

Criminal Governance in Latin America: An Initial Assessment of its Extent and Correlates

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Abstract

For citizens across Latin America, basic order is provided by local criminal organizations. Existing studies establish that criminal governance is pervasive, persistent, and consequential—not only for those governed but for macro-level political, social, and economic outcomes—yet systematic assessments of its prevalence and characteristics are lacking. We leverage novel, representative survey data and a compendium of qualitative sources to create country-level estimates of people living under criminal governance. For 18 countries across Latin America, 13% of respondents—representing nearly 80 million people—report order-provision and crime-reduction by local criminal groups; this likely underestimates the true number, we argue. We also find, counterintuitively, that criminal governance (relative to non-governing gang presence) is correlated with positive perceptions of state governance and higher income, as well as objective measures of local state presence. Validating and untangling the causal relationships behind these correlations is a central challenge for future research.

Keywords: Criminal governance, state capacity, Latin American politics

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1 Introduction

“A state,” Weber (1947) tells us, “is a human community that (successfully) claims the monopoly of the legitimate use of physical force within a given territory,” yet in practice many states do no such thing. Familiar examples arise in scholarship on civil war and state formation: states may “optimize” rather than monopolize coercion (Staniland, 2012), whether outsourcing it to paramilitaries (Acemoglu *et al.*, 2013), co-existing with less oppositional groups, or remaining standoffish toward marginalized, sparse, or distant populations (Slater & Kim, 2015; Herbst, 2000). A variety of “armed orders” (Staniland, 2021) emerge, glaring but comprehensible exceptions to the Weberian ideal.

More puzzling are non-Weberian scenarios—common though not exclusively found in urban settings—in which order is provided at least partially by armed criminal groups. While these groups range from local street gangs (e.g. Arias, 2006; Barnes, 2021) and sophisticated prison-based networks (e.g. Denyer Willis, 2015; Cruz & Durán-Martínez, 2016) to international drug cartels (e.g. Duncan, 2015; Trejo & Ley, 2020), they virtually never seek to topple or secede from the state, or even pose a serious military challenge. Indeed, police can generally enter these areas at will, if not always without some violence. Yet states rarely eliminate criminal governance or formalize it into the state’s coercive apparatus. Rather, state and criminal governance usually come to coexist and overlap, in an antagonistic but ultimately stable “duopoly of violence” (Skaperdas & Syropoulos, 1997).

For those living under it, criminal governance can structure virtually every aspect of life, from physical safety, household finance, and community relations to elections, policing, and public services (e.g. Magaloni *et al.*, 2020; Lessing, 2021). These micro-dynamics can aggregate up to important macro-level effects. Governing criminal groups can get involved in politics not only as vote brokers, but because they often have the power to sharply reduce (or exacerbate) urban violence. Gangs like El Salvador’s *maras* and Medellín’s *bandas* have struck both overt and covert truces with governments to curb homicides (Cruz & Durán-Martínez, 2016), while the Primeiro Comando da Capital (PCC) in São Paulo has imposed a stable and effective *pax monopolista* (Biderman *et al.*, 2019). More broadly, criminal governance can provide basic social order and effective property rights, improving the daily life of citizens while permitting states to continue policies of neglect. This is critical in informal urban settlements, which

often house the lion’s share of developing nations’ workforce and are central to the economic processes of industrialization and urbanization.

Given its consequential and puzzling nature, it would be good to know just how pervasive criminal governance is, and what sort of places it typically occurs in. Accumulated ethnographic evidence has documented criminal governance and illuminated its contours and dynamics in hundreds of specific sites throughout Latin America. However, collecting and transforming these piecemeal observations—essentially a convenience sample from the universe of communities experiencing criminal governance—into reliable estimates of its extent is challenging. We know; we tried.¹

Here, we exploit a novel source of nationally representative survey data to produce the first (to our knowledge) national and regional estimates of the number of people living under criminal governance in Latin America. We find that 13% of all respondents—representing an astonishing 79 million people—experience criminal governance in their daily lives, with national estimates ranging from 5% to 23%. Moreover, these estimates likely represent lower bounds: factors including difficulty of enumerator access to areas of stark gang control and social-desirability bias against “admitting” that gangs rule suggest that false negatives are more common than false positives.

The survey data also permits us to analyze the correlates of reported criminal governance, yielding suggestive, descriptive findings. For example, respondents could report multiple types of criminal activity, and were far more likely to pair “extortion” with “violence” than either with governance activities. Given ample ethnographic evidence that many governing gangs do indeed impose “security fees” and “rent,” these small overlaps suggest that many respondents mentally distinguish between coercive extraction by governing gangs and “extortion” or “violence.” This supports the idea that criminal governance can generate forms of legitimacy (e.g. Magaloni *et al.*, 2020; Blattman *et al.*, 2021).

Finally, we show that criminal governance counterintuitively predicts higher measures of state presence and efficacy. Whereas reported presence of criminal and armed groups overall correlates with lower confidence in the state and income level, respondents who report criminal governance activities have more favorable perceptions of the state and their personal economic situation. This correlation is not purely subjective: using open-source mapping data to con-

¹An overview of this initial estimation effort and its results is presented in Appendix 1.

struct district-level measures of objective state presence, we find similarly positive associations with gang governance.

While we cannot make causal inferences from this data, both the sheer extent of criminal governance and its tendency to cluster in places where states are strong constitute substantive findings in their own right. The first shows that non-Weberian duopolies of violence—particularly in urban cores—are more norm than exception. The second calls into question the conventional wisdom that gangs govern to fill vacuums of state absence.

2 Data and Methods

Our primary data is the 2020 Latinobarómetro survey, which compiles nationally representative samples of 1,000 - 1,200 respondents in each of 18 Latin American countries. The survey instrument includes questions about political opinions and behavior, economic experiences, and social issues. Respondents are geocoded at the district level.

The 2020 survey included, for the first time, questions about the presence and activities of local criminal groups, allowing us to measure criminal governance. Respondents were asked “Are there organized crime, armed groups, narco groups, or gangs where you live?” We coded all affirmative answers as “criminal presence”.² Those respondents who answered yes were then asked:

Which of the following roles do these groups play in your city or town:

- A) Control robberies, improve security;
- B) Put order in the zone;
- C) Extort people or businesses;
- D) Use violence against people;
- E) Other.

Respondents could select as many options as appropriate.

We coded as “criminal governance” respondents whose answers included A), B), or both (regardless of other selections). We coded all respondents indicating C) as “extortion” and

²A different question asked who if anyone commits violence in respondents’ neighborhood and included “organized crime” and variants on “gangs” as options. We coded criminal presence for respondents who answered either of these options, even if they answered “no” to the principal question.

D) as “violence.” This coding follows Lessing’s (2021) definition of criminal governance as occurring when “the lives, routines, and activities of those governed are impinged on by rules or codes imposed” by a criminal organization, but excludes pure extortion, “where the only rule is ‘pay’.” While this coding decision preceded our analysis, we find support for it in our results: respondents apparently see extortion as distinct from governance, even where qualitative evidence suggests that governing gangs charge taxes.

To assess criminal governance’s spatial distribution within countries and its correlations with social and political variables, we pair the survey results with data on the districts in which respondents live. We collect geocoded individual-level census data for the 18 surveyed countries from the Integrated Public Use Microdata Series - International (IPUMS-I) project.³ We record individuals’ gender, age, educational attainment, and employment status, and use this data to calculate the population and population density of each district in the Latinobarómetro sample.

To proxy for district-level economic output, we use satellite-measured luminosity from the NOAA/VIIRS nighttime-lights dataset, which we normalize by population. We also draw on the Open Street Maps (OSM) platform, which crowd-sources data from contributors around the world to record the locations of streets, businesses, government institutions, and other features.⁴ We use OSM data to measure each district’s road density, a common measure of economic integration. We also use OSM to create two measures of state presence in each district, based on by counts of government institutions: police stations, military bases, hospitals, post offices, and schools per thousand residents. Table A.5 presents summary statistics for all variables.

Obviously, survey data on sensitive and understudied phenomena like residents’ experience of armed criminal groups may suffer from measurement error. True validation of the Latin-barómetro data will require, at a minimum, triangulation via surveys in places where criminal governance can be independently measured with precision. We offer a second-best validation exercise, leveraging our prior estimation effort for which we hand-coded the presence of governing criminal groups in subregions of 12 countries, based on a broad sweep and careful analysis of extant scholarship, government sources, investigative journalism, and civil-society reports.

³We use the most recent census available for each country, ranging from 2001 (Honduras and Venezuela) to 2017 (Chile). In most cases IPUMS-I offers a 10% random sample of individual census responses.

⁴Validation exercises demonstrate that OSM data is generally quite complete (Haklay, 2010).

3 Results

3.1 Estimates of Criminal Governance

Table 1 presents our main results: country-level estimates of criminal presence and criminal governance. Column 1 shows the share of survey respondents reporting presence of criminal groups; column 2 the resulting national count estimate. Columns 3 and 4 show the same for respondents indicating that local criminal groups engage in crime-reduction, order-provision, or both. The results are striking: 345 million people—more than half of the population of Latin America—live in communities with criminal organizations are present. Of these, 79 million people, a populace larger than all but two countries in the region, live under some form of criminal governance. This phenomenon is present across the region, with at least 5% of respondents reporting criminal governance activities in every surveyed country.

Although systematic validation of these estimates must await future survey work, several factors suggest they are lower bounds—a troubling possibility given their size. First, respondents living with illegal armed groups may fear reporting their presence—a pre-condition for being asked about criminal activities—and survey teams may undersample areas with stronger gangs.⁵ Second, among the four activities respondents could attribute to criminal groups in their neighborhoods, “reduce crime” and “provide local order” stand out as more positive and less typically associated with criminal activity than “violence” and “extortion,” and thus more likely to be underreported due to sensitivity bias. At the same time, respondents without first-hand knowledge seem less likely to report governance than extortion or violence based solely on news reports or common perceptions.⁶ Finally, if respondents experiencing governance alongside violence and/or extortion believed (erroneously) they could select only one option,⁷ they might tend to choose the more typical or socially expected activities, further attenuating our estimates.

An intriguing aside: among respondents indicating multiple activities, the overlaps of governance with extortion (30%) and with violence (39%) are much smaller than that between

⁵Indeed, enumerators in El Salvador reported respondents’ “suspicion and fear” when asked about gangs, “especially in low-income urban zones.” Teams also reported having to ask gangs’ permission to enter some zones.

⁶Overall, governance was reported less frequently (13%) than extortion (17%) or violence (18%).

⁷We address this concern further in Section 4.2.

Table 1: Criminal presence and governance by country

Country	Criminal presence		Criminal governance	
	Proportion	Count (millions)	Proportion	Count (millions)
Argentina	0.48	21.73	0.05	2.31
Bolivia	0.46	5.37	0.08	0.89
Brazil	0.72	154.15	0.23	48.03
Chile	0.35	6.70	0.05	0.97
Colombia	0.50	25.24	0.09	4.50
Costa Rica	0.54	2.73	0.12	0.62
Dominican Republic	0.33	3.54	0.07	0.72
Ecuador	0.52	9.16	0.10	1.84
El Salvador	0.58	3.74	0.08	0.54
Guatemala	0.50	8.41	0.06	1.06
Honduras	0.37	3.70	0.10	1.03
Mexico	0.51	65.72	0.09	11.03
Nicaragua	0.36	2.38	0.05	0.30
Panama	0.42	1.82	0.09	0.37
Paraguay	0.35	2.50	0.05	0.36
Peru	0.50	16.62	0.08	2.53
Uruguay	0.39	1.34	0.06	0.19
Venezuela	0.36	10.23	0.06	1.82
Total	0.56	345.06	0.13	79.10

*Estimates derived from 2020 Latinobarómetro survey. Proportion = share of respondents indicating presence of and governance by criminal groups. Count = Proportion * national population estimates.*

extortion and violence (74%).⁸ This is somewhat surprising, since many governing criminal organizations—from Rio’s *milícias* to Medellín’s *combos*—are known to forcibly extract taxes from residents (e.g. Arias & Barnes, 2017; Blattman *et al.*, 2021). These groups, however, explicitly frame themselves as protectors and the taxes they charge as the price of that protection, and often employ euphemisms that may distinguish “extortion” from supposedly legitimate forms of criminal taxation. Thus for Salvadorans taxed by the MS-13, “extortion is a single, occasional act, while ‘the rent’ (*la renta*) is regular. So, in their words, many pay ‘rent,’ but not extortion” (Amaya & Martínez d’Aubuisson, 2021, *iii*). Elsewhere, residents pay “dues” (*derecho de piso*), “vaccines” (*vacuna*), and “security fees” (*taxas de segurança*). The low reported governance-extortion overlap suggests that such framing may be effective. Future

⁸Table A.6 presents joint distributions of criminal governance, extortion, and violence by country.

surveys could fruitfully incorporate ethnographic work to formulate more precise questions about gang taxation and other activities.

3.2 Correlates of Criminal Governance

The variation among countries in Table 1 raises questions about the correlates of criminal governance. The highest rates by far are in Brazil, a middle-income country with relatively strong institutions; Mexico, Colombia, and Costa Rica also pair high criminal governance with relatively strong states and developed economies. While we cannot explain such variation with our data, we can explore its covariates at both national and individual levels.

Simple cross-national correlations show, perhaps unsurprisingly, that criminal governance is not predicted by broad measures of income or corruption (Figure 1). Poorer countries do not seem to be more susceptible to criminal governance. Neither does corruption appear to be a precondition for criminal rule: if anything, the countries reporting higher levels of criminal governance struggle *less* with corruption.

The survey data allows us to explore the individual-level correlates of criminal governance. Table 2 reports associations between respondents' perceptions of the state, as well as other individual-level characteristics, and their answers to questions about criminal groups. The first three columns model the association between criminal presence and respondents' confidence in government (Model 1), beliefs in the responsiveness of local authorities (Model 2), and perceptions that police are corrupt (Model 3). We add economic and demographic covariates and district-level fixed effects to account for some likely confounders of these relationships. Unsurprisingly, respondents reporting criminal presence in their communities also reported less confidence in the state across all three measures.

Surprisingly, though, the subset of these respondents who reported criminal governance activities (columns 4-6) also reported more confidence in government, greater responsiveness of local authorities, and less police corruption, relative to the total population reporting criminal presence. This surprising result runs counter to the conventional wisdom that organized crime grows strong where the state is weak or absent. Rather, criminal groups seem to govern—rather than merely extract from or ignore local civilians—in places where the state is more present, more effective, and better regarded.

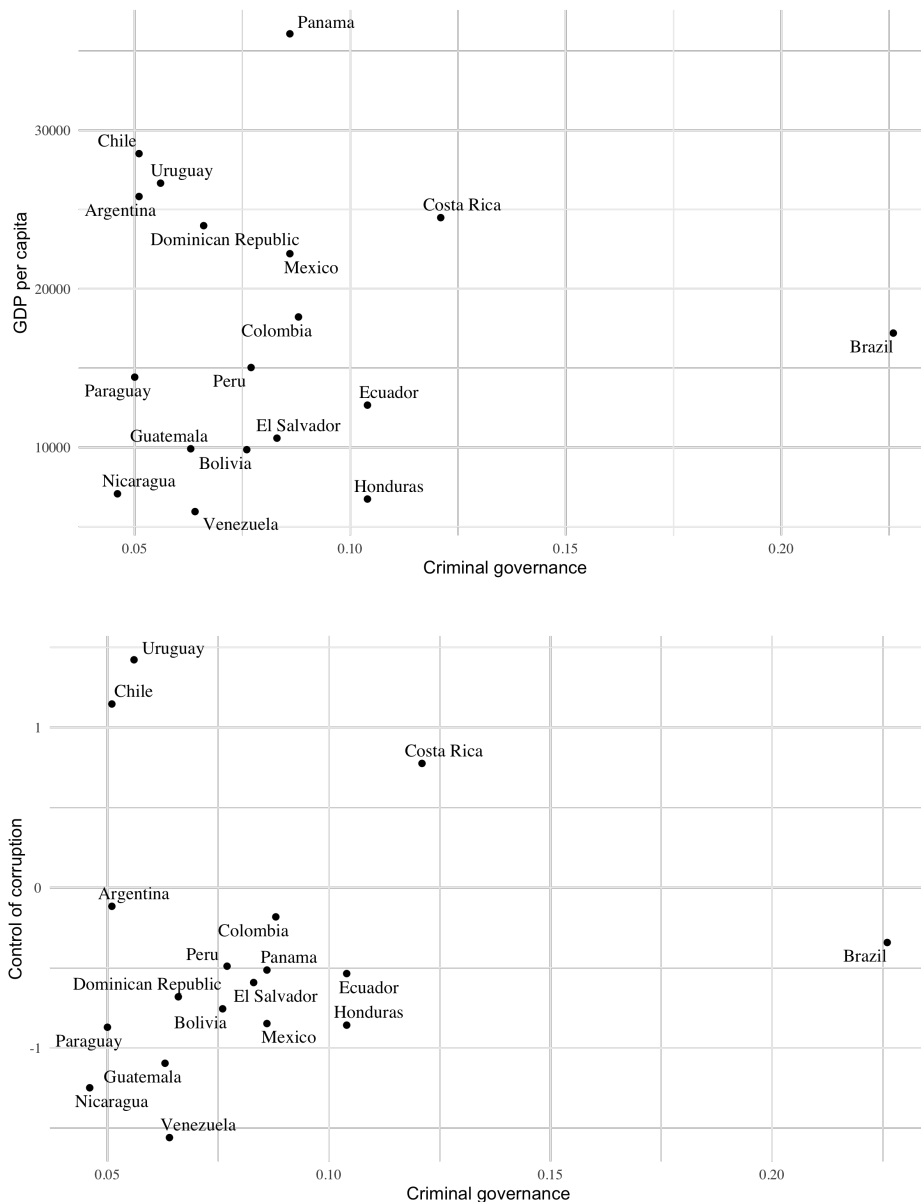


Figure 1: Country-level correlates of criminal governance. Sources: International Monetary Fund (GDP) and World Bank (Control of corruption); a lower score indicates lower corruption.

One drawback of individual-level results is their reliance on respondents' perceptions of state capacity, which could diverge from objective measures in ways potentially correlated with the dependent variable. For example, citizens who experience criminal governance as positive may also tend to feel positively about local state governance, regardless of its objective quality. To address this concern, we evaluate whether the positive relationship between criminal and state governance persists for more objective measures of the latter. We use Open Street Maps to generate two indices of local state presence in each district sampled by Latinobarómetro: 1) the simple average of the counts of police stations, military bases, hospitals, post offices, and

Table 2: Correlates of living with criminal presence and under criminal governance

	Criminal presence			Criminal governance		
	(1)	(2)	(3)	(4)	(5)	(6)
Confident in government	-0.046** (0.009)			0.039** (0.013)		
Local gov. is responsive		-0.043** (0.009)			0.034** (0.011)	
Police are corrupt			0.061** (0.010)			-0.030* (0.012)
Gender	0.018* (0.007)	0.020** (0.007)	0.012 (0.008)	-0.000 (0.010)	-0.000 (0.010)	-0.008 (0.012)
Age	-0.000 (0.000)	0.000 (0.000)	-0.001 (0.000)	-0.001** (0.000)	-0.001** (0.000)	-0.001** (0.000)
Educational attainment	-0.004 (0.007)	-0.003 (0.007)	-0.007 (0.008)	-0.010 (0.008)	-0.011 (0.008)	-0.005 (0.008)
Unemployed	0.014 (0.013)	0.013 (0.013)	0.017 (0.015)	0.024 (0.016)	0.021 (0.016)	0.021 (0.018)
Salary covers needs	-0.044** (0.009)	-0.043** (0.009)	-0.046** (0.010)	0.021* (0.010)	0.022* (0.010)	0.024* (0.011)
District FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	15,635	15,638	11,474	8,287	8,282	6,393
R ²	0.24	0.24	0.27	0.22	0.22	0.25
Within R ²	0.005	0.005	0.007	0.006	0.006	0.005

*Standard errors clustered within districts. Signif. Codes: **: 0.01, *: 0.05, .: 0.1. Universe is all respondents for Models 1-3, respondents who report criminal presence for Models 4-6.*

schools per thousand residents, and 2) the first principal component of those five measures. Mirroring our earlier specifications, we first model criminal presence as a function of these objective measures of state presence, adding the same set of individual-level controls, four district-level socioeconomic covariates, and country fixed effects. We then subset the sample population to only respondents reporting criminal presence and model the correlates of criminal governance.

The results (Table 3) are broadly consistent with perceptual correlations (Table 2): criminal presence is associated with less state presence (Columns 7-8), though the association is not distinguishable from zero for the principal component index. Among those reporting gang presence, criminal governance is positively associated with state presence in both the additive ($p = .08$) and principal component ($p < .01$) indices (Columns 9-10). These suggest that the

Table 3: State presence and criminal governance

	Criminal presence		Criminal governance	
	(7)	(8)	(9)	(10)
State presence (avg.)	-0.181** (0.067)		0.141 (0.082)	
State presence (PCA)		-0.003 (0.007)		0.025** (0.009)
Gender	0.011 (0.008)	0.011 (0.008)	-0.006 (0.010)	-0.006 (0.010)
Age	-0.000 (0.000)	-0.000 (0.000)	-0.001** (0.000)	-0.001** (0.000)
Educational attainment	-0.001 (0.008)	-0.000 (0.008)	-0.011 (0.007)	-0.011 (0.007)
Unemployed	0.012 (0.014)	0.012 (0.015)	0.016 (0.016)	0.015 (0.016)
Salary covers needs	-0.054** (0.010)	-0.053** (0.010)	0.030** (0.010)	0.030** (0.010)
Road density	3.101 (1.873)	3.274 (1.865)	0.123 (2.038)	0.317 (1.994)
ln(Population)	0.060** (0.007)	0.064** (0.007)	0.010 (0.006)	0.007 (0.006)
Pop. density	-2.271 (2.586)	-2.221 (2.586)	-1.359 (3.131)	-0.878 (3.104)
Luminosity per capita	0.078** (0.030)	0.067* (0.031)	-0.015 (0.044)	-0.042 (0.045)
Country FE	Yes	Yes	Yes	Yes
Observations	14,328	14,328	7,530	7,530
R ²	0.08	0.08	0.03	0.03
Within R ²	0.03	0.03	0.005	0.007

*Standard errors clustered within districts. Signif. Codes: **: 0.01, *: 0.05, .: 0.1. Universe is all respondents for Models 7 and 8, respondents who report criminal presence for Models 9 and 10.*

correlation between criminal and state governance is likely more than an artifact of subjective attitudes toward political authority. Rather, criminal groups seem to be more likely to govern where the state is objectively stronger. This lends support to the idea that criminal governance typically overlaps, coexists, or even complements the instruments of state governance, administration, and coercion.

To be sure, any number of causal mechanisms could drive these correlations. Criminal groups may choose to govern in places made attractive by state infrastructure, or government leaders may invest more in areas under criminal rule. State presence and repressive force may

even nourish and incentivize criminal governance (Lessing, 2017). Economic growth is likely both a cause and effect of governance, by both state and non-state actors. Unfortunately, the data at hand cannot help arbitrate among these.

4 Validation and Robustness

Potential sources of error in the survey data abound, and any biases are likely to vary across districts and countries in unpredictable ways. While data limitations make strong validation impossible, this section presents several exercises that we believe increase confidence in our results.

4.1 Validation Exercise

Here, we take advantage of our prior estimation effort, carried out before the 2020 Latino-barómetro survey, for which we conducted large-scale qualitative data collection. Based on sources ranging from journalistic accounts to theses and dissertations, government sources, and reports by NGOs, we coded for the presence of governing criminal groups in subnational units. In six countries—Colombia, El Salvador, Guatemala, Honduras, Nicaragua, and Venezuela—we were able to code at the municipal level; we use these measures here to conduct a validation exercise on our survey-based results.⁹

Since the Latinobarómetro data is not representative at the district level, we employ multi-level regression and post-stratification (MRP) (Park *et al.*, 2004; Lax & Phillips, 2009) to produce district-level estimates of the proportion of residents being governed by criminal groups. We post-stratify survey responses using a range of individual- and district-level characteristics that may affect criminal presence and governance. We draw a battery of individual traits from Latinobarómetro (gender, age, educational attainment, employment status), which we pair with census data from IPUMS-I. We also incorporate several contextual-level variables in the MRP model: logged district population, population density, per-capita economic output, and road density. We add country random effects to allow for variation between countries.

The varied accounts of criminal governance we collected largely corroborate the survey evidence. Our qualitative codings are dichotomous and hence not perfectly comparable to the

⁹Full details of this procedure are presented in Appendices 1 and 2.

survey measures, which capture the proportion of the district population reporting criminal governance. Nonetheless, the two are encouragingly aligned: our qualitative measure is a strong predictor of the survey variable ($p < .01$), both with and without country fixed effects (Table A.4).

4.2 Robustness

We next evaluate the robustness of our results to model specification and potential sources of measurement error. One such source concerns the inclusion of “armed groups” in the survey question. This could overcount criminal governance in countries with active insurgencies or other non-criminal armed actors. It could also threaten the validity of the correlations reported if such groups overwhelmingly concentrate in areas with strong state presence. To address this concern, we omit the two countries where large-scale non-criminal armed actors operate (Colombia and Venezuela) from the sample (Tables A.7 and A.8). The correlations change little.

To assess the sensitivity of our results to our choices of model specification, we estimate each of the perceptual and objective models without covariates (Tables A.9 and A.10) and without fixed effects (Tables A.11 and A.12). The results are largely unchanged in all cases. Finally, in the six Central American countries and the Dominican Republic, zero respondents indicated more than one activity by criminal groups, suggesting they may have believed they could indicate at most one. Besides potentially attenuating our prevalence estimates, as noted in Section 3.1, this could bias our correlational results. To check, we re-estimate the main models excluding those eight countries; the results are unchanged (Tables A.13 and A.14).

5 Implications and Avenues for Future Research

The Latinobarómetro data raise more questions than they answer, questions that only future research will be able to fully address. Some are primarily descriptive: are these estimates broadly correct? Is criminal governance growing more or less common over time? Are the patterns we observe, with criminal groups tending to govern—as opposed to merely extracting from or ignoring local populations—in places where the state is more present, more effective,

and better regarded, robust to more fine-grained and carefully executed survey work?

More difficult but ultimately more pressing is untangling the causal arrows that produce correlations between state strength and criminal governance: are gangs responding to state presence by governing more? Are states trying (unsuccessfully) to crowd out gang governance with their own presence? Are both positively responding to favorable conditions, perhaps historical factors that generate path-dependent co-development?

Nonetheless, the data yields important takeaways. First, criminal governance is extremely widespread. For tens of millions of people across the Americas, local order depends on both the official state and the armed criminal groups it nominally fights. A second takeaway is methodological: whatever its shortcomings, the 2020 Latinobarómetro survey instrument demonstrates that respondents can and do report governance activities by local criminal groups, and can distinguish governance from more typical criminal activities. These questions should be improved and extended in future iterations and in national and subnational surveys.

Criminal governance is a phenomenon of hemispheric (if not global) importance, not only because of its impact on the daily lives of significant swathes of the population, nor the fact that it is likely growing more common as informal urban settlements continue to grow worldwide. In addition, this vast, understudied “continent” of non-Weberian governance must surely impact long-term processes of economic and social development, democratic consolidation, and demographic change in ways that we are only beginning to systematically study. If nothing else, this initial empirical assessment will, we hope, ensure the inclusion of criminal governance as an issue in future research on these and related topics.

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