

## A Theory of Armed Clientelism

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## Abstract

Armed clientelism is a particular form of patronage in which politicians and non-state armed groups establish a symbiotic relationship where the former provides economic resources, judicial protection, or other benefits, while the latter provides political support and votes. In this paper a theory of armed clientelism is presented, which shows that when politicians establish illegal alliances with armed groups and mafias, they face a political tradeoff: illegal alliances augment the probability of being elected, but generate the risk of being removed from office. The model predicts that in a context in which a mafia controls a district or a town, armed clientelism is more likely when social diversity among the constituency is high, the judicial system is inefficient, party identification of citizens to clientelistic parties is low, and candidates are highly budget-constrained. It also shows that armed clientelism is more likely when the illegal group and the machine are ideologically aligned.

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“The paradox is that Chicago’s struggle to combat street gangs is being undermined by its own elected officials. And the alliances between lawmakers and lawbreakers raise a troubling question: Who actually rules the neighborhoods—our public servants or the gangs?” Bernstein and Isackson (2011)

## 1 Introduction

In December of 2011, Chicago Magazine published an extensive investigation describing the “unholy alliance” between gang members and politicians in some of the most dangerous wards of the city. The article, which caused a public stir and controversy provided a detailed description of the symbiotic relationship established by several aldermen and notorious gang leaders in the southern neighborhoods of the city (Bernstein and Isackson, 2011). Gang members have provided political support to politicians throughout several electoral races by mobilizing entire blocks of citizens. In doing so, gangs allocate hundreds of votes that may incline the results of elections in favor of the preferred candidates. Naturally, coercion and the threat of violence are powerful weapons used by gangs to persuade citizens to support and vote for their allied candidates. In exchange, as suggested by the magazine, these aldermen reciprocated with many sorts of favorable services, which included not only judicial benefits and the weakening of police patrols, but also access to public jobs, contracts, and other city resources.

Naturally, this kind of alliance between illegal organizations and renowned politicians is not an exclusive phenomenon of gang-infested American cities such as Chicago. The phenomenon is common and prevalent throughout the developing world. Notable examples include the association between politicians and non-state armed groups, such as *militias* in Brazil (Hidalgo and Lessing, 2015), paramilitaries in Colombia (Acemoglu et al., 2013; Gallego, 2018), mafias in Italy (Waltson, 1988), and gangs in Jamaica (Haid, 2010). Furthermore, several decades ago, the U.S. cities of Chicago, New York, and Kansas City frequently witnessed illegal associations between candidates and criminals, as documented by several authors (Gosnell, 1937; Scott, 1972; Hayde, 2007). Referring to the Chicago case during the first half of the 20th century, for instance, Gosnell (1937) stated that:

“Not only are the contributions from the underworld interests an important item in the campaign funds of the dominant party, but the services

of the personnel are also significant. When word is passed down from the gangster chiefs, all proprietors of gambling houses and speak-easies, all burglars, pick-pockets, pimps, prostitutes, fences, and their likes, are whipped into line. In themselves they constitute a large block of votes, and they frequently augment their value to the machine by corrupt election practices.” (p. 42).

But again, far from being a resolved issue in contemporaneous democracies, this phenomenon still exists, and at gigantic proportions, in several developing countries. For instance, in the context of the Colombian civil conflict, former paramilitary boss Vicente Castaño in a 2005 interview argued that:

“There is a friendship with politicians in the areas where we operate. There are direct relationships between commanders in chief and politicians and undeniable alliances are created. The self-defense forces give advice to many of them and there are commanders in chief whose friends are candidates for public office and the mayor’s office... . I would say that we have more than 35 percent of the Congressmen as our friends. And for the next elections we will increase that percentage of friends.”<sup>1</sup>

All these examples correspond to what I will refer to as *armed clientelism*: the relationship between candidates and voters in which an illegal armed group or mafia<sup>2</sup> uses the threat of violence to enforce political support in favor of a candidate. Under this particular form of clientelism, armed groups are used as brokers between candidates and citizens, with the symbiotic relationship occurring between the armed actor and the politician, and not necessarily between the candidate and the voter. In such cases, politicians offer contracts, money, control over public goods, convenient legislation, accommodated justice, or weak enforcement of the law, in exchange for votes.

In contrast, under traditional clientelism a dyadic relation takes place in which a patron (the candidate) offers material goods and services to a client (the citizen)

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<sup>1</sup>Revista Semana, June 5, 2005. Available online through <http://www.semana.com/noticias-portada/habla-vicente-castano/87628.aspx>

<sup>2</sup>Throughout this paper, I will use interchangeably the terms *mafia* and *illegal armed group*. While I acknowledge that important differences exist between irregular groups participating in civil conflict —like guerrilla groups and paramilitary units— and criminal organizations —such as gangs and mafia organizations (Lessing, 2015), the theory developed here applies to any of these cases.

in exchange for political support, which generally includes the vote (Wantchekon, 2003; Stokes, 2007; Gallego, 2015; Smith and Bueno de Mesquita, 2012; Gallego and Wantchekon, 2018). Therefore, traditional clientelism, which is strongly connected to other phenomena such as patronage (Smith and Bueno de Mesquita, 2012), pork-barrel politics (Shepsle and Weingast, 1981; Ferejohn, 1974), or machine politics (Gosnell, 1937), refers to the traditional system in which the candidate “bribes” a clientele of voters using jobs, benefits, housing materials, food, alcohol, etc., as payment mechanisms.

Given the prevalence of armed clientelism, especially in such diverse contexts as the ones described above, it is somehow surprising that few theoretical accounts of this phenomenon exist. A natural question arises: what is the rationale behind the politician’s decision of making alliances with criminals, if other less risky options for obtaining votes are available? This is the main question that this paper analyzes. I hypothesize that politicians face a tradeoff when this type of agreement is available: *making an alliance with an illegal group that controls an entire district, municipality, or region increases the probability of winning an election, but at the same time generates a risk of being deposed from office.* Moreover, the value of armed clientelism as a strategy for winning elections depends on important economic and political characteristics, such as judicial state capacity, party identification of voters, or the ideological affinity between illegal organizations and political machines.

In a context in which both traditional and armed clientelism coexist, what are the advantages of one method over the other? Traditional clientelism has the advantage in many countries of being considered immoral or unethical, but not necessarily illegal. Even so, it is difficult to detect and punish. Several authors have shown how traditional clientelism is a very efficient method for winning elections (Scott, 1972; Lemarchand, 1972; Wantchekon, 2003; Stokes, 2005; Kobayashi, 2006; Golden and Picci, 2007; Weitz-Shapiro, 2007). Nonetheless, in places in which democracy (or at least elections) coexist with a weak state that does not have the monopoly of violence, and in which an armed group or a mafia controls a particular district or region, traditional clientelism may become unfeasible. In such cases, politicians may have only two options: establish symbiotic relations with the groups that control their districts in order to win the election, or find the votes elsewhere, reducing the probability of victory.

In this paper, I present a probabilistic voting model of clientelism, in which a candidate must decide what form of clientelism he uses: armed or traditional. Agents' behavior depends on structural factors like social (ethnic) heterogeneity, party identification, judicial state capacity, or campaign funds. The main result of the model is clear: armed clientelism is more likely in equilibrium as the society becomes more diverse (from a social, economic, or ethnic perspective), if the judicial system is weaker, if candidates have less resources for buying votes, or if citizens have lower levels of party identification with respect to the machine.

This paper is connected to at least three strands of the literature on political economy: first, to studies on the emergence and consolidation of social order in places controlled by illegal armed groups; second, to the political economy of gangs and mafia organizations; and third, to the literature on clientelism through brokers and intermediaries.

Kalyvas (2006), Arjona and Kalyvas (2008), Arjona (2014), and especially Arjona (2016), recognize that social order may emerge even in the context of civil conflict, where a state lacks the monopoly of violence and competes with illegal armed groups. These groups consolidate as *stationary bandits* (Olson, 1993) who take advantage of the state's weaknesses and build their own state. The notion of territorial control and stability is crucial in these theories; once an illegal actor achieves control and the territory becomes undisputed, the time horizon of this group expands and the possibility of establishing a social contract enhances. In my model, I take for granted that the illegal actor has achieved territorial stability and focus on a particular element that may be included in the social contract: the voting decisions of civilians. The theory of armed clientelism presented in this paper complements these theories by underscoring the role of structural economic and political conditions, such as judicial state capacity, social heterogeneity, voters' levels of party identification, and parties' financial constraints.

While the literature on social order under civil war focuses on the political role that non-state armed groups such as guerrillas or paramilitaries may have during irregular conflicts (Kalyvas and Balcells, 2010), it is undeniable that other types of groups such as gangs or cartels, at different scales, may also achieve the territorial control that permits the consolidation of symbiotic relationships with politicians. Holland (2016) connects the literature, arguing that the relationship between gangs

and civilians in urban settings is often mediated by the level of territorial control achieved by these groups. Nonetheless, the empirical corroboration of this study, which uses contemporaneous data from Chicago’s violence, does not focus on the political implications of gang presence. Zachary and Spaniel (2018), in turn, argue that gangs have incentives to bribe politicians as a profit-maximizing strategy, and that the success of this behavior depends on the politicians’ amount of time in office. However, their model assumes that cartels bribe parties once they are in office, ignoring the fact that illegal organizations might endogenously affect the party coming into power. Something similar occurs in Dal Bó et al. (2006) plata o plomo model. In my model, I endogenize the decision to form pre-electoral alliances.

Hidalgo and Lessing (2015) do focus on the electoral incentives that illegal armed groups may have, and analyzing the case of militias in Rio de Janeiro, claim that the association between paramilitaries and politicians in the city represents a form of self-enforcing state weakening. Paramilitaries exist because the state is weak, and through electoral alliances, the state is further weakened in order to favor the operation of these groups. Their theoretical account underscores the economic tradeoffs faced by illegal organizations when getting engaged in electoral activities. However, it misses an important part of the story: the tradeoffs faced by candidates throughout this process.

Acemoglu et al. (2013) model digs deeper into the rationale of politicians, but misses several important elements that are needed in order to understand why in some cases these symbiotic alliances are formed, while not in others. First, judicial state capacity is completely absent in their story, something crucial to analyze this phenomenon, because in the end these alliances are criminal activities that affect the probability of politicians staying in power. And second, the status quo in their model—i.e., equilibrium when alliances are not established—seems to be programmatic politics, in which candidates offer provisions of public goods to voters in exchange for votes. This setting seems to not be the *status quo* in developing countries where illegal armed groups coexist with the state and in which clientelism and vote-buying tend to be the natural methods for winning elections.

Finally, this paper is strongly connected to the literature on clientelism and brokers, which in recent years has underscored the important role that intermediaries play at linking candidates to voters before an election (see Baland and Robinson

(2007) and Keefer and Vlaicu (2007) for early accounts). While some authors have focused on the relationship between politicians and brokers (Stokes et al., 2013; Camp, 2015; Larreguy, 2013; Larreguy et al., 2016, 2017), others have studied in more detail the connection between brokers and voters (Brusco et al., 2004; Chandra, 2007; Calvo and Murillo, 2004; Gingerich and Medina, 2013; Rueda, 2014). Here, I focus on the relationship between candidates and intermediaries, but my contribution to this literature lies in the fact that I recognize that brokers might be illegal actors and that the principal-agent problem between them and voters might be resolved through the threat of violence.

This paper is divided into seven sections, including this introduction. Section 2 presents the theoretical foundations of the model, describing the relevant actors and how certain structural economic and political conditions affect their payoffs. Section 3 solves the game for the armed clientelism subgame, while Section 4 proceeds analogously for the traditional clientelism case. Section 5 presents the main proposition of the paper, which establishes the conditions under which armed clientelism prevails in equilibrium. In turn, Section 6 provides a theoretical explanation for the fact that politicians and illegal organizations that establish these alliances tend to be ideologically aligned. Section 7 discusses some of the implications and limitations of the model.

## 2 The Model

In this section I present a simple two-period model in which a clientelistic candidate interacts with three districts or groups and each one casts a vote against or in favor of the candidate. One of the districts is controlled by an illegal armed group, so in order to obtain the vote from this district the politician must make an alliance with the mafia. If such an alliance occurs, additional to any immediate transfer of resources that might occur before the election, the mafia receives other benefits if the politician is in office. Therefore, the candidate, which is budget-constrained and has a limited amount of money to bribe the districts before the election takes place, must decide how to allocate this budget among the districts. Naturally, making an alliance with the armed group is an illegal act that may be punished, causing the politician to be removed out of office. In this context, will the politician prefer



traditional clientelism, i.e., to bribe the districts not controlled by the mafia in order to get elected? Or will the candidate prefer to face the risk of being deposed and use armed clientelism instead?

Consider an election in which two candidates, candidate A and candidate B, face three districts or towns that have to decide which candidate support. A candidate needs at least two out of three possible votes from the districts in order to win the election. *Candidate A is a clientelistic candidate*: he offers material goods and benefits in exchange for votes. Candidate B is not a clientelistic candidate and, in fact, in terms of ideology, he is preferred by the three districts, which I label as districts 1, 2, and 3. For the sake of simplicity, we will not model party competition in this paper, and thus candidate B is a dummy candidate: in the event that he is elected, the payoff for each district is normalized to 0.

The three districts share a common dislike towards the clientelistic candidate's *party*, represented by the parameter  $\alpha < 0$ . Anytime this party is in power, each district faces a disutility represented by this term. Additionally, districts differ in their sympathy, neutrality, or antipathy towards the clientelistic *candidate*. If he is elected, district 1 experiences a disutility of  $-\gamma$ , district 2 experiences no change, and district 3 experiences an increase in utility of  $\gamma$ , where  $-\alpha > \gamma > 0$ . Finally, if the candidate gets elected for a given period, districts' utilities are affected by a random shock  $\varepsilon_i$ , for  $i = 1, 2, 3$ , uniformly distributed in the interval  $[-k, k]$ . Hence,  $\varepsilon_i$  simply represents any perturbation in the political, social, or economic environment (a war or an economic shock, for instance) that might affect a district's perception of the candidate. Therefore, in this context anytime the clientelistic candidate is in power, the "ideological" payoff for each district is given, respectively, by

$$\pi_1 = \alpha - \gamma + \varepsilon_1$$

$$\pi_2 = \alpha + \varepsilon_2$$

$$\pi_3 = \alpha + \gamma + \varepsilon_3$$

Consequently,  $\alpha$  is a measure of party identification, representing how much the districts prefer ideologically candidate B's party as opposed to candidate A's, whereas  $\gamma$  is a measure of heterogeneity or diversity among the three districts, representing how much their utilities change if the candidate is elected. Clearly, district 1 opposes this candidate, district 2 is neutral, and district 3 supports him. Social, ethnic, or

geographical reasons could explain this diversity. Finally, assume that the clientelistic candidate has a “gift”  $g > 0$  to be used to “bribe” the districts and get their votes. Before the election, the candidate offers  $g$  to one of the districts, in exchange for its vote.

Up to this point the basic structure of the model has not differed from the theory presented in Gallego (2015). But the purpose of this paper is to develop a model of armed clientelism that incorporates illegal groups or gangs whose presence alters the electoral process and changes the traditional relationship between patrons and clients. Following Staniland (2015), who claims that states tend to tolerate or collude with armed groups perceived to be a good “ideological fit”, suppose that district 3 is controlled by an illegal group that has the power to completely control its vote.<sup>3</sup> We assume that the district is already controlled by the mafia, and if the candidate wants to win the vote from this district, he must make an alliance with the illegal group. *Otherwise, the mafia does not support him.*

In this context, the clientelistic candidate has two options to get elected: he can use traditional clientelism, bribing districts 1 and 2, or rely on *armed* clientelism, a form of clientelism in which the illegal armed group is bribed in order to get its political support. Given that at least two votes are needed in order to win the election and that the districts should receive (or have the expectation of receiving) the gift in order to support the clientelistic candidate (otherwise they vote for the other candidate), we assume that at the beginning of the game the candidate chooses one of two possible mixed strategies: bribe district 2 with probability  $\sigma$  and bribe district 3 with probability  $1 - \sigma$  (armed clientelism), *or* bribe district 2 with probability  $\lambda$  and bribe district 1 with probability  $1 - \lambda$  (traditional clientelism).<sup>4</sup>

Intuition would suggest that the candidate will always choose armed clientelism by using a mixed strategy with districts 2 and 3, because those two are ideologically

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<sup>3</sup>Intuitive reasons justify choosing district 3 as the one controlled by the mafia. As suggested by Acemoglu et al. (2013), the Colombian evidence suggests that the paramilitary groups had an ideological sympathy towards the involved politicians, both being right-wing oriented. In fact, some theories suggest that this is not casual: local and regional elites, identified by their right wing ideology, matched politicians and paramilitary forces to militarily and politically defend their interests.

<sup>4</sup>Note that under armed clientelism the mixed strategy includes district 2 and not district 1, as the latter is farther away in terms of its ideological payoff.

closer than district 1. In other terms, given the role of the parameter  $\gamma$ , one could think that for the politician it is easier to encourage districts 2 and 3 to support him than to convince district 1.<sup>5</sup> However, things are not so simple under armed clientelism given the illegal nature of the non-state armed group that controls district 3. In essence, if the candidate chooses this strategy and makes an alliance with the mafia, with probability  $\beta$  he is caught and removed from office. Therefore, the clientelistic politician faces a tradeoff that represents the basic intuition behind the model: an alliance with an illegal armed group that controls the vote in a district and that sympathizes with the candidate increases his probability of winning the election, but creates a risk of being caught by the authorities and of losing everything. The candidate weighs up the costs and benefits of each strategy, and optimizes accordingly.

Summing up, the timing of the game is as follows:

1. The clientelistic candidate chooses between armed or traditional clientelism.
2. As a consequence of the candidate's previous decision, a gift-allocation strategy across districts is determined.
3. Each district votes for or against the candidate.
4. The candidate is elected if he receives at least two votes, and payoffs materialize.

In what follows, I solve the model for the two potential subgames that result from the candidate's first stage decision.

### 3 Armed Clientelism Subgame

The game is solved by backward induction. First, assume that the candidate makes an alliance with the illegal group. Then, as I said before, with probability  $\beta \in (0, 1)$  he is caught, and in the event of winning the election, he is removed from office. In this paper, it is assumed that if the politician is deposed because of his relationship with the mafia, another politician *from the same party* replaces him. This means that only candidates are punished if they establish illegal alliances, *whereas the parties*

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<sup>5</sup>In fact, this is the strategy followed in Gallego (2015).

are not sanctioned in any way. An interesting extension of the model would be to consider the case in which the party is also punished, in order to analyze how this policy would affect the likelihood and survival of armed clientelism. Therefore, after the alliance takes place and assuming that the candidate bribes district 2 with probability  $\sigma$ , the mafia's expected payoff if the candidate gets elected is given by

$$u_3 = \alpha + (1 - \beta)\gamma + \varepsilon_3 + (1 - \sigma)g$$

Similarly, district 2's payoff is given by

$$u_2 = \alpha + \varepsilon_2 + \sigma g$$

For the sake of simplicity, assume that if the candidate follows this strategy (armed clientelism), and given that district 1 is not awarded the gift, such district votes for the candidate with probability 0. Also, suppose that districts 2 and 3 follow *cutoff* (threshold) strategies, such that if  $\varepsilon_i$  is "high enough", they vote for the clientelistic candidate. In other terms, if districts follow cutoff strategies, their respective threshold values for each random shock are given by

$$x_2 = -\alpha - \sigma g$$

$$x_3 = -\alpha - (1 - \beta)\gamma - (1 - \sigma)g$$

Hence, any time  $\varepsilon_i > x_i$ , for  $i = 2, 3$ , district  $i$  votes for the clientelistic candidate. Define  $p_i$  as the probability that district  $i$  votes for the candidate. Therefore, given that district 1 never votes for this candidate, the probability that he gets elected and governs when choosing armed clientelism and the subsequent mixed strategy, is given by

$$\theta^a = p_2 p_3 (1 - \beta)$$

Given that  $\varepsilon_i \sim U[-k, k]$ , for districts 2 and 3 it follows that

$$p_i = 1 - F(x_i) = \int_{x_i}^k f(x)dx = \int_{x_i}^k \frac{1}{2k}dx = \frac{1}{2} - \frac{x_i}{2k}$$

Which implies that

$$p_2 = \frac{1}{2} + \frac{\alpha + \sigma g}{2k}$$

$$p_3 = \frac{1}{2} + \frac{\alpha + (1 - \beta)\gamma + (1 - \sigma)g}{2k}$$

With these two probabilities, we can establish the first result of the model: how does the candidate allocate the gift among the districts controlled by the mafia and the other district, given that armed clientelism was the chosen strategy?

In this context, if the politician seeks to maximize the probability of being elected and staying in office, his problem is

$$\max_{\sigma} \theta^a = \left[ \frac{1}{2} + \frac{\alpha + \sigma g}{2k} \right] \left[ \frac{1}{2} + \frac{\alpha + (1 - \beta)\gamma + (1 - \sigma)g}{2k} \right] (1 - \beta)$$

subject to  $\sigma \in [0, 1]$ .

Having established the politician's maximization problem under armed clientelism, it is possible to formulate the first proposition of this paper.

**Proposition 1: (Armed Clientelism)**

Consider the clientelism game defined above, in which a non-state armed group controls the vote in district 3. Under the armed clientelism subgame, candidate A's best response is to bribe districts 2 and 3, respectively, with probabilities (fractions):

$$\sigma^* = \frac{1}{2} + \frac{\gamma(1 - \beta)}{2g}; \quad 1 - \sigma^* = \frac{1}{2} - \frac{\gamma(1 - \beta)}{2g}$$

Therefore, the probability of rewarding the mafia's district decreases with social diversity and increases with judicial state capacity and the budget available for buying votes.

**Proof:**

In an interior solution, the first order condition of this problem is given by

$$\frac{g}{2k}(1 - \beta) \left( \frac{k + \alpha + (1 - \beta)\gamma + (1 - \sigma)g}{2k} \right) - \frac{g}{2k}(1 - \beta) \left( \frac{k + \alpha + \sigma g}{2k} \right) = 0$$

and solving for  $\sigma$  we find the probability that district 2 gets the gift from the candidate:

$$\sigma^* = \frac{1}{2} + \frac{\gamma(1-\beta)}{2g}$$

We can also interpret this result as the fraction of the gift  $g$  that goes to district 2. The district controlled by the mafia, in turn, receives the gift with probability

$$1 - \sigma^* = \frac{1}{2} - \frac{\gamma(1-\beta)}{2g}$$

which completes the proof. ■

This proposition shows that the transfer given by the candidate to the mafia's district decreases with diversity, increases with the probability of being caught and increases with the size of the gift. This means that as heterogeneity (represented by  $\gamma$  in the model) grows, the mafia has more sympathy towards the candidate. In other terms, if the benefit to the mafia of having this candidate in office is higher, fewer immediate material benefits are needed in order to make the illegal group comply with the agreement. When the mafia supports a candidate, other long term benefits, like a favorable justice or the adjudication of contracts, might be more important than any short-term electoral transfers.

Another interesting conclusion that can be inferred from this result has to do with the role of  $\beta$ . Remember that this parameter represents the probability that the candidate is caught after establishing an illegal alliance with the mafia. Not surprisingly, as this probability increases, the share of  $g$  received by the mafia increases. If justice in the country or the locality is effective and it is very likely that the candidate will be caught, and if the mafia's ideological expected benefits of having this candidate in power are small, then the politician will have to offer a higher immediate short run benefit. Hence, in places with higher levels of judicial state capacity, criminal candidates will have to offer larger bribes in order to establish illegal alliances.

An interesting corollary can be derived from the result presented above.

**Corollary 1:**

In the armed clientelism subgame, in equilibrium,  $\sigma^*$  is chosen in order to equate the probability that districts 2 and 3 vote for the candidate.

**Proof:**

The result follows from the fact that

$$\begin{aligned} p_2^* &= \frac{k + \alpha + g \left[ \frac{g + \gamma(1 - \beta)}{2g} \right]}{2k} \\ &= \frac{2k + 2\alpha + g + \gamma(1 - \beta)}{4k} \end{aligned}$$

and that

$$\begin{aligned} p_3^* &= \frac{k + \alpha + (1 - \beta)\gamma + g \left[ \frac{g - \gamma(1 - \beta)}{2g} \right]}{2k} \\ &= \frac{2k + 2\alpha + g + \gamma(1 - \beta)}{4k} \end{aligned}$$

Hence, clearly  $p_2^* = p_3^*$ . ■

The result of this corollary is not surprising, given that the objective function is the product of probabilities  $p_2$  and  $p_3$ . Substituting this equality into the objective function, we find the probability that the candidate gets elected under armed clientelism is given by:

$$\theta^a = \frac{[2k + 2\alpha + (1 - \beta)\gamma + g]^2(1 - \beta)}{16k^2} \quad (1)$$

Consequently, for the candidate the probability of being elected under armed clientelism increases with the mafia's sympathy towards him ( $\gamma$ ), but decreases with the probability of being caught ( $\beta$ ). This is an interesting result: a higher  $\gamma$  implies more affinity between the candidate and the district controlled by the mafia, which may be interpreted in such a way that, in the case of governing, the candidate would bring more medium- or long-term benefits to the illegal organization in terms of contracts, justice, etc. Naturally, this outcome provides more incentives for the mafia to support the candidate and hence increases his probability of being elected. But this probability decreases with  $\beta$ , because if this term is high and the illegal alliance is detected easily, the mafia will have less incentives to make the alliance. In this model  $\beta$  is exogenous, but for future extensions it might be interesting to endogenize it, as in many cases lawmakers and illegal organizations have the capacity for bribing judges, making the justice system less effective.

Additionally, the probability that the candidate gets elected under armed clientelism decreases with dislike towards his party and increases with the size of the

gift. Richer candidates are elected with higher probability while lower levels of party identification make illegal alliances more attractive. Given that the candidate maximizes his probability of winning the election, in what follows I will compare the result obtained here with the equivalent after solving the “traditional clientelism” subgame, as I have done in the next section.

## 4 Traditional Clientelism Subgame

Now suppose that the candidate chooses traditional clientelism instead. Under this scenario, he commits not to bribe district 3, given that it is controlled by an illegal armed group. Hence, the politician plays a mixed strategy, bribing districts 1 and 2. Remember that district 1 ideologically opposes the candidate, district 2 is neutral, and both districts experience a disutility of  $\alpha$  any time the clientelistic party is in power. Define  $\lambda \in [0, 1]$  as the probability that district 2 is awarded  $g$  under this mixed strategy. Therefore,  $1 - \lambda$  represents the probability that district 1 is awarded the gift.<sup>6</sup>

Given that the politician makes no agreements with the mafia, and that the latter controls district 3, we impose  $p_3 = 0$ : district 3 does not vote for the candidate. In this context, we also know that district 1 votes for the candidate if

$$\alpha - \gamma + \varepsilon_1 + (1 - \lambda)g \geq 0$$

which implies that district 1’s threshold value is

$$x_1 = -\alpha + \gamma - (1 - \lambda)g$$

Similarly, district 2 votes for the candidate if

$$\alpha + \varepsilon_2 + \lambda g \geq 0$$

implying a threshold value of

$$x_2 = -\alpha - \lambda g$$

Given that  $\varepsilon_i$  follows a uniform distribution over  $[-k, k]$ , we know that

$$p_1 = \frac{1}{2} + \frac{\alpha - \gamma + (1 - \lambda)g}{2k}; \quad p_2 = \frac{1}{2} + \frac{\alpha + \lambda g}{2k}$$

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<sup>6</sup>Once more, we can interpret  $\lambda$  as the fraction of  $g$  given to district 2, with no substantive change in the conclusions.



and using the fact that the probability of being elected under traditional clientelism is

$$\theta^t = p_1 p_2$$

the candidate's maximization problem in this case is:

$$\begin{aligned} \max_{\lambda} \quad & \theta^t = \left[ \frac{1}{2} + \frac{\alpha - \gamma + (1 - \lambda)g}{2k} \right] \left[ \frac{1}{2} + \frac{\alpha + \lambda g}{2k} \right] \\ \text{subject to} \quad & \lambda \in [0, 1]. \end{aligned}$$

Note that in this case the probability of not being caught for establishing an illegal alliance,  $1 - \beta$ , is not present in the objective function of the candidate, contrary to what happens in the armed clientelism case.

**Proposition 2: (Traditional Clientelism)**

Consider the clientelism game defined above and suppose that the candidate decides not to establish an alliance with the non-state armed group. Under the traditional clientelism subgame, candidate A's best response is to bribe districts 1 and 2, respectively, with probabilities (fractions):

$$1 - \lambda^* = \frac{1}{2} + \frac{\gamma}{2g}; \quad \lambda^* = \frac{1}{2} - \frac{\gamma}{2g}$$

Therefore, the probability of rewarding district 2 decreases with social diversity and increases with the budget available for buying votes.

**Proof:**

In an interior solution, the first order condition is

$$\frac{g}{2k} \left[ \frac{k + \alpha - \gamma + (1 - \lambda)g}{2k} \right] - \frac{g}{2k} (k + \alpha + \lambda g) = 0$$

and solving, we find the equilibrium strategy for the candidate given that he plays traditional clientelism:

$$\lambda^* = \frac{1}{2} - \frac{\gamma}{2g}$$

implying

$$1 - \lambda^* = \frac{1}{2} + \frac{\gamma}{2g}$$

Which proves the proposition. ■

Comparing equilibrium levels, it is clear that the probability of rewarding district 2 with the gift  $g$  is higher under armed clientelism than under traditional clientelism. This follows from the fact that under traditional clientelism, given that only districts 1 and 2 are rewarded, the latter ideologically becomes the closest to the candidate, whereas under armed clientelism district 2 represents the group of swing supporters. In other words, in either case the candidate gives more to the district that is farther away in terms of preferences. Nonetheless, this does not mean that the candidate awards only core or swing supporters; the difference in any case is a function of the parameters of the game.

Substituting  $\lambda^*$  we find, once again, that the candidate chooses his mixed strategy in order to equate the probability of support from the two groups that are rewarded:

$$p_1^* = p_2^* = \frac{2k + 2\alpha + g - \gamma}{4k}$$

Finally, substituting into the objective function, we find that the probability of being elected under traditional clientelism is:

$$\theta^t = \frac{(2k + 2\alpha + g - \gamma)^2}{16k^2} \quad (2)$$

Hence, under traditional clientelism the probability that the candidate is elected is lower as party identification decreases, the budget for buying votes decreases, and diversity grows. This last result is quite interesting. Under armed clientelism we saw that higher levels of  $\gamma$  are better for the candidate. This follows from the fact that in such case  $\gamma$  represents the mafia's affinity with the candidate. But in this case, given that the candidate made no alliance with the illegal group and does not support him,  $-\gamma$  represents how much district 1 dislikes the candidate. Hence, a higher level of diversity implies a higher opposition from the distant group that the candidate is trying to bribe, which in turn implies a lower probability of being elected.

## 5 Weapons or Handouts?

Naturally, the big question I want to answer in this paper is under what conditions does the clientelistic candidate prefer armed clientelism (using bullets in order to

obtain votes), to establish an illegal alliance with an illegal armed group, over traditional clientelism (using handouts or gifts to convince voters). The purpose of this section is to show that the candidate faces a tradeoff: armed clientelism increases the probability of being elected because the mafia's support guarantees the vote of a district with ideological affinity, leaving more room for bribing the swing voter district. But at the same time, armed clientelism generates a risk to the politician because, in the event of being caught, he will be deposed from office.

Solving the game by backward induction and moving to the first stage, we derive the following proposition:

**Proposition 3: (Subgame Perfect Equilibrium)**

In the subgame perfect equilibrium of the game, armed clientelism is chosen over traditional clientelism if:

$$\gamma \geq \frac{(2k + 2\alpha + g)[1 - (1 - \beta)^{\frac{1}{2}}]}{1 + (1 - \beta)^{\frac{3}{2}}}$$

**Proof:**

We know that the candidate chooses armed clientelism if

$$\theta^a \geq \theta^t$$

or, from (1) and (2), if

$$\frac{[2k + 2\alpha + (1 - \beta)\gamma + g]^2(1 - \beta)}{16k^2} \geq \frac{(2k + 2\alpha + g - \gamma)^2}{16k^2} \quad (3)$$

Which reduces to

$$\gamma \geq \frac{(2k + 2\alpha + g)[1 - (1 - \beta)^{\frac{1}{2}}]}{1 + (1 - \beta)^{\frac{3}{2}}}$$

■

This expression tells us under what conditions armed clientelism, as opposed to traditional clientelism, results in equilibrium. One can conclude that armed clientelism is more likely if:

1. Diversity is large (high  $\gamma$ ). The higher the sympathy of the mafia towards the candidate, the more tempted the candidate will feel to establish the illegal alliance, because it will be easier to bribe group 2 and get elected.

2. The probability of being caught is low (low  $\beta$ ). Not surprisingly, a better judicial system implies a lower incentives for establishing illegal alliances with non-state groups.
3. Party identification is low (high  $-\alpha$ ). If voters are not ideologically attached to machines, candidates will have no other option than to rely on weapons in order to get votes.
4. The gift ( $g$ ) is low. When the candidate has a low budget, it is harder to bribe non-sympathetic groups. He is more likely to rely on illegal alliances and use the threat of violence instead.

Therefore, it should be clear from this analysis that while making an illegal alliance makes a candidate more likely to be elected, it also increases his probability of being deposed, even after winning the election. This is the fundamental tradeoff between armed and traditional clientelism in a country in which illegal armed groups have the capacity of affecting the elections and become the brokers between citizens and candidates.

## 6 Ideological Affinity and Armed Clientelism

Some scholars have recognized that alliances between illegal armed groups and political parties tend to occur when these two have ideological affinity. The model presented in this paper formalizes the electoral strategy used by armed groups that Matanock and Staniland (2018) define as *covert indirect*: secretly supporting mainstream candidates or parties. The authors claim that this strategy usually takes place between a group and a party that are relatively close in terms of key preferred policies. Similarly, Staniland (2015) states that the position adopted by a government towards a militia—to suppress, contain, incorporate, or collude with it—depends on ideologic affinity. Alliances and collusion occur when both groups exhibit ideological closeness. Finally, Acemoglu et al. (2013) argue that in the case of Colombia, paramilitaries delivered “votes to politicians with preferences relatively close to theirs.” A similar argument can be raised in terms of militias and former policemen in Brazil, gangs in Jamaica, or mafias in Italy.

In this section, I formalize these ideas by showing that when the illegal armed group controls the district that is ideologically farther away from the politician,

conditions for armed clientelism to hold in equilibrium are more stringent. This result reconciles the fact that alliances are scarce or inexistent between candidates and illegal groups that do not have ideological affinity. For instance, evidence of alliances between the left-wing guerrilla group FARC and right-wing candidates in Colombia is not common or documented at all.

To formalize this discussion, consider the model described above in which a politician competes for the votes of three districts, with district 1 opposing the candidate, district 2 remaining neutral, and district 3 being the most favorable (remember that the parameter  $\gamma$  captures these distances with respect to the candidate). However, now assume that it is district 1 the one that is controlled by the mafia, while districts 2 and 3 are not. In this setting, it is reasonable to assume that the candidate has two feasible strategies: armed clientelism, which implies bribing with positive probabilities towns 1 and 3, or traditional clientelism, which implies randomizing between towns 2 and 3. We will call this case —when the mafia controls district 1— the game with *ideological disparity*, while the former —when it controls district 3—will be referred to as the game with *ideological affinity*.

In this context, we can derive similar results to the ones presented in previous sections of this paper. In particular, we can characterize the equilibrium strategies followed by the candidate under armed and traditional clientelism, the probabilities of being elected and governing under each strategy, and the comparison of both strategies with each other and with the case in which the mafia controls the affine group instead.

**Proposition 4: (Armed Clientelism under Ideological Disparity)**

Consider the clientelism game with ideological disparity, in which a non-state armed group controls the vote in district 1. Under the armed clientelism subgame, candidate A's best response is to bribe districts 1 and 3, respectively, with probabilities (fractions):

$$1 - \tilde{\sigma}^* = \frac{1}{2} + \frac{\gamma(1 - \beta)}{g}; \quad \tilde{\sigma}^* = \frac{1}{2} - \frac{\gamma(1 - \beta)}{g}$$

Therefore,  $1 - \tilde{\sigma}^* > 1 - \sigma^*$ , so that the probability of rewarding the mafia's district under armed clientelism is higher in the game with ideological disparity relative to the case we ideological affinity.

**Proof:**

Cutoff strategies in this case are given by  $\tilde{x}_1 = -\alpha + (1 - \beta)\gamma - (1 - \tilde{\sigma})g$  and  $\tilde{x}_3 = -\alpha - (1 - \beta)\gamma - \tilde{\sigma}g$ . Therefore, the probabilities that districts 1 and 3 support the candidate are, respectively,

$$\tilde{p}_1 = \frac{1}{2} + \frac{\alpha - (1 - \beta)\gamma + (1 - \tilde{\sigma})g}{2k}; \quad \tilde{p}_3 = \frac{1}{2} + \frac{\alpha + (1 - \beta)\gamma + \tilde{\sigma}g}{2k}$$

Solving the maximization problem of the candidate yields:

$$1 - \tilde{\sigma}^* = \frac{1}{2} + \frac{\gamma(1 - \beta)}{g}; \quad \tilde{\sigma}^* = \frac{1}{2} - \frac{\gamma(1 - \beta)}{g}$$

Given that in the game with ideological affinity  $1 - \sigma^* = \frac{1}{2} - \frac{\gamma(1 - \beta)}{2g}$ , it is clearly the case that  $1 - \tilde{\sigma}^* > 1 - \sigma^*$ . ■

This proposition shows two important things: first, under armed clientelism in the ideological disparity game, the district controlled by the mafia receives the gift with a higher probability (or receives more) than the other district. This result comes from the fact that district 1 is ideologically farther away from the candidate than district 3. More interestingly, the probability of rewarding the mafia under armed clientelism is higher in the ideological disparity game than in the ideological affinity case. Again, the higher ideological distance between the candidate and the illegal group makes it harder for the former to convince the latter, in such a way that larger material incentives are needed to achieve that goal.

Moreover, the probability of winning the election and governing, in this case, is given by:

$$\tilde{\theta}^a = \frac{(2k + 2\alpha + g)^2(1 - \beta)}{16k^2} \tag{4}$$

A close comparison of (1) and (4) shows that  $\tilde{\theta}^a < \theta^a$ : the probability of holding office is lower under the ideological disparity case. In fact, the distance between the two probabilities increases with the term  $(1 - \beta)\gamma$ . As diversity increases, disparity between the candidate and the mafia augments as well. Also, weaker judicial systems make the ideological affinity or disparity between candidates and illegal groups more salient and decisive.

The following results hold for the traditional clientelism subgame, in which districts 2 and 3 are bribed with positive probabilities:

**Proposition 5: (Traditional Clientelism under Ideological Disparity)**

Consider the clientelism game with ideological disparity in which the candidate decides not to establish an alliance with the non-state armed group. Under the traditional clientelism subgame, candidate A's best response is to bribe districts 2 and 3, respectively, with probabilities (fractions):

$$1 - \tilde{\lambda}^* = \frac{1}{2} + \frac{\gamma}{2g}; \quad \tilde{\lambda}^* = \frac{1}{2} - \frac{\gamma}{2g}$$

Therefore, the probability of rewarding district 2 is higher than the probability of rewarding district 3.

**Proof:**

The thresholds in this case are given by  $\tilde{x}_2 = -\alpha - (1 - \tilde{\lambda})g$  and  $\tilde{x}_3 = -\alpha - \gamma - \tilde{\lambda}g$ . Hence, the probabilities that districts 2 and 3 support the candidate are, respectively,

$$\tilde{p}_2 = \frac{1}{2} + \frac{\alpha + (1 - \tilde{\lambda})g}{2k}; \quad \tilde{p}_3 = \frac{1}{2} + \frac{\alpha + \gamma + \tilde{\lambda}g}{2k}$$

Solving the maximization problem of the candidate yields:

$$1 - \tilde{\lambda}^* = \frac{1}{2} + \frac{\gamma}{2g}; \quad \tilde{\lambda}^* = \frac{1}{2} - \frac{\gamma}{2g}$$

which completes the proof. ■

Clearly, district 2 is bribed with a higher probability than district 3, as the latter is ideologically closer to the candidate than the former. Substituting into the objective function of the candidate, it can be shown that the probability of holding office under traditional clientelism is given by:

$$\tilde{\theta}^t = \frac{(2k + 2\alpha + g + \gamma)^2}{16k^2} \tag{5}$$

Comparing (2) and (5), it is clear that  $\tilde{\theta}^t > \theta^t$  and that this difference increases with  $\gamma$ . This result is intuitive, because in the game with ideological disparity, under traditional clientelism, the candidate excludes the most distant district and bribes the neutral and the closest ones, instead.

In the end, the goal of this section is to compare equilibrium conditions for armed clientelism under the ideological disparity and affinity games. Proposition 6 shows that the conditions that guarantee that armed clientelism is a subgame perfect equilibrium are more stringent in the case of ideological disparity, compared to the ideological affinity situation.

**Proposition 6: (Affinity versus Disparity)**

In the subgame perfect equilibrium of the ideological disparity game, the conditions for armed clientelism being chosen over traditional clientelism are more stringent than in the case of ideological affinity.

**Proof:**

In the game with ideological disparity, the candidate chooses armed clientelism if

$$\tilde{\theta}^a \geq \theta^t$$

or, from (4) and (5), if

$$\frac{[2k + 2\alpha + g]^2(1 - \beta)}{16k^2} \geq \frac{(2k + 2\alpha + g + \gamma)^2}{16k^2} \quad (6)$$

It is clear that in (6), compared to (3), the left hand side of the expression is lower while the right hand side is larger, which implies that the conditions are more stringent in (6).■

Summing up, armed clientelism needs to satisfy a more stringent condition —or is less likely— when the illegal armed group controls the district that is ideologically farther away from the candidate. This result goes in line with the empirical regularities posed by different authors and discussed at the beginning of this section. Illegal alliances tend to occur between agents that are ideologically aligned, and the reason is that the likelihood of reciprocation is higher among “friends”, like paramilitaries and right-wing politicians in Colombia, milítias and policemen in Brazil, or latino gangsters and latino candidates in Chicago.

## 7 Discussion

It is worth discussing some aspects of the model presented above. The first is the role that the judicial system plays in preventing the emergence and consolidation of armed clientelism. The conclusion that a more efficient and independent judicial



system prevents illegal alliances between politicians and illegal armed groups is not surprising. Nonetheless, in the analysis presented above, this efficiency, captured by the parameter  $\beta$ , is completely exogenous and independent from the players' choices. But in a context of violence and corruption, in which non-state armed actors have the capacity to influence public officials through different mechanisms, this might be an uncomfortable assumption. Therefore, a future modification or extension of the model could include the endogenization of  $\beta$ , allowing for the possibility of criminals to affect its value with their actions. Dal Bó et al. (2006) give an interesting explanation of why this might be true and what consequences may occur. Their basic argument is that certain groups are capable of influencing public officials' decisions (which might include the judicial system) through two mechanisms, "plata o plomo" (silver or lead). Hence, either the threat of violence against the officials, or the use of bribes to seduce them, could be used to affect policies and legislation.

In the context of the Colombian civil conflict, Eaton (2006) argues that the decentralization reforms that took place during the 1980s and 1990s explain to great extent why armed clientelism consolidated as a mechanism for state capture. In an attempt to negotiate with several guerrilla movements and in the hope of ending hostilities, the government conducted several reforms with the objective of decentralizing political authority (in the form of subnational elections) and economic authority over revenues and expenditures (Eaton, 2006). The problem is that these reforms were conducted *before* some of these groups (like FARC, ELN, or the paramilitaries) demobilized. Therefore, the reforms had paradoxical and unintended effects: they gave these groups more incentives to affect electoral outcomes and establish alliances with local leaders or national politicians with some influence on regional budget allocation.

Hence, decentralization may explain, to some extent, why armed clientelism is prevalent at the local level in different contexts —cities in the U.S., regions in Colombia, favelas in Río—and constitutes an effective alternative used by different actors to control economic and political resources at the regional level. In the context of the model presented above, we may interpret the unintended consequences of decentralization as a shift in the parameter  $\gamma$ . Remember that this parameter can be interpreted as all the post-election benefits that the illegal group receives if its candidate is elected and governs. Decentralization without the monopoly of violence, as a form of institutional design, can be understood as an exogenous increase in  $\gamma$ ,

which makes candidates more valuable for the criminals.

The empirical analysis presented by Acemoglu et al. (2013) reveals that the paramilitaries influenced the electoral outcomes during the 2000s in Colombia, while the guerrilla groups did not. But this does not mean that the guerrilla groups did not affect the elections. In fact, these left-wing groups tend to use other strategies that might also affect the results. It is well reported how the guerrillas intimidate citizens and suppresses voting, to the extent that in those regions controlled by them turnout tends to be lower. If both guerrilla and paramilitary groups are non-state armed actors seeking to control entire regions and economic resources, why do they use different electoral strategies? Is it completely true that left-wing groups do not use armed clientelism at all, or is it the case that the existing empirical analysis does not use the appropriate strategies to reveal it?

Naturally, the answers to these questions are empirical. But if it is true in those regions controlled by the right-wing paramilitaries that turnout tends to be higher, and in regions controlled by left-wing guerrilla groups that turnout tends to be lower, then some theoretical explanation should be given as to the question of why some armed groups follow one strategy while others do not.

A final comment: at a different scale, and as it was stated in the introduction of this paper, some of the phenomena that developing countries experience today and that affect the functioning of their political institutions were already experienced, about a century ago, by cities in the U.S. like Chicago, Kansas City, and New York—although some vestiges may remain. Consequently, if one is to accept that these cities (partially) solved their problems during the twentieth century, a careful examination of what happened, how things evolved, and how problems were solved could serve as a guideline for dealing with today’s difficulties in the developing world.

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