# Does Criminal Governance Increase Electoral Competition in Slums?

## (And is That a Good Thing?)

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## Abstract

A central problem for democratic consolidation in developing countries has been rapid urbanization, leaving huge populations living in informal slums and peripheral zones with low state presence and weak rule of law. In many slum zones, local governance is provided as much or more by criminal gangs than by the state. There is ample anecdotal and ethnographic evidence that these gangs engage in forms of armed electioneering, often most directly by selling physical access to specific candidates. We probe these dynamics by exploiting the sharp reduction of criminal governance in a subset of Rio de Janeiro's favelas induced by the Pacification Policing program between 2008 and 2016. Contrary to what conventional wisdom would predict, we find that "Pacified" favelas had systematically *less* political competition than gang-governed favelas, and that political competition falls the longer a community has been pacified. This suggests that criminal governance is not effective in forcing residents to vote for favored candidates, but rather may induce skepticism, apathy, and generally erratic voting behavior.

## 1. Introduction

In the 1980s, authoritarian governments fell throughout Latin America as the "Third Wave" of democratization swept through the region. In the aftermath, concern centered on preventing countries from backsliding into authoritarianism. On the whole, formal democratic institutions have remained strong, and the region has made great strides in reducing extreme poverty and other social problems. Despite these advances, however, the region continues to grapple with widespread social and economic problems that prevent the consolidation of democracy.

The United Nations estimates that 20 percent of all urban residents in Latin America live in slums.[1] In may slums, armed criminal groups partially govern civilian populations, imposing rules and regulations upon community residents and deciding who can and cannot enter the community. While the phenomenon has not been studied systematically, and the degree of criminal governance surely varies enormously from country to country, the number of people living under some form of criminal governance in Latin America is surely in the tens if not hundreds of millions, far more than those living under ideological armed groups like insurgents and paramilitaries. However, we know little about the impact of criminal governance on elections. Unlike ideological armed groups, whose alignment (or not) with government preferences is critical to electoral outcomes (Acemoglu, Robinson, and Santos 2013), criminal groups may simply "sell" communities to the highest bidder, or seek candidates linked to corrupt police, aiding bribery and "hollowing out" the state.

In this paper, we exploit the variation in criminal governance induced by Rio de Janeiro's Pacification / Pacification Pacifying Police (UPP) program to examine how changes in criminal governance affect electoral politics. Most of Rio's nearly 1,000 favelas have been ruled by heavily armed drug syndicates for more than a generation. While systematic data on drug-gang electoral interreference is lacking, they are known to charge candidates fees to enter their territory, and also to threaten candidates. Pacification was an experimental public security policy rolled out by the state government between 2008 and 2012, to reduce violence and establish a state presence in low-income communities. In a quickly increasing number of "Pacified" favelas, UPP units replaced armed drug gangs as the local monopoly on the use of force. We

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[1] United Nations. 2015. "Regional Backgrounder: Latin America and the Caribbean." http://www.un.org/millenniumgoals/2015_MDG_Report/pdf/backgrounders/MDG%202015%20PR%20Bg%20LAC.pdf

assume that this facilitated candidate access in Pacified favelas. Moreover, while selection into Pacification was not random, the criteria—high-profile favelas close to the wealthy Zona Sul and key thoroughfares and favelas prone to intense armed violence—were not specifically linked to evidence of prior armed electioneering.

We posit two potential causal effects of Pacification on electoral results. On the one hand, increased candidate access should lead to greater electoral competition: voters exposed to more local campaigning by more candidates might split their vote among more candidates. On the other hand, criminal governance can lead residents to become extremely apathetic about their options, since the candidates they are exposed to are likely to serve the interests of local gang bosses or simply be those willing to buy off the drug lords. If eliminating criminal governance allows higher-quality candidates, with greater ability to deliver benefits to residents, to campaign, it is possible that voters will begin to systematically favor a smaller number of better candidates. Moreover, candidates freed from the need to purchase access may be able to direct more resources to specific communities, including through clientelistic practices. This proposed mechanism predicts, counterintuitively, that the weakening of criminal governance leads to *less* political competition.

We test these competing hypotheses using an original dataset on favela pacification and state legislative elections from the city of Rio de Janeiro between 2006 and 2014.  Our central findings are that (1) Pacification does not immediately alter political competition in favelas, but that (2) the presence of a Pacifying Police Unit over time correlates with a reduction in political competition. The "effect" is detectable when Pacification occurred at least 2 years prior to an election, and increases over time.  Across a variety of model specification, this decline in competition ranges from 9 to 36 percent.

Section 2 presents background on the Pacification / PCC  program. Section 3 presents some descriptive empirics of criminal electioneering and our theorized mechanisms. Section 4 presents our data and methodology. Section 5 presents our main results. Section 6 concludes.


## 2. The Pacification / UPP Program

Public security has been a long-standing political issue in Rio de Janeiro.  Between 1995 and 2006, the state had more than 81,000 homicides and each new gubernatorial election brought about a different approach to security.  While security was improving in the months leading up to the 2006 gubernatorial elections, the state continued to have the country's fourth highest homicide rate and more than 7000 murders annually.  Sérgio Cabral Filho, candidate for the Brazilian Democratic Movement Party (PMDB), made public security a central campaign issue. After winning the election, his government began forming a new policy, the Pacifying Police Program.  This strategy emphasized reducing violence through social programs in conjunction with a stronger police presence in poor neighborhoods, typically referred to as *favelas*.  There are currently 1018 favelas in the city of Rio de Janeiro.  In December 2008, Secretary of Public Security José Beltrame launched the first Pacifying Police Unit (UPP) in the Santa Marta Community in Rio de Janeiro's wealthy and touristic South Zone.

The Pacification strategy involves several steps.  First, the government releases public notices that they are going to occupy the favela within a certain timeframe (without specifying a date).  In an initial occupation phase, police officers from the military police's Special Operations Police Battalion (BOPE) enter the favela to take control and disarm any armed actors who may oppose their presence.  The BOPE stays for roughly a month, conducting searches for

weapons caches. Meanwhile, the state constructs and staffs permanent UPP police posts in the community to prevent the return of criminal groups. The police officers assigned to these units are overwhelmingly newly hired officers that received additional training in human rights and community relations. The strong police presence provides other government agencies with the security necessary to enter the community to implement social projects and increase educational opportunities for the residents. However, the government has largely focused on the program has largely ignored the underlying socioeconomic problems in these neighborhoods. In a May 2016 interview, the then-Secretary of Public Security, José Beltrame, publicly criticized the state government for focusing only on policing, asking "Where is the money for social programs?"[2]

As Table 1 shows, the number of UPPs has grown over time. In 2008, the UPP program covered only 4760 residents in a single favela; Santa Marta. However, by 2014, there were 38 UPPs providing security for more than six hundred thousand people in 134 favelas. The strategy, which the state government backed with the hiring of 8000 new military police officers, had great success in reducing violence (Forúm Brasileiro de Segurança Pública 2016). Between 2008 and 2014, the city's homicide rate declined 26 percent. Following pacification, the Santa Marta favela, which received the first UPP in December 2008, did not have a single homicide for more than seven years. In another UPP-occupied favela, City of God (Cidade de Deus), there were 58 homicides in the two years prior to the installation of the UPP but only 10 afterwards.

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[2] Thomé, Clarissa. 2016. "A UPP fez sua parte. Para onde foi a verba de assistência social?" *O Estado de São Paulo*. May 25. http://brasil.estadao.com.br/noticias/rio-de-janeiro,a-upp-fez-sua-parte-para-onde-foi-a-verba-de-assistencia-social,10000053273

In addition, the police did not kill a single individual in the two years after pacification; they killed 45 in the two years prior to it.

**Table 1: Pacifying Police (UPP) Expansion, 2008-2014**

|      | New UPPs | Total UPPs | Population | % City Population |
|------|----------|------------|------------|-------------------|
| 2008 | 1        | 1          | 4,760      | 0.07              |
| 2009 | 4        | 5          | 84,979     | 1.34              |
| 2010 | 7        | 12         | 166,814    | 2.64              |
| 2011 | 6        | 18         | 259,283    | 4.10              |
| 2012 | 10       | 28         | 480,157    | 7.60              |
| 2013 | 8        | 36         | 618,503    | 9.79              |
| 2014 | 2        | 38         | 687,218    | 10.87             |

Source: Secretaria de Segurança Pública: Instituto de Segurança Pública

According to the former state Secretary of Public Security and the UPP program's architect, José Beltrame, the program's primary goal is to reduce violence along with gang and militia territorial domination, limiting their ability to openly exercise authority and serve as gatekeepers, deciding who is and who is not able to enter the favela. "It is a shame that a person has to be accountable to an armed "marginal" asking where he is going and what he is going to do" (Beltrame 2014, 118). This emphasis on retaking territorial control in communities that were typically off limits to government actors and other outsiders provides a unique opportunity to study how changes in criminal governance influence electoral politics in low-income communities.

**3. Armed Criminal Electioneering and Proposed Theoretical Mechanism**

Electoral interference by armed actors is a common problem throughout the developing world. These actors may include rebel groups and even state agents. Wilkinson (2004) shows that the Indian government foments ethnic riots to rally their core supporters when the ethnic group is

part of the opposition but they actively manage riots when they will have to negotiate with the ethnic group's party later on.  Auyero (2006) similarly shows that the Peronist government in Argentina organized riots that targeted opposition businesses, while also providing "free" goods to government supporters.

The government, alternatively, may choose to use selectively sanction violence through its inaction.  Acemoglu, Robinson and Santos (2013) show that paramilitary groups in Colombia prefer conservative policies and the federal government leaves them alone in district where they coerce voters into supporting candidates from the government's party and allied parties.  Trejo and Ley (2016) find that Mexico's federal government coordinates security policies with local government less when the opposition is in power, in an effort to discredit local political opposition.

While there is a broad understanding of the motivations and tactics that ideologically-motivated rebel groups and state actors use, we have a much more limited knowledge about how criminal organizations intervene in the electoral process.  Their effect on the electoral process is likely to differ, however, since their primary goals are economic rather than ideological. Criminal groups may have weaker political preferences over candidates, and they are also likely to have far less social access to the political class. However, like ideologically-motivated groups, they have the option of using violence against politicians and candidates within their zones of control.

Between 2006 and 2017, drug cartels assassinated 109 current and former mayors in Mexico.[3]  More recently, during Rio de Janeiro's 2016 municipal elections, gunman assassinated

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[3] Rosagel, Shaila. 2017. "El sexenio de EPN supera al de FCH en alcaldes asesinados: 60; urgen a Segob protocolo de seguridade." December 21. *SinEmbargo*. http://www.sinembargo.mx/21-12-2017/3365581

15 mayoral and city council candidates.[4] Political assassinations, however, are rare. Killing candidates or sitting politicians attracts widespread media attention and often forces the government to take drastic measures against the group, which they may have otherwise left alone. For criminal groups that are primarily interested in economic rather than political goals, this attention is likely to be counterproductive.

Criminal organizations more commonly engage in discrete coercion by requiring political candidates or parties to negotiate access to low-income communities during elections (e.g. Arias 2006). This coercion does not attract as much government attention and can lead to significant financial benefits for the group. In El Salvador, the ruling leftist Farabundo Marí National Liberation Front (FMLN) political party gave the MS-13 and MS-18 prison gangs $10 million in micro-credit financing to support it during the 2014 presidential election.[5] The gangs likely made this deal based purely on financial rather than ideological considerations. According to a gang spokesperson, the only reason the gang did not work with ARENA, a right wing party, was that "when ARENA searched for us to even things (out) we already had a pact with the FMLN. So it was not possible because there was already an agreement with the Front."[6]

We present strong descriptive evidence of criminal armed electioneering in Rio and Brazil more broadly. Between July 2015 and June 2016, we interviewed 100 states deputies in six Brazilian states and asked them how security issues affected their campaign. As Table 2 shows, 35 percent of deputies modified their campaign strategies or avoided campaigning in poor

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[4] Martín, María. 2016. "A campanha de "matar quem atrapalha" nas eleições municipais do Rio."July 24. El País. *https://brasil.elpais.com/brasil/2016/07/21/politica/1469053544_610983.html?%3Fid_externo_rsoc=FB_BR_CM*

[5] d'Aubuisson, Juan José and Carlos Martínez. 2016. "Videos Show FMLN Leaders Offering El Salvador Gangs $10 Mn in Micro-credit." October 29. *Insight Crime*. http://www.insightcrime.org/news-analysis/videos-show-fmln-leaders-offering-el-salvador-gangs-10-mn-in-micro-credit

[6] Martínez, Carlos. 2016. "Pandillas aseguran que tenían pacto electoral con el FMLN." April 18. *El Faro*. https://elfaro.net/es/201604/el_salvador/18455/Pandillas-aseguran-que-ten%C3%ADan-pacto-electoral-con-el-FMLN.htm

neighborhoods due to threats of violence or demands that they pay an "entrance fee." One Rio state deputy said that in a community dominated by Red Command (CV), the state's largest prison-based gang, leaders asked him to pay 20,000 reais (about US$7000) for the right to campaign there.[7] This electoral interference affected more than 30 percent of sampled deputies from across the ideological spectrum and four out of every 10 deputies from right parties.

**Table 2: Threats Made Against State Deputies During the 2014 Electoral Campaign**

| | Left Parties | | Center Parties | | Right Parties | | Total | |
|---|---|---|---|---|---|---|---|---|
| **State** | Yes | No | Yes | No | Yes | No | Yes | No |
| Bahia | 2 | 4 | 1 | 4 | 3 | 5 | 32% | 68% |
| Paraná | 1 | 8 | 1 | 7 | 2 | 5 | 17% | 83% |
| Pernambuco | 2 | 6 | 0 | 3 | 2 | 6 | 21% | 79% |
| Rio de Janeiro | 5 | 5 | 5 | 1 | 5 | 3 | 63% | 38% |
| Rio Grande do Norte | 0 | 1 | 2 | 1 | 3 | 2 | 44% | 56% |
| Sergipe | 1 | 0 | 0 | 1 | 1 | 2 | 40% | 60% |
| **Total** | 11 (31%) | 24 (69%) | 9 (34%) | 17 (66%) | 16 (41%) | 23 (59%) | (35%) | (65%) |

Brazil utilizes an open-list proportional representation system for state and federal deputy elections, and voting is compulsory. In this system, the entire state is a single district and party lists receive legislative seats based on the percentage of total votes their candidates receive. Political parties may run individually or in a coalition but regardless of which strategy they choose, candidates win a seat based on their ranking relative to other candidates on the list. This system gives candidates an incentive to campaign and market their personal brand to distinguish themselves from other candidates running for office, even if from the same party. In Rio de

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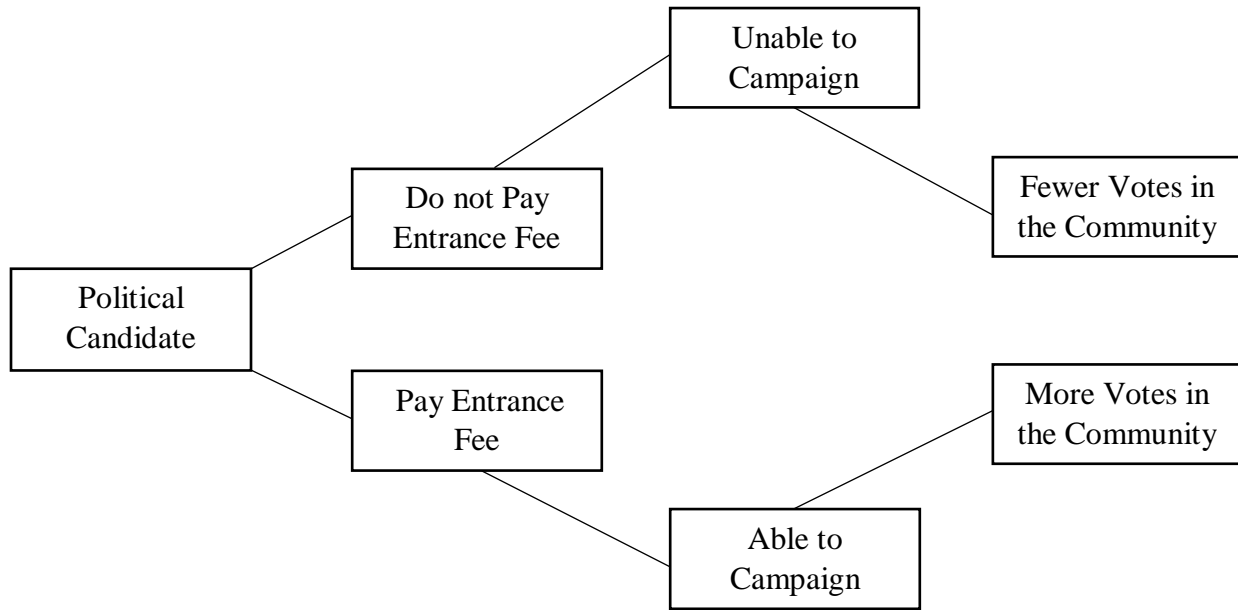[7] Personal Interview, State Deputy, October 6, 2015.

Janeiro, there were more than 1000 candidates for state deputy in all three elections between 2006 and 2014.

In this system, candidates can win the election by developing an electoral bulwark in specific geographical areas or by targeting specific groups, such as evangelicals, environmentalists and human rights supporters (Ames 2002). In theory, they are able to campaign and seeks votes throughout the state. However, in areas where criminal groups dominate, the rules of the game are different.

Figure 1 outlines the conventional wisdom of how interference with political campaigns affects electoral outcomes. Say a political candidate wants to campaign in a specific community. If it is under gang control, entering the community requires negotiating with gang leaders. If she decides to negotiate, they will require her to pay a "fee" or to provide some other good for the community. However, after she pays the fee, she will have unrestricted access to the community and can distribute campaign materials and hold campaign events there. In addition, the gangs will prevent other candidates from entering the community and will openly endorse this candidate. If she does not pay, then she is unable to enter the community.

**Figure 1: Criminal Governance and Campaigning**

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                                    ┌──────────────┐
                                    │  Unable to   │
                                    │  Campaign    │
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                                            \        ┌──────────────────┐
                     ┌──────────────┐        \       │  Fewer Votes in  │
                     │  Do not Pay  │         \      │  the Community   │
                     │ Entrance Fee │          \     └──────────────────┘
                     └──────────────┘
┌──────────────┐    /
│  Political   │   /
│  Candidate   │  /
└──────────────┘  \                                  ┌──────────────────┐
                   \ ┌──────────────┐                │  More Votes in   │
                    \│ Pay Entrance │                │  the Community   │
                     │     Fee      │         /      └──────────────────┘
                     └──────────────┘        /
                                            /
                                    ┌──────────────┐
                                    │   Able to    │
                                    │  Campaign    │
                                    └──────────────┘
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The hypothetical prediction arising from this model is that candidates who negotiate to campaign in a community will receive more votes from it than candidates who do not (Auyero 2006). Since the gangs generally sell access to a small number of candidates, criminal governance in a community should lead to most votes going to a few or even a single candidate at those polling stations where community members vote. We should expect, therefore, to see fewer candidates receiving more votes in those polling stations.

Paying an entrance fee, however, does not guarantee that the community's voters will support the candidate(s). Candidates must still convince voters in the community that they are a better option than any of the other 1000 candidates on the ballot. Residents can also cast a general vote for a political party, casting a blank ballot.[8] While it is certainly possible that

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[8] In the 2014 elections, null and invalid votes accounted for 19 percent of all votes cast.

physically campaigning in a neighborhood helps a candidate stand out in the crowd, there are competing considerations that point in a different direction.

One factor is resource constraints. To the extent that candidates campaign on a clientelistic basis, with promise of material rewards in exchange for votes or victory, paying entrance fees reduces the resources available for buying support from voters. More broadly, residents know that their exposure to candidates is mediated by the gangs, and my update their perceptions about the candidates that get through. They might think such candidates are more corrupt or "dirty" (because willing to purchase access from traffickers), and reject them on moral grounds or on the grounds that such candidates, if elected, will be ineffective. Or residents might conclude that even if effective, these candidates would be more likely to act in the interest of traffickers than residents themselves. A third possibility is that the experience of living under gang rule, and the common knowledge that candidates are not free to enter and campaign, turns residents off to politics in general, leading them to vote in more erratic ways. In sum, while voters may more easily recognize a candidate who has paid entrance fees, this does not necessarily mean that they have strong reasons to vote for her.

Criminal groups often ask candidates to fund broad projects that benefit them personally, such as fixing a plaza to hold dances and other events, or giving jobs to close friends. In these situations, the average voters will not receive additional benefits regardless of whether or not that individual wins or loses. In addition, knowing that only candidates who negotiate with community owners are able to campaign there may cause them to resent these candidates and vote against them. In this situation, therefore, contrary to expectations, we expect that strong criminal governance will lead to a high number of candidates receiving votes.

Conversely, under Pacification, higher-quality candidates, and/or candidates with more programmatic policies, might be able to build stronger reputations over time, solidifying a stronger base of electoral support in slum communities. After the government pacifies the favela, candidates no longer need permission to enter the area. This reduces campaign costs for all candidates. They can enter the community and make appeals to voters based on their policy proposals or they can establish direct clientelistic linkages. Candidates who utilize the latter strategy and previously paid for access to the community now have more resources to distribute directly to voters through projects, jobs and other policies. This can help them establish strong electoral bulwarks. Other candidates who lack the financial resources to directly pay criminal organizations for community access but have the power to pressure the bureaucracy to direct benefits, such as fixing a road or opening a new health clinic, to specific areas, will also now be able to make clientelistic appeals to voters. In prior years, they would not have made these appeals since they would be unable to claim credit for the goods they were providing the community.

Finally, and optimistically, candidates who are morally opposed to cutting deals with drug gangs can now freely campaign as well. These mechanisms, taken together, suggest that Pacification might increase the concentration of votes for a smaller number of candidates at favela polling stations. Moreover, since these mechanisms involve reputation-building and candidate-community relationships, we would expect this predicted effect to grow over time.

The two competing mechanisms described here make opposite predictions of the effect on vote-share concentration of a reduction in criminal governance.

H$_1$: *Pacification of a favela should lead to an increase in the number of candidates receiving votes in polling stations near that favelas after they are pacified.*

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H[2]: *Pacification of a favela should lead to a decrease in the number of candidates receiving votes in polling stations near that favelas after they are pacified.*

H[2b]: *This decrease should grow larger as the number of years a favela has been Pacified grows.*

We now turn to an empirical analysis of electoral returns by polling station, to test which, if any, of these competing predictions is borne out by the data.

## 4. Data and Methodology

We probe the possible effects of changes in criminal governance on electoral outcomes using geocoded electoral data from Rio de Janeiro state's 2010 and 2014 state legislative elections; the two elections that have occurred since the UPP program went into effect. Since our argument focuses on how changes in criminal control of low-income communities affect voting behavior, we focus the analysis on the city's 1018 favelas.

We linked polling-station-level voting data from the Brazilian electoral authorities (Tribunal Regional Eleitoral) to each of the city's more than 1450 polling stations. We then geo-reference the location of polling stations, using the Google Map Developers application. To identify the location of the city's 1018 favelas, which are home to 22 percent of its 6.5 million residents, we use data from the Pereira Passos Institute (IPP); the city's statistical agency. Given the high levels of crime and violence present in many favelas, the government often locates polling stations outside favelas and assigns most people to a station near their home. We classify a polling station as being "treated" by criminal governance if it is within 1 mile of a favela.[9]

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[9] We ran robustness tests and found similar results using a 0.5 mile cutoff instead of 1 mile.

Figure 2 shows the location of the city's favelas and polling stations during the 2010 and 2014 elections. Favelas are the green polygons. The red dots represent the location of every polling station in the 2010 election, while the yellow dots are polling stations in the 2014 elections. Since most polling stations remain at the same location across elections, there are fewer visible polling stations for the 2014 elections.

**Figure 2: Favelas and Polling Stations in the City of Rio de Janeiro**
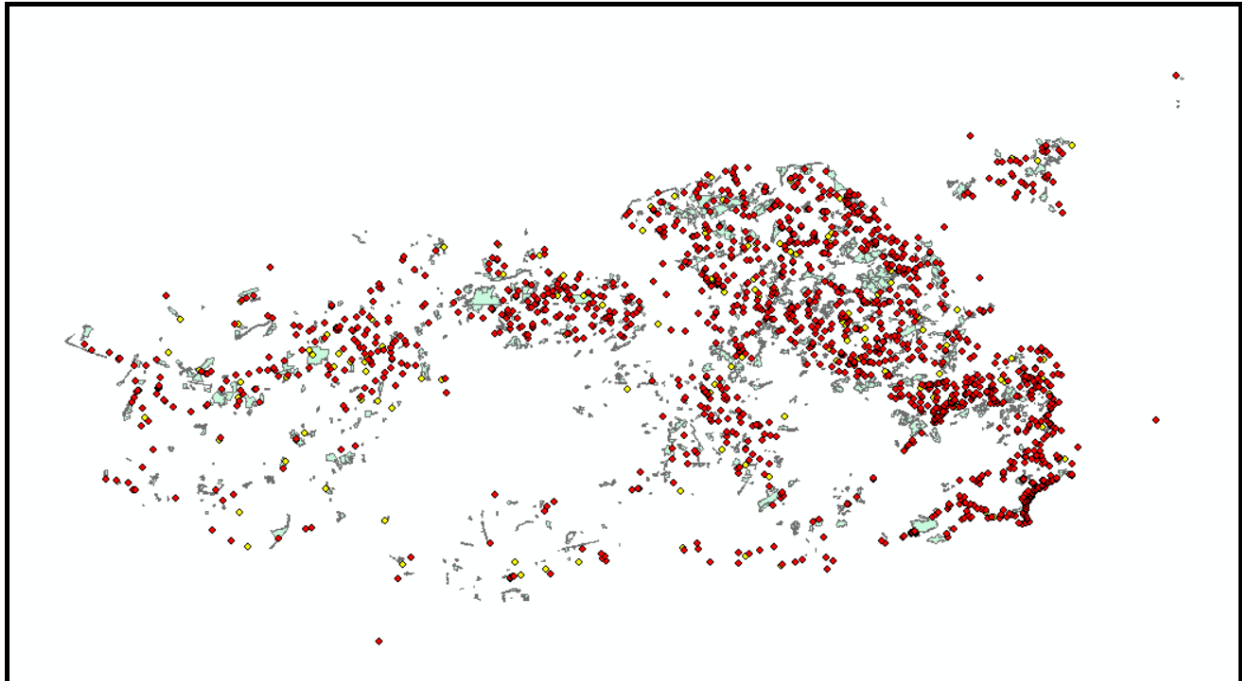


The primary dependent variable, *political candidates*, measures the competitiveness of elections at polling stations near favelas. When there is more than one polling station near the favela, we use the average across all polling stations in our "treated" area. We focus on candidates rather than parties since Brazil's open list proportional representation system has led to the development of an extreme multi-party system where each politician runs an individualistic campaign that receives minimal oversight from the party (Ames 2002).

Highlighting the extremely individualistic nature of the system, following the 2014 elections, 22 political parties had a representative in the state legislative assembly.

We calculate the competitiveness of the election at each polling station by adapting Laakso and Taagepera's (1979) measure of the effective number of parties in a political system to candidates.[10] This is the inverse of the summation of the squared proportions of the vote won by all candidates at the polling station:

Effective Number of Candidates = $1/\sum V_i^2$

Where $V_i$ is the proportion of votes won by candidate *i*. The intuition behind this formula is that polling stations where a few candidates receive many votes will have less political candidate than a similar polling station where many candidates receive relatively equal proportions of the vote. Across all favelas, an average of 12 candidates receive support at each polling station. However, the number varies greatly across favelas, whose individual average number of candidates ranges from just 2.7 to more than 28.6.

We have posited that UPPs can alter political competition through two mechanisms; by increasing the number of candidates with access to favela residents (predicting an increase in the DV), and by increasing the ability of skillful or effective candidates to reach favela residents (predicting a decrease in the DV). To help disentangle these mechanisms, we use two distinct independent variables. The first, *favela pacification*, takes a 1 if the favela had an UPP prior to the election, and 0 otherwise. The second, *occupation years*, indicates the number of years that the UPP has been in the favela prior to the election. If UPPs are altering political competition solely because more candidates are able to enter favelas and campaign without paying an

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[10] Quin (2012) uses this same strategy to measure the competitiveness of leadership elections.

"entrance" fee, and this access on its own leads to more votes, then simply Pacifying a favela should produce more political competition immediately following the establishment of the UPPs. Meanwhile, if UPPs are affecting competition by allowing candidates to develop reputational relationships in low-income communities, we would expect stronger declines in political competition the longer the UPP has been in the favela.

We include the *total polling stations* to indicate the quantity of polling stations that are within our cutoff distance. We are agnostic about the impact that having more polling stations will have on the effective number of parties. However, there may be more changes in political competition when there are fewer polling stations since changes in even one station can have a strong impact on the entire estimate.

To measure how changes in criminal governance influence political competition, we use a fixed affects panel model. The fixed effects model is a conservative estimator that allows us to control for unobservable fixed factors, such as community history and geographic location within the city, which can cause the favela to have more or fewer candidates, on average. It corrects this problem by using deviations from the mean values of the model covariates in each favela, rather than the level. Since multiple favelas sometimes exist in broader communities called "complexes" (*complexos*), we cluster standard errors at the complex level to account for correlation among favelas in the same complex. All models include time fixed effects to control for unobservable features affecting voting patterns in each election.

## 5. Results

As Table 3 shows, the mere act of pacifying the favela does not alter political competition. When the government establishes an UPP during an election year, there is a slight

increase in political competition, but the effect is not statistically significant. However, for each additional year that a UPP is present in the favela prior to the election, political competition declines. These results hold for the entire sample as well as in small (less than 1000 residents) and large (more than 1000 residents) favelas. The substantive effects are quite large. In Figure 3, we plot the hypothetical decline in political competition in an otherwise average favela that starts out with 12 candidates. After 6 years, political competition has declined around 9 percent to 11 candidates.

**Table 3: UPPs & Changes in Political Candidates**

|  | All Favelas | Small Favelas | Large Favelas |
|---|---|---|---|
| Pacifying Police Presence | 0.227 | 0.248 | 0.211 |
|  | -0.175 | -0.205 | -0.215 |
| UPP Occupation (Years) | -0.208*** | -0.190*** | -0.240*** |
|  | -0.026 | -0.027 | -0.045 |
| Polling Stations | -0.009 | -0.014 | 0.002 |
|  | -0.018 | -0.021 | -0.028 |
| 2014 Elections | -0.299*** | -0.281*** | -0.345*** |
|  | -0.063 | -0.068 | -0.106 |
| Constant | 12.31*** | 12.42 | 11.96*** |
|  | -0.375 | -0.405 | -0.674 |
| Overall R-Squared | 0.0234 | 0.038 | 0.001 |
| Within R-Squared | 0.0591 | 0.0481 | 0.0929 |
| Between R-Squared | 0.0476 | 0.0552 | 0.004 |
| N | 1988 | 1342 | 646 |

Robust standard errors in parentheses, * p<0.05, ** p<0.01, *** p<0.001

**Figure 3**: **Pacifying Police Units and Changes in Political Candidates**
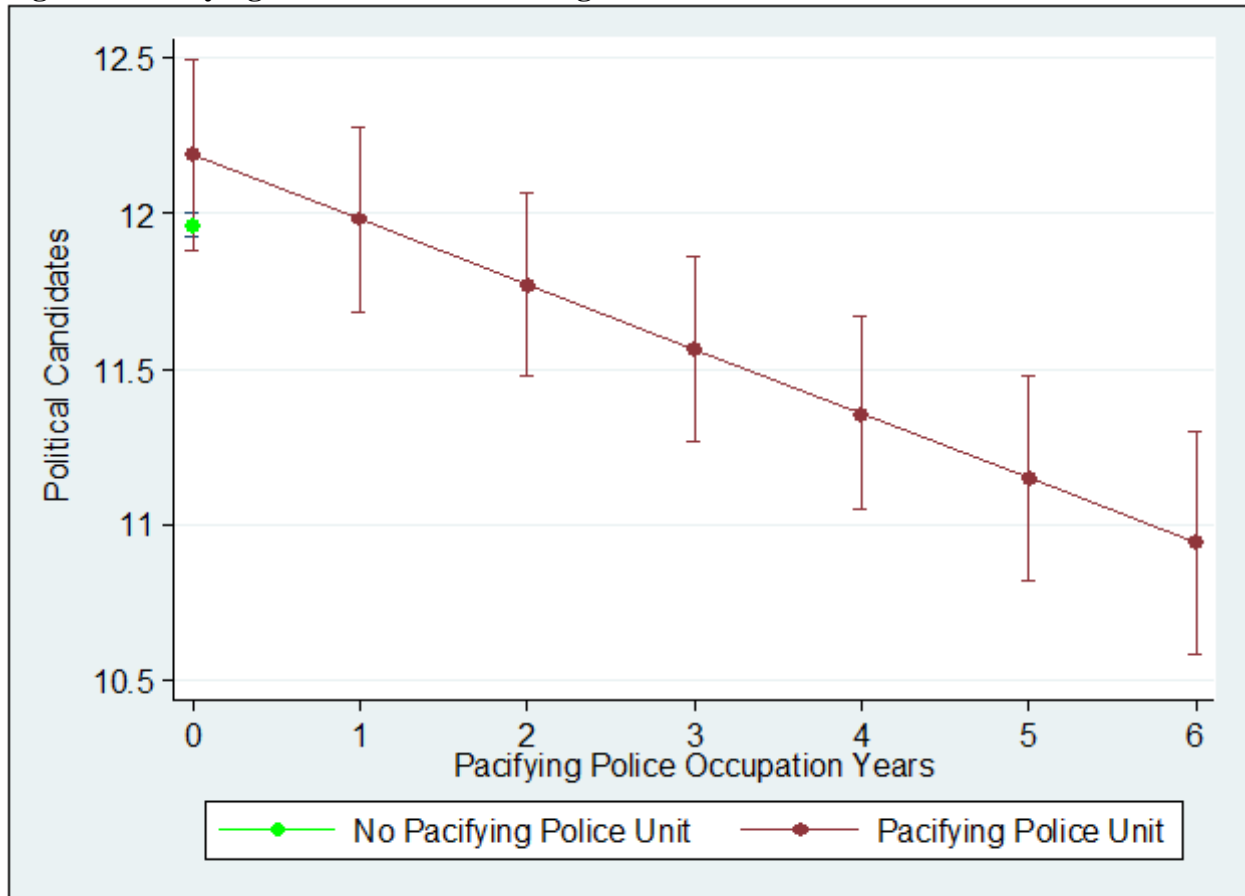


**Robustness Checks**

We ran several robustness checks for our results. First, we recalculated the effect of UPPs on

changes in the effective number of political candidates using a 0.5-mile cutoff for polling

stations rather than 1 mile and obtained similar results. We also recalculated our dependent

variable to take into account party votes. Brazilian voters have the option to vote for a specific

political candidate or a political party. Votes cast for candidates count toward the total number

of legislative seats that the candidate's party will receive. In addition, they determine the

candidate's position on the party's list. Votes cast for parties, in contrast, only affect the total

number of seats that the party will receive in the legislature. Our alternative dependent variable, *political competition*, measures the change in political competition, taking into account both types of votes. Using this new measure, there are an average of 32 candidates and parties in each favela.

As Table 4 shows, using this new measure, the pacification program leads to an even more striking decline in political competition. Each additional year that the UPP is in a community, leads to around a 6 percent decline in competition. Holding all the other covariates at their mean, in Figure 3, we graph the effect of UPP occupation years on political competition comparing two favelas; One that does not have a UPP presence and the other that has been occupied for six years. In this situation, the non-occupied favela has around 29 political competitors compared to only 18 in the occupied favela; a more than 38 percent decline in overall competition.

**Table 3: UPPs & Changes in Political Competition**

|                          | All Favelas | Small Favelas | Large Favelas |
|--------------------------|-------------|---------------|---------------|
| Pacifying Police Presence | 0.376       | -2.652*       | 3.048*        |
|                          | (1.348)     | (1.257)       | (1.412)       |
| UPP Occupation (Years)   | -1.893***   | -1.253***     | -2.711***     |
|                          | (0.403)     | (0.447)       | (0.446)       |
| Polling Stations         | -0.886***   | -0.594***     | -1.223***     |
|                          | (0.173)     | (0.177)       | (0.266)       |
| 2014 Elections           | -3.486***   | -3.425***     | -3.637***     |
|                          | (0.451)     | (0.456)       | (0.724)       |
| Constant                 | 49.07***    | 41.85***      | 60.95***      |
|                          | (3.598)     | (3.390)       | (6.468)       |
| Overall R-Squared        | 0.0802      | 0.0803        | 0.0737        |
| Within R-Squared         | 0.1975      | 0.1435        | 0.2966        |
| Between R-Squared        | 0.1354      | 0.1689        | 0.1306        |
| N                        | 1988        | 1342          | 646           |

Robust standard errors in parentheses, * $p<0.05$, ** $p<0.01$, *** $p<0.001$

**Figure 4**: **Pacifying Police & Changes in Overall Political Competition**
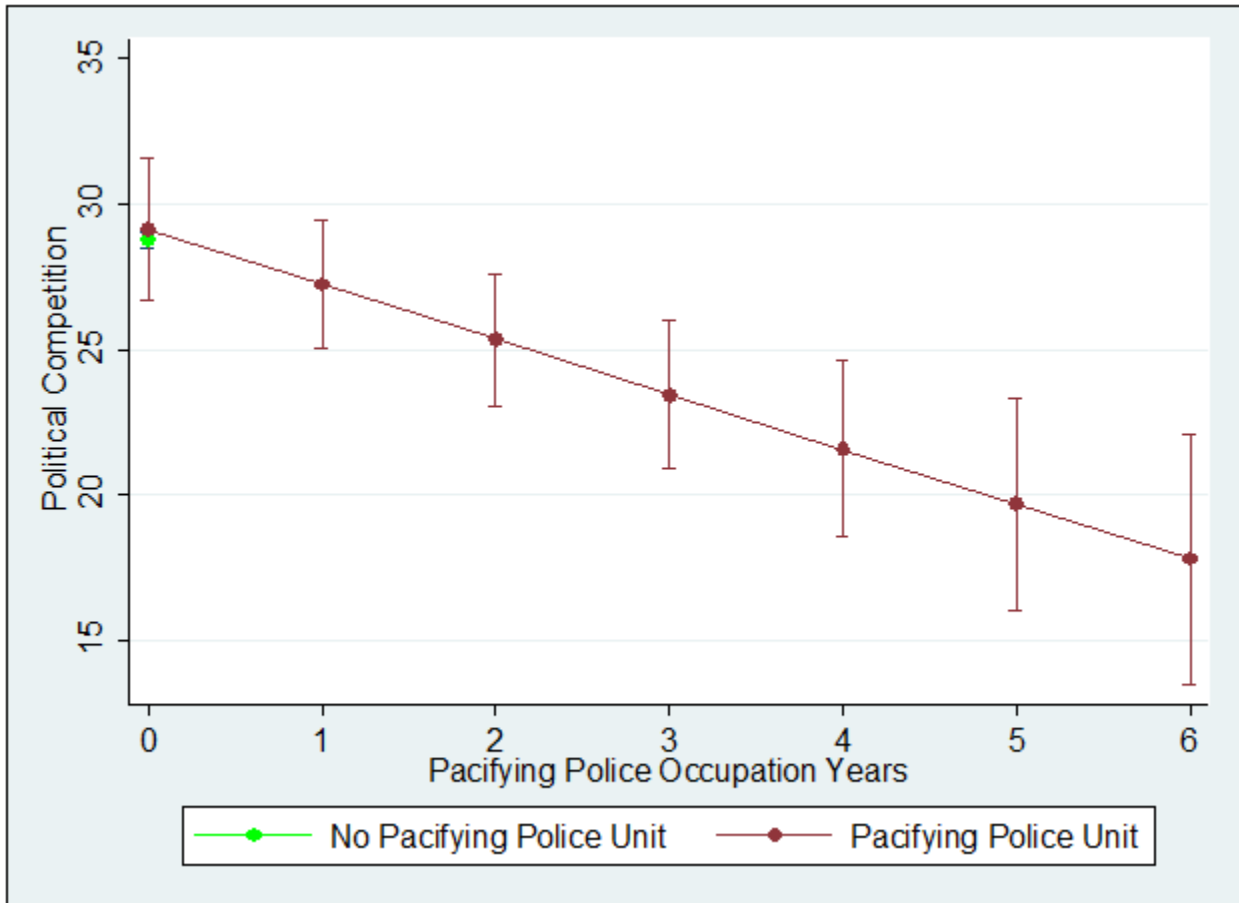


The alternative model also leads to changes in the other covariates. Across all three models, an increase in the number of polling stations near the favela lead to a decline in electoral competition. Meanwhile, the initial effect of the UPP program stays the same when we combine small and large favelas. However, when we split the sample, the arrival of the UPP during an election year leads to less political competition in small favelas and more competition in large favelas.

## 6. Discussion and Conclusion

Obviously, these preliminary results are merely suggestive. Our present analysis does not rule out that Pacification occurred in favelas that were trending toward greater candidate concentration, so that Pacification itself did not cause this increase. More importantly, our empirical approach does not permit us to distinguish among the multiple hypothesized mechanisms that might be driving the results. Substantively, it matters whether the observed decrease in competition is due to increased vote-buying or the ability of more programmatic and high-quality candidates to build electoral bases of support in low-income communities.

Nonetheless, the core empirical results are striking. Simply demonstrating the effect of Pacification on patterns of resident voting is an important first step in building a deeper, more systematic understanding of the interaction between criminal governance and electoral politics, an interaction with potentially devastating effects on democratic consolidation.

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