forces made a public ultimatum, giving the traffickers until sundown to turn themselves in. A prominent cultural figure and experienced mediator, who entered Alemão on the 28th at the behest of the traffickers and with the permission of state authorities in an attempt to convince the traffickers to surrender, said he was motivated to take such a risky action by a desire to avoid a “bloodbath”. The attempt at mediation failed, only one trafficker surrendered, and the next morning a combined force of 2,700 police and soldiers entered Alemão. However, to the surprise of the media, analysts, and even force commanders, there was next to no resistance: the entire operation lasted only a few hours, and produced three fatal casualties.

Prior to the invasion, estimates of the number of armed traffickers in Alemão ran from 500 to more than 1,000. The invasion produced no more than two dozen arrests. Most of the traffickers, including the local CV boss, successfully fled. Although the official line is that the state sought to corral the traffickers and bring them to justice, and that the escapes occurred via genuinely successful subterfuge or the corruption of individual officers, this seems implausible given the sheer number of traffickers. A more likely hypothesis is that, as had become standard practice during previous UPP installations, state forces essentially allowed the traffickers to either flee or to disarm and melt into the local population.

What is beyond doubt is that since the retaking of Alemão, the state has managed to retake enormous amounts of important favela territory without firing a shot. One indication of the decisive effect the occupation of Alemão and Cruzeiro had was the next scheduled UPP operation, in the São Carlos favela, in February of 2011. A smaller community with a much lighter armed presence of drug traffickers, the pacification took place almost nonchalantly. Residents said that the traffickers had either fled or disarmed a week in advance of the operation (Costa, Moura, and Daflon, 2011).

The most spectacular example of this shift toward nonviolent strategies, however, was the pacification of the Rocinha-Vidigial-Chácara do Céu in November 2011. The largest favela in Rio and, some say, in Latin America, Rocinha sits in the heart of the city’s wealthy southern zone and is widely thought to be the single most lucrative drug market in the city. After arresting the head (*dono*) of the favela’s drug operation under somewhat bizarre circumstances (he was riding in the trunk of a car the drivers of which claimed to be Congolese diplomatic officials), the state announced the imminent pacification of the community. Several days later, an enormous task force of police and army units took all three favelas in a matter of hours without firing a shot.

A word about alternative explanations: Much has been made of the community-policing aspect of the UPP units themselves. The advent of a more human police force with the capacity to form a

²⁶“Nota Pública---Não aceitamos mais uma chacina”, available online at <http://global.org.br/programas/nota-publica-nao-aceitamos-mais-uma-chacina>

relationship of mutual respect with favela residents is a major step forward for the consolidation of democracy and the full expansion of citizenship in Rio de Janeiro. Welcome as such a development is, it is simply not plausible that this aspect had a substantive effect on the decision of syndicates to eschew violence. It certainly seems implausible that the reason syndicates fought instead of hid was out of concern for how residents would be treated. The other potential channel is a counterinsurgency, 'hearts and minds' effect: by winning over the local population, UPPs are undercutting the 'social base' of the traffickers. This is logically possible, but empirically unconvincing: the shift in syndicate strategy was simply too abrupt, and occurred too soon in the UPP process (many pacified communities are still occupied by BOPE and army forces). Besides, public opinion among pacified residents is still wary and divided.

4.2 “No Truce and No Quarter” in Mexico: the Unconditional Crackdown

Felipe Calderón, of the conservative National Action Party (PAN), won Mexico's July 2006 election by the slimmest of margins (.58%, just 240,000 votes) over leftist Party of the Democratic Revolution (PRD) candidate and mayor of Mexico City Andres Manuel López Obrador. López Obrador, invoking the scandalous election-night fraud that had prevented leftist hero and eventual founder of the PRD Cuauhtémoc Cárdenas from winning the presidency in 1988, declared the result invalid and mobilized a mass of supporters in an on-going protest that stretched on for months. A few days before Calderón took office, López Obrador was proclaimed “Legitimate President” in a mass rally in Mexico City's *zocalo*; in his “acceptance” speech, he laid out a shadow agenda and called for a parallel cabinet to serve in protest. Calderón's actual inauguration was marred by a brawl on the floor of Congress, and a hasty exit.

The details are colorful, but Calderón's position was truly precarious. He clearly needed to establish the legitimacy of his presidency quickly and decisively. This would soon lead him to make the most important single decision of his presidency, publicly declaring war on the drug trade, and ordering the Mexican army to crack down on cartels in urban areas and along major land routes. Why did Calderón take on the cartels? Although inter-cartel violence had been on the rise throughout the previous administration, economic issues far outweighed crime and security in terms of political salience. Calderón seems to have seen little hope of outmaneuvering López Obrador's economic populism, and instead sought to shift public debate away from the elections to terrain that would be more favorable to him. But why did Calderón think that a crackdown on the drug trade would yield political benefits? In a word, Colombia.

The experience of Colombia had two related and ultimately tragic effects on Calderón's thinking. First, at the time, Colombian president Alvaro Uribe had an over 80% approval rating. That was roughly as high as that of Brazil's once-in-a-lifetime leftist hero Luis Inácio Lula da Silva, and probably about as popular as any right-wing president has ever been in Latin America. The key to Uribe's unprecedented level of support was straightforward: he had made Colombians feel safer, after decades of seemingly unending civil war. In so doing, he proved by example that public security could be one, and perhaps the only, path to mass popularity for the right. Within weeks of taking office, Calderón sent a delegation of top security officials, including Attorney General Medina Mora and Public Security Secretary Genaro García Luna to Colombia, to meet with Uribe and his cabinet “to learn from the Colombian experience” in Medina Mora's words (Bailey, 2009; Pérez-Plá, 2007).

Colombia's experience influenced Calderón in a tactical sense as well. Uribe had improved security by striking hard and unrelentingly at the leftist guerrillas of the Fuerzas Armadas Revolucionarias de

Colombia (FARC) while simultaneously demobilizing the most violent paramilitary groups. In short, he had shown that a centralized crackdown can be successful both militarily and politically. More subtly but equally important, though, was a kind of conventional wisdom that had solidified around the narco-violence period analyzed in this study (1984-1993). In this line of thought, the end of ‘pure’ narco-violence (that is, committed by drug cartels as opposed to guerrillas or paramilitaries involved in the drug trade) was the result of having shattered the giant cartels of the 1980s, Medellín and Cali. What were left behind were smaller organizations that lacked the firepower to “go toe-to-toe with the nation-state.”²⁷ To prominent drug warriors like former DEA chief Robert Bonner, Colombia’s narco-violence period was essentially a success story, ending in “victory,” and one which Mexico would be able to learn from and ultimately repeat (Bonner, 2010).

Thus Calderón, only a month into his presidency, publicly declared war on the drug trade and launched a major militarized crackdown. He thoroughly and personally identified himself with the policy, making it in many ways the centrepiece of his presidency. This simultaneously served both a political and a strategic end. By tying his political fate to the persecution of his war, such that any reversal of course would signify political suicide, Calderón effectively tied his own hands through audience costs (Fearon, 1994). This may be one reason that there has been little violent lobbying in Mexico: there has never been any real possibility that Calderón would call off his war. On the other hand, it has led to an utter refusal to change course in the face of setbacks and unintended consequences. When the cartels reacted with increased levels of armed violence, including attacks on state forces, the government essentially doubled down, arguing that by capturing and killing cartel leaders it would eventually break up the organizations into fragments too small to fight the state (Guerrero, 2011). Now, as the Calderón administration draws to a close, and there is widespread speculation that the PRI candidate Enrique Peña Nieto will win the presidency and change course, the president has sought to “lock in” his strategy and portrayed any potential future deviation from it as a kind of surrender (Archibold, Cave, and Malkin, 2011).

Another critical aspect of Calderón’s crackdown was its unconditional nature. From the very beginning, he used martial language to describe his stance, perhaps most memorably in the phrase “no truce and no quarter,” used first in 2007 and repeatedly since. While part of the intended meaning is the tying of hands mentioned above, another important message is that the government would go after all cartels with equal and maximum force, “with no distinction” (Guerrero, 2011:89).

Calderón had strong reasons to adopt a blanket crackdown. One may have simply been the unavoidable fact that in the midst of a turf war, any blow against one cartel necessarily aids a rival. But a more pertinent reason had to do with Mexico’s long history of state corruption and collusion with traffickers, at the highest levels. Busts, arrests, extraditions and killings of drug traffickers had often been pre-negotiated between rivals and state officials. The prior assumption of many observers, including cartel leaders, was that state crackdowns were inherently part of a corrupt deal to aid one cartel at the expense of another. This dynamic had played out during the Fox administration. Rumors long plagued Fox that he had facilitated the escape of Sinaloa cartel boss “El Chapo” Guzmán from prison at the outset of his presidency, and his deployment of troops to Nuevo Laredo was interpreted by many, including the Gulf cartel, as a corrupt attempt to hand the territory to El Chapo.

Calderón thus set out from the beginning to combat the suggestion that he, as PAN successor to Fox, favors the Sinaloa cartel. He has continued to be dogged by such accusations, not only in the form of narco-banners hung by cartels, but also journalistic investigations, including a prominent

²⁷ Author interview, DEA Bogotá station chief, October 3, 2011.

one by National Public Radio (Burnett, Peñaloza, and Benincasa, 2010). The Calderón government vehemently denied the reports' conclusion, and insisted that cartels were being "attacked in a manner proportional to their size" (Burnett, Peñaloza, and Benincasa, 2010).

Clearly, while the rhetoric of Calderón's crackdown was designed to make it sound fair, it also, perhaps inadvertently, sent a message to traffickers that repression would not be conditional on their behavior. In practice, Calderón's crackdown has hit all the major cartels and the states in which they operate (Guerrero, 2011:89). Moreover, targets have been distributed among the numerous security agencies participating in Calderón's war (the army, the navy, the federal police, etc.), who take operational decisions autonomously from the presidency.²⁸ Thus for most of the past six years, cartels have had no reason to believe that by eschewing violence they could reduce the amount of state repression they are exposed to.

Interestingly, this may be changing. There are some signs of a move toward a more conditional approach (89-90). US officials consulted by NPR attributed the study's finding—that the plurality of arrests from 2006 to 2010 were of members of the Gulf and Zeta cartels (then only recently split)—to Los Zetas' more brazen behaviour (Burnett, Peñaloza, and Benincasa, 2010). In 2011, the apparent focus on Los Zetas intensified, with a dedicated military operation ('Lince Norte,' or 'Northern Lynx') and several high-level arrests and busts (Corchado, 2011; Gómora, 2011), including the imprisonment of one of the Zetas' founders. The government, however, continues to publicly reject any departure from a blanket approach, equating proportional response with corrupt pacting, and collusion with the Sinaloa cartel in particular. In the words of then national security spokesman Alejandro Poiré:

The federal government does not favour any criminal organization; it weakens them all systematically without distinction. To benefit any criminal group [...] is to validate the outdated argument that crime can be 'managed' (Poiré Romero, 2011).²⁹

5 Conclusion

This paper has argued that cartel-state conflict is fundamentally different from insurgency. Cartels turn to brazen, anti-state violence, not, as in civil war, in hopes of conquering mutually prized territory or resources, but to influence state policy outcomes. In some respects, cartels can be seen as simply interest groups, employing resources to influence policy; following a distinction made by Scott (1969), we can say that they may seek to influence policy enforcement, through *corruption*, or at the level of policy formation, through *lobbying*, or both. When they turn to violent forms of corruption and lobbying, the result is cartel-state conflict.

Violent corruption—epitomized by drug lord Pablo Escobar's infamous phrase "*plata o plomo*" (the bribe or the bullet)—is observed in all three cases, preceding violent lobbying even in Colombia. The key finding of the formal analysis herein is that crackdowns can actually increase criminal violence when they 1) occur in a context of widespread corruption, and 2) are not *conditional*, i.e. do not specifically target cartels that opt for violence with additional or differential repression. This mechanism undergirds the paper's larger claim that conditional crackdowns, in which repressive force is applied in proportion to the amount of violence used by cartels, have successfully curtailed cartel-state conflict in Rio de Janeiro, while Mexico's unconditional approach, by contrast, has led to sharp increases in cartel-state violence.

²⁸ Author interview, CISEN intelligence officer, September 28, 2010.

²⁹ Author's translation.

6 Appendix: Proofs of Formal Propositions

Lemma 1 *In equilibrium, D never plays $a \in (0, \tilde{a})$.*

Proof. Assume, toward contradiction, that in some equilibrium, D plays $a^o \in (0, \tilde{a})$. Since $a < \tilde{a}$, in the last round, D must either hide or bribe. In the preceding round, P chooses b . But a does affect P 's payoffs unless D fights, so whatever P 's equilibrium b^* is (even if it is a mixed strategy), that strategy would also be a best response to any $a \in [0, \tilde{a}]$. But D 's equilibrium payoffs are strictly decreasing in a over this range, so that a could profitably deviate from a^o by playing $a = 0$. ■

Lemma 2 *If $b_h^* > b_h^M$, P is weakly better off playing b_h^M than any other b , and strictly better off than for any $b < b_h^M$.*

Proof. D is sure never to pay any bribe $b \geq b_h^M$, so P is indifferent among all such b . Algebra reveals that $E[U_h^P(b)]'$ is left-differentiable at b_h^M , and is equal to $\frac{d}{\mu} \frac{s_b + \eta}{s_b} - \frac{3}{2}$ which is positive since $b \geq b_h^M \implies d > \frac{s_b}{s_b + \eta} \frac{3}{2} \mu$. Thus P is strictly worse off demanding $b < b_h^M$. ■

Similar analysis applies in the case of b_f^m, b_f^* , and b_f^M .

Proposition 3 *If C_d holds, the equilibrium probability of hiding (conditional on $a = 0$) is $\frac{1}{4} + \frac{1}{2} \frac{s(1-c) + \eta}{s(1-c)} \frac{d}{\mu}$. The probability of bribe-taking ($1 - \text{Pr}_H$) is thus increasing in μ and s , and decreasing in d and c .*

Proof. Revealed by algebra. ■

Corollary 4 *For any set of parameter values, $\exists c^{NB} \in (0, 1) : c > c^{NB} \implies b_h^* \geq b_h^M$, such that Inequality C_d does not hold, and if $a = 0$, no bribes are paid.*

Proof. $\lim_{c \rightarrow 1} b_h^* = \frac{d}{2} > \lim_{c \rightarrow 1} b_h^M = 0$. ■

Lemma 5 $\lim_{c \rightarrow 1} E[U_h^D] = \mu$

Proof. From Corollary 4, we know that for $c > c^{NB}$, there is no bribe that P would accept that D would be willing to pay, so $E[U_h^D] \Big|_{c \in (c^{NB}, 1)} = \mu \frac{\eta}{\eta + (1-c)}$; the limit as $c \rightarrow 1$ is μ . ■

Proposition 6 $\exists \tilde{c} \in (0, 1)$ such that if $c > \tilde{c}$, D plays $a = 0$, P plays $b \geq b_h^M$, and D always hides.

Proof. $E[U_f^D] = p_F(\mu \frac{a}{a+s}) + (1 - p_F)(\mu - b) - a$ which is strictly less than μ for $a > 0$. Since the payoff to fighting is not a function of c , by continuity there must be some \tilde{c} such that $c > \tilde{c} \implies E[U_h^D] > E[U_f^D]$. ■

Proposition 7 *Given an interior solution for a fighting strategy, crackdowns increase the probability of fighting whenever the cost of corruption is low ($d < \phi$), but decrease fighting when corruption is rare ($d > \phi$).*

Proof. By assumption, a_f^* is positive, so $\frac{\sqrt{(8s\mu - (d - \phi)^2)(23\mu^2 + 12\mu\phi - 4\phi^2)}}{2(8s\mu - (d - \phi)^2)} > 1$. Thus the sign of $\frac{\partial \text{Pr}_F}{\partial s}$ depends on the sign of $(\phi - d)$. ■

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