Peace Versus Profit: Rebel Fragmentation and Conflict Resurgence in Colombia

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Abstract   Why do rebel splinter groups emerge during peace processes, and who chooses to defect? Since Colombia's landmark peace agreement with the FARC in 2016, roughly half of the territory once controlled by the group has seen a resurgence of rebel activity by FARC splinter groups. I argue that the FARC's return to arms is a case of "middle-out fragmentation," whereby opportunities for profit induce mid- or low-ranking rebel commanders to establish splinter groups. In Colombia, I argue that profits from the cocaine trade incentivized local-level FARC officers to defect from the peace agreement and allowed them to rapidly mobilize viable splinter groups. I offer several lines of evidence for this argument. I first construct a chronology of splinter group formation, which demonstrates that mid- and low-level commanders, rather than high-level commanders, were the key drivers of fragmentation. Second, I show that splinter groups emerged in areas where opportunities for profit were greatest. Among areas previously controlled by the FARC, those with coca cultivation prior to the peace agreement were up to thirty-seven percentage points more likely to see splinter groups emerge by 2020 than areas without significant production. Using soil and weather conditions to instrument for coca cultivation produces similar results. Further, I use a novel measure of how critical each municipality is to drug trafficking to show that areas that are theoretically most important for drug trafficking are also more likely to see FARC resurgence. I also address competing explanations related to state capacity, terrain, and popular support for the rebels. These findings highlight an important challenge to peacebuilding: satisfying the political demands of rebel leadership is a necessary but insufficient component of peace agreements in cases where opportunities for profit motivate fragmentation from the middle out.

In recent decades, negotiated settlements between governments and rebel groups have become an increasingly common solution to civil wars.[1] Yet negotiating agreements that can endure is difficult, and some countries have reached settlements with rebel groups only to see rebel splinter groups defect and return to conflict.

Why do rebel splinter groups emerge during peace processes? The dominant line of research on this question emphasizes a top-down model, in which negotiations lead to

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1. Fazal 2018; Toft 2009.

factional power struggles among rebel leaders, who fear a peace deal may compromise their ideological vision or diminish their factions' relative power. Here, I propose and provide evidence for a model of *middle-out* rebel fragmentation driven by opportunism. I argue that in negotiated settlements of conflicts financed by valuable illicit resources, opportunities for profit may offer mid- and even low-level rebel commanders both an incentive and the means to organize a viable splinter group.

I provide evidence for the middle-out model of fragmentation in the case of Colombia, where dozens of rebel splinter groups emerged after a 2016 peace agreement with the FARC,[2] the country's largest rebel group. A careful negotiation process, which won Colombia's president a Nobel Peace Prize for his efforts, culminated in the demobilization of 95 percent of the FARC's roughly 14,000 members, including all of its top commanders (the Secretariat). Yet within just a few years, dozens of splinter groups had emerged and rapidly expanded to capture roughly half of the FARC's former territory. I use this case to test two hypotheses of the middle-out fragmentation argument: first, that mid- or low-level commanders can catalyze rebel fragmentation; and second, that this phenomenon is caused by opportunities for profit.

I first show descriptively that, consistent with the first hypothesis, the FARC's mid- and low-level commanders, not its top leadership, were the driving force behind the emergence of splinter groups. Low-level commanders formed the first splinter groups several years before any top FARC leaders joined them, and of the roughly twenty major FARC splinter groups that emerged by 2020, the vast majority were founded by either mid- or low-level FARC commanders.

Second, I test quantitatively the hypothesis that these splinter groups emerged in areas where opportunities for profit were greatest. Among areas previously controlled by the FARC, those with coca cultivation prior to the peace agreement were up to thirty-seven percentage points more likely to see splinter groups emerge by 2020 than areas without significant production. Using soil and weather conditions to instrument for coca cultivation produces similar results. I also develop a novel measure of cocaine trafficking, using a least-cost-path algorithm to identify routes from coca-producing areas to the border, and show that this measure of drug trafficking potential also predicts the emergence of splinter groups.

Last, I consider several alternative explanations for the pattern of splinter group emergence related to military or political strategies. First, with regard to military strategy, I find no relationship between FARC splinter group emergence and rough terrain or proximity to military bases, suggesting that the pattern of splinter group emergence was not the result of a strategy to evade attacks by the Colombian military. Second, with regard to politics, I find some evidence that FARC splinter groups were more likely to emerge in areas where the group's political wing enjoyed the most

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2. Officially, Fuerzas Armadas Revolucionarias de Colombia, or Revolutionary Armed Forces of Colombia.

support from civilians. However, the estimated effects of drug production remain large and significant even after accounting for this effect.

This paper makes two contributions to the scholarly literature. First, it advances research on rebel group fragmentation, where recent work has highlighted the potential for peace processes to catalyze splits within rebel groups.[3] In demonstrating that, under certain conditions, rebel groups can fragment during peace processes even when the top leadership is relatively unified and supports peace, this paper subverts the dominant image of rebel fragmentation in the literature, in which negotiations exacerbate political or ideological disagreements among the leaders of major factions in a rebel group. Bueno de Mesquita, for example, argues that negotiations create splits between moderates seeking a deal and ideological hardliners opposed to peace,[4] while Cunningham contends that negotiations catalyze disputes over leadership, demands, and strategy between the veto players in a group.[5] These studies are consistent with a broader literature on rebel fragmentation that emphasizes factional group structure, rivalry between top commanders, and changes in the balance of power within groups as key risk factors for the emergence of splinter groups.[6]

While their argument focuses on top-level leaders, Duursma and colleagues acknowledge that splinter groups might form not only on the initiative of top leaders but also of mid- and low-level commanders, who might "see peace processes as a window of opportunity to break away and form their own organization."[7] Yet cross-national studies like theirs are unable to assess empirically whether splinter groups were led by high-level leaders or by mid- and low-level commanders, due to a lack of fine-grained data. The most comprehensive cross-national data set on rebel group leaders identifies only a top leader for each rebel group,[8] making it impossible to distinguish in the cross-national data between a splinter group formed by the second-in-command from one formed by the lowest-ranking rebel officer.

To the extent that there is empirical evidence on the risk of fragmentation from outside of the top rebel leadership, it has focused on highly fractious militias that lack the organizational hierarchy typical of rebel groups. Daly, for example, demonstrates the important role of mid-level commanders in the remilitarization of Colombian paramilitary and militia groups.[9] I build on such work by demonstrating that this variety of splintering is a threat not only to fractious and weakly organized militias but also to rebel groups like the FARC, with hierarchical command structures and a history of cohesion across several decades. Moreover, where Daly's theory

3. Duursma and Fliervoet 2021; Lounsbery and Cook 2011.
4. De Mesquita 2005.
5. Cunningham 2006.
6. Asal, Brown, and Dalton 2012; Tamm 2016; Woldemariam 2018.
7. Duursma and Fliervoet 2021.
8. Acosta, Huang, and Silverman 2023.
9. Daly 2014, 2016. Daly 2016 quotes a former paramilitary commander who characterizes these groups as "an atomized and diffuse [set of] organizations that had no unified high command which gave orders."

emphasizes social-organizational factors and downplays the role of resources in the remobilization of paramilitaries,[10] my argument and empirical results suggest that opportunities for profit from valuable resources played a central role in motivating and enabling the formation of FARC splinter groups.

Second, I contribute carefully identified empirical evidence on the relationship between valuable illicit resources, rebel group fragmentation, and conflict recurrence. Conflict scholars have long hypothesized that profits from valuable resources might motivate rebels to defect from peace processes.[11] These predictions echo empirical results from the "greed versus grievance" literature on civil war onset and recurrence, which emphasizes factors that improve the cost–benefit calculus for insurgency, such as state weakness or the presence of valuable resources.[12] Research at the cross-national level finds that armed groups with access to lootable resources are more prone to fragmentation,[13] and that countries with valuable resource endowments are more prone to conflict recurrence.[14]

While these studies have focused on the cross-national implications of this argument, it also has potential implications at the subnational level, one of which is that within countries, areas with certain resource endowments might be more likely to see rebel fragmentation. I contribute carefully identified causal evidence for a link between profit-seeking and splinter group formation at the subnational level by exploiting exogenous variation in opportunities for profit.[15]

These contributions have practical value for scholars and practitioners in the domain of peace and conflict. While the cross-national evidence indicates a heightened risk of rebel splintering during peace processes, the dominant model of rebel group fragmentation implies that this risk can be contained by securing the compliance and cohesion of the top rebel leaders. To the extent that the literature anticipates a threat from mid- or low-level commanders, it is within groups that are fractious and weakly organized. By contrast, I demonstrate that middle-out rebel fragmentation can threaten peace agreements even in cases where rebel groups are well organized and top rebel leaders are unified in support of peace. In practical terms, this finding suggests that where opportunities for profit give mid- and low-level commanders the incentive and capacity to defect, peace deals must include additional measures to secure their compliance and cannot afford to focus exclusively on a group's central leadership.

Governments and aid agencies also have limited budgets for postconflict stabilization and may seek to prioritize the conflict zones most at risk for the return of violence. While earlier cross-national research suggests that countries with valuable natural resources face greater risk of conflict recurrence, I provide evidence that

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10. Daly 2016.
11. Collier 1999; Stedman 1997.
12. Collier and Hoeffler 2004; Fearon and Laitin 2003.
13. Lidow 2016.
14. Rustad and Binningsbø 2012.
15. See, for example, Dube and Vargas 2013.

this pattern may also hold true within countries, and that territory valuable for extracting or smuggling illicit resources should therefore be a key target for postconflict stabilization programs.

Argument: Why Opportunities for Profit Lead to Splinter Group Formation

How do rebel splinter groups form? In answering this question, I follow Tamm in defining a rebel splinter group as "part of a group [that] refuses to recognize the existing leader's command authority and breaks away to form a separate organization with its own leadership and chain of command."[16] To establish a splinter group, a rebel leader must either command strong loyalty from a critical mass of group members, or have the resources to offer attractive material incentives. The literature on rebel group fragmentation largely takes it for granted that only a group's top leaders meet these criteria. In some instances, a group's top leaders hold unique authority or legitimacy, particularly in rebel groups composed of tribal or religious factions, where members' loyalties ultimately belong not to the group but to the leader of their tribe or religious sect.[17] If top leaders choose to either demobilize or to form splinter groups, their loyalists will follow suit. In other groups, top leaders may have exclusive access to external support from sympathetic governments or diaspora communities.[18] If these leaders choose to keep fighting, the group can continue to recruit and equip its members, but if they choose to demobilize, the group's resources will dry up, potentially preventing splinter group formation.

On the other hand, many rebel groups rely on less centralized sources of financing, such as the smuggling and extortion of valuable natural resources or contraband. Their top leaders cannot personally control all aspects of operations, particularly when they are spread out over large swaths of territory, and instead must delegate day-to-day management to mid- and low-level commanders.[19] Thus, in contrast to the examples cited earlier, in these circumstances top-level rebel leaders may not be the only commanders with access to the resources necessary to mobilize a splinter group.

This observation leads to the central theoretical claim of this paper, which is that opportunities for profit can cause "middle-out" rebel group fragmentation during peace processes—that is, the formation of rebel splinter groups by mid- and low-level rebel commanders. First, such opportunities give those commanders the *capacity* to mobilize splinter groups. By maintaining the smuggling or extortion

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16. Tamm 2016.
17. Asal, Brown, and Dalton 2012.
18. Tamm 2016.
19. Johnston 2008.

operations under their command, they can offer wages or other incentives to retain or attract members, and buy the weapons and supplies to equip them.

Second, opportunities for profit provide mid- and low-level rebel commanders with a powerful *incentive* to mobilize splinter groups. Negotiated settlements often offer top rebel leaders substantial incentives for their compliance—political concessions such as seats in the cabinet or legislature, legal protections such as immunity from war crimes prosecutions or extradition, or even informal deals involving business or resource concessions. Mid- and low-level commanders, by contrast, are unlikely to qualify for costly political or economic benefits, but also less likely to be targeted for extradition or for prosecution by a war crimes tribunal. For this group, the opportunity to maintain or acquire personal power or wealth as a rebel commander may be more attractive than the benefits they are offered under a peace agreement. The result is a discrepancy between the interests of top commanders, who have the power to negotiate a settlement, and the interests of mid- and low-level commanders, who may have the power to establish a splinter group.

As Kalyvas argues, while conflicts are often understood at the macro level through the lens of "master" cleavages, at the local level individuals' motivations reflect a diverse array of goals and interests.[20] While the second element of my argument emphasizes personal power and wealth as potential motivating factor, because opportunities for profit also increase the capacity for commanders to establish splinter groups, the broader argument may hold even for rebel commanders who have personal motives unrelated to profit. It is plausible, for example, that mid- or low-level commanders who believe the top leadership has compromised the group's ideological vision by making peace might use their access to smuggling and extortion revenues to establish a splinter group with political aims.

Generalizability

The scope conditions for this argument apply in a substantively important set of armed conflicts. Broadly, my argument implies that opportunities for profit from resource smuggling or extortion increase the threat of rebel splintering during civil war peace processes. Several cross-national studies have established that a significant proportion of civil wars are financed by the extraction or smuggling of contraband.[21] Recent data from Walsh and colleagues, for example, show that almost 40 percent of civil conflict observations (dyad-years) between 1990 and 2012 involved funding from smuggling.[22]

My argument applies most directly to rebel groups engaged in negotiations because an important mechanism in my argument is the mismatch they introduce

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20. Kalyvas 2003.
21. Fearon 2004; Walsh et al. 2018.
22. Walsh et al. 2018.

between the interests of top rebel leaders on the one hand and mid- and lower-ranking commanders on the other. While my evidence is from a case of a formal peace process, the type of mismatch in incentives I describe might also arise in scenarios such as informal talks or back-channel negotiations.

The literature on rebel fragmentation suggests that splinter groups often emerge in response to a catalyzing event or crisis, including negotiations as well as other scenarios where my theory does not yield strong predictions, such as interventions by external sponsors or battlefield gains or losses.[23] Yet even setting aside informal negotiations and focusing narrowly on formal peace processes, the data indicate that a large and substantively important number of cases likely fall within the scope of my argument. Duursma and colleagues find that rebel groups are roughly five times more likely to fragment during years when they are engaged in a peace process.[24] Moreover, civil war peace processes are both relatively common and increasingly prevalent: data from the UCDP show that 34 percent of all conflicts between 1975 and 2018 saw a peace process negotiated,[25] and both Fazal and Toft document a trend by which military victories in civil wars are becoming increasingly rare and negotiated settlements increasingly common.[26] Thus, Colombia is far from the only case where splinter groups seeking to capture illicit resources might emerge out of a negotiated settlement.

Beyond the presence of opportunities for profit, at least two additional factors influence the likelihood of observing middle-out fragmentation after a peace agreement. First, groups vary both in the level of unity or factionalization among the central leadership, and in the strength of the central leadership's control over local units.[27] In general, I expect that the more factionalized a group's central leadership is, the more likely it is to experience top-down as opposed to middle-out fragmentation. I also expect that the less control a group's central leadership has over local units, the greater the risk of middle-out fragmentation. Nevertheless, in the Colombian case, I contend that the FARC experienced middle-out fragmentation despite relatively strong central control over local units. Prior to 2016, for example, instances of local units defying central authority (which are characteristic of more decentralized groups) were rare within the FARC.

Second, my argument implies that the contours of the peace process may influence the likelihood of this mode of splinter group emergence. In Colombia, I argue, the deal offered to mid- and low-level commanders under the 2016 agreement was incommensurate with the massive wealth and power available to them in the cocaine trade. In some cases, where peace agreement concessions are more commensurate with mid- and low-level rebel commanders' outside options, the benefits of compliance might outweigh the potential profits from defection. And in other

23. Tamm 2016; Woldemariam 2018.
24. Duursma and Fliervoet 2021.
25. Pettersson, Högbladh, and Öberg 2019.
26. Fazal 2018; Toft 2009.
27. Staniland 2018.

cases, concessions may fail to satisfy the demands of top-level commanders, either preventing a deal from being reached at all or resulting in a split among top leadership that leads to top-down, rather than middle-out, fragmentation.

Setting: Colombia's 2016 Peace Agreement

I test this argument in Colombia, where many rebel splinter groups emerged after a 2016 peace agreement with the FARC, the country's largest rebel group. The FARC emerged in central Colombia in the early 1960s as a communist-inspired rural insurgency. In the 1980s the group entered the country's burgeoning drug trade, its involvement at first limited to imposing a tax on farmers who cultivated coca, but eventually encompassing a range of activities that involved operating cocaine labs and coordinating shipments with international cartels.[28] By the late 1990s, the FARC was earning hundreds of millions of dollars per year in revenues from the cocaine trade, which constituted 50 percent of its income, with the remainder coming from extortion, kidnapping for ransom, and cattle rustling, among other illicit activities.[29]

The FARC reached the peak of its power around the year 2000, at which point it operated in over a third of Colombia's 1,122 municipalities and had up to 20,000 members. Over the next decade, however, it faced major setbacks at the hands of right-wing paramilitary groups and the Colombian military. Beginning in 2012, the FARC, now reduced to around 14,000 members in 260 municipalities,[30] entered negotiations with the government that culminated in the peace accord of 2016. The agreement required FARC members to disarm and demobilize in exchange for guaranteed political representation and conditional amnesty, among other concessions.

The international community was to play a pivotal role in nearly every stage of the peace process: facilitating talks, providing technical experts to help draft key provisions, monitoring and verifying the ceasefire and disarmament, and offering substantial financial support for implementation.[31] In the early years, both the negotiation process and the agreement it produced were perceived as models whose success might be replicated elsewhere.[32]

In late 2016, the Nobel Committee awarded the Peace Prize to then-president Juan Manuel Santos, pronouncing that "much of the groundwork has been laid for both the verifiable disarmament of the FARC guerrillas and a historic process of national fraternity and reconciliation."[33] The initial results of the agreement were indeed promising. The FARC's ceasefire, which began during the negotiation phase, brought

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28. Felbab-Brown 2010.
29. Ibid.
30. Indepaz 2013; *Semana* 2016.
31. Segura and Mechoulan 2017.
32. Siegfried 2016; Vulliamy 2016.
33. Nobel Committee 2016.

conflict-related violence to its lowest level in fifty years.[34] Moreover, the FARC's initial disarmament and demobilization was relatively smooth, with UN observers reporting that 100 percent of the group's weapons had been turned in and destroyed by mid-2017.[35] Meanwhile, 95 percent of its members demobilized at twenty-six transition camps across the country.

The initial successes of this peace agreement, however, have been challenged by the emergence of FARC splinter groups.[36] They were formed when units of the FARC, typically "fronts" led by mid-level commanders, disobeyed orders from the central leadership by refusing to demobilize or by leaving the demobilization camps, and established themselves as independent groups with their own commanders. Within just five years of the peace agreement's ratification, more than a dozen splinter groups with a total of 5,200 members had emerged in Colombia, and recaptured nearly 50 percent of the territory controlled by the FARC during the conflict.[37]

The splinter groups resemble the FARC in its later stages in many respects. Like the FARC, these groups are extensively involved in the cocaine trade and other illicit economic activity.[38] And like the FARC, they espouse a Marxist-inspired political and economic agenda. For example, the pamphlet announcing the formation of the first group to split from the FARC in 2016 devoted significant space to attacking Colombia's "neoliberal" economic model and demanded that Colombia's elites "distribute the wealth and return the lands usurped from the peasants."[39]

In the first years following the agreement's ratification, dozens of splinter groups emerged in various parts of the FARC's former territory. Some of them acted completely independently, while others formed loosely organized alliance networks, and violent clashes between splinter groups were not uncommon. Over time, three major alliance structures emerged: the Segunda Marquetalia (Second Marquetalia), the Comando Coordinador de Occidente (Western Coordinating Command), and the Bloque Suroriental (Southeastern Bloc). Since fall 2022, all three have engaged in peace talks with the Colombian government, with the Comando Coordinador de Occidente and the Bloque Suroriental forming a joint negotiation bloc, and the Segunda Marquetalia negotiating on a separate track. They have engaged in intermittent ceasefires and have submitted formal proposals outlining their agenda for a new peace deal.[40]

34. Mora 2016.
35. *Telesur* 2017.
36. Some government agencies and NGOs use the term "FARC dissidents" to refer to groups that emerged before the final ratification of the peace agreement and whose commanders never demobilized, and "FARC recidivists" to refer to groups that emerged after the peace agreement and whose commanders demobilized for a brief period before rearming. For the purposes of this paper, I refer to both as "FARC splinter groups."
37. Posso et al. 2021.
38. Cárdenas et al. 2019.
39. Frente Primero 2016.
40. "Colombia y disidencia FARC pactan protocolo de cese al fuego," Associated Press, 8 February 2023; Oficina del Alto Comisionado para la Paz 2024.

   The emergence and expansion of the FARC splinter groups has contributed to the uneven success of Colombia's peace agreement. The initial ceasefire led to a dramatic decline in conflict-related violence throughout the FARC's territory, and many former conflict zones have become relatively stable. However, in many areas affected by the splinter groups, these early gains have been reversed. By the end of 2020, FARC splinter groups had fought in over 150 military engagements and carried out many selective assassinations, kidnappings, and other forms of violence (see Table A.2, in the online supplement). The resurgent conflict has spilled over into neighboring Venezuela, where clashes between two rival FARC splinter groups, the National Liberation Army (ELN), and the Venezuelan military displaced more than 3,000 civilians from the state of Apure.[41] These groups have not only caused a resurgence of violence but also disrupted the implementation of the peace agreement by targeting members of the FARC who remain in the demobilization program, as well as social leaders who promote critical policies such as crop substitution and rural development.[42]

Observable Implications: Where and How Did FARC Splinter Groups Emerge?

My theoretical argument suggests that opportunities for profit can cause the middle-out fragmentation of rebel groups during peace processes. This argument makes testable predictions regarding the emergence of FARC splinter groups in Colombia. In contrast to a top-down model of rebel group fragmentation, which predicts that splinter groups should arise out of divisions among the FARC's top leadership, I predict that opportunities for profit might facilitate the emergence of splinter groups led by mid- or low-level commanders. I test two dimensions of this prediction empirically. First, I use descriptive evidence on the process of splinter group formation to test the prediction that *splinter group emergence was driven by mid- and low-level commanders (H1)*.

   Second, I use quantitative data on where FARC splinter groups emerged to test the prediction that *splinter groups emerge where the opportunities for profit are greatest (H2)*. I focus specifically on opportunities to profit from cocaine, a resource that generates an estimated USD 8–12 billion in Colombia annually (2.6 to 4 percent of Colombia's GDP).[43] I hypothesize that areas valuable for coca *cultivation* and

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41. Human Rights Watch 2022.
42. *El Espectador* 2022.
43. Alsema 2021. The FARC also relied to a lesser extent on other valuable resources, such as gold and oil, for financing, either extracting them directly or extorting mining and oil companies via threats and kidnappings. Journalistic accounts suggest that FARC splinter groups are involved in these activities as well (Caracol Radio 2022; Ortega 2022). However, these resources are difficult to evaluate quantitatively due to their geographic concentration in a few key regions. By contrast, coca cultivation and cocaine trafficking are more evenly distributed across several different regions and hundreds of Colombian municipalities,

for cocaine *trafficking* provide better opportunities for profit and are thus more likely to see the emergence of FARC splinter groups.

Descriptive Evidence: The FARC's Middle-Out Fragmentation

The FARC's organizational structure makes it possible to assess empirically whether splinter groups were established by mid- and low-level commanders or by the top commanders. I distinguish between three tiers of FARC leadership. I classify as top commanders the members of the FARC's highest decision-making body, the Secretariat, which included the group's commander-in-chief and the five to ten highest-ranking commanders. The next tier of leadership, whom I refer to as mid-level commanders, were twenty to thirty commanders who belonged to the FARC's general staff but not to the Secretariat and held positions of regional, rather than national, authority. A third tier, whom I refer to as low-level commanders, were commanders of FARC subunits, which typically operated in a few municipalities and ranged in size from "fronts" or "columns" with up to a few hundred members, to a "squadron" of roughly a dozen.

A top-down model of rebel defection during peace processes would predict that splinter groups emerge out of rivalry or dissension among the FARC's Secretariat, or perhaps powerful members of the general staff. In fact, however, members of the Secretariat and the general staff remained relatively unified during the negotiation of the 2016 peace accord. Every single member of the Secretariat signed the agreement negotiated in Havana.[44] When it was ratified, in late 2016, all members of the Secretariat and all but one member of the general staff turned in their weapons and demobilized. Some former top commanders took up seats in Colombia's legislature, which were allocated to the FARC under the terms of the peace agreement, while others received positions in the FARC's newly formed political party.[45]

The splinter groups, on the other hand, started with low-level commanders (Figure 1). The first two such groups to emerge were the First Front and the United Guerrillas of the Pacific (GUP), established in summer 2016 by low-level commanders Néstor Gregorio Vera Fernández (alias Iván Mordisco) and Yeison Segura Mina (alias Don Y), respectively.[46]

By the end of 2017, there were roughly a dozen FARC splinter groups.[47] One of them was founded by a mid-level commander named Gentil Duarte from the FARC's

general staff, while the rest were established by low-level commanders. In the ensuing years, Duarte, along with Iván Mordisco, attempted to unite all of them under a single alliance structure.[48] However, they were only partially successful, as many commanders sought to maintain their autonomy.[49]
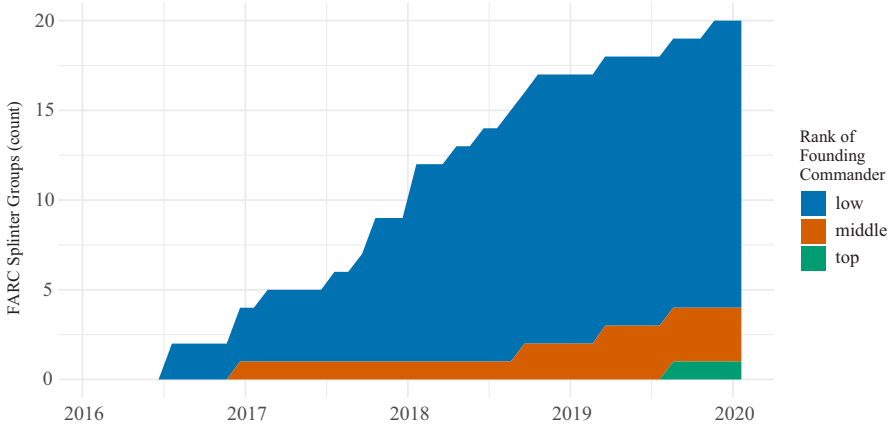
Notes: The underlying data represented in this figure are available in Section A.3 of the online supplement. I include FARC splinter groups established between 2016 and 2020 that reached at least 100 members. I code the members of the FARC Secretariat as top commanders, members of the FARC's general staff who were not members of the Secretariat as middle commanders, and all commanders below the general staff as low-level. For the identities of the FARC's Secretariat and general staff during this period, I rely on a 2016 report by Verdad Abierta, a Colombian outlet for investigative journalism focused on the armed conflict.

FIGURE 1. *Low-level commanders drove early splinter group formation*

It was not until August 2019 that a commander from the FARC's Secretariat, Iván Márquez, defected. By this time there were already more than a dozen FARC splinter groups active in Colombia, with an estimated 3,400 members in total.[50] Márquez defected in response to moves by US and Colombian law enforcement agencies to pursue a drug case against one of his close associates.[51] After Márquez defected, he too attempted to unite the disparate FARC splinter groups under his Segunda Marquetalia alliance structure, but many other commanders rejected his leadership and either remained independent or joined Duarte and Mordisco's alliance.[52]

In sum, the FARC splinter groups that emerged out of Colombia's 2016 peace process originated not with the group's top leadership but primarily with mid- and

48. Vélez and Duque 2018.
49. Méndez 2018.
50. Posso et al. 2020.
51. Otis 2020.
52. *El Tiempo* 2021.

low-level commanders. While a top leader defected from the peace agreement at a later stage, his role does not appear to have been decisive for the emergence of splinter groups.

Quantitative Evidence: Splinter Group Emergence and Variation in Opportunities for Profit

Data

Figure 2 maps the pattern of splinter group emergence in former FARC municipalities. The data come from the Institute for the Study of Peace and Development (Indepaz), a Colombian think tank.[53] I start with 260 Colombian municipalities with FARC presence in 2012, the year negotiations began. I operationalize the emergence of splinter groups as a binary variable that takes a value of 1 if Indepaz recorded FARC splinter group presence in the municipality between 2016 and 2020, and 0 otherwise. By focusing on this relatively short period after the peace agreement, I aim to limit the analysis to the territory where splinter groups first emerged.

A common concern regarding data on armed group presence or control is that, in practice, a group's presence or control is often inferred from incidents of violence. Yet in locations where a single armed group exerts total control, it may be able to govern without resorting to violence.[54] If this were the case, data on the presence of FARC splinter groups might omit municipalities where splinter groups are in control but violence is minimal. I address this concern by validating the Indepaz data on FARC presence against survey data on armed group control (see Table A.4 in the online supplement).[55] I find a strong positive correlation between the Indepaz measure of splinter group presence and the proportion of civilians who said that FARC splinter groups exercise control in their municipality ($p = 0.0001$).

Data on coca cultivation come from the Colombian Ministry of Justice's Drug Observatory. The Observatory uses satellite imagery to precisely locate coca cultivation sites, which it aggregates to produce an estimate of the area in each municipality dedicated to coca cultivation each year. In some specifications I define a binary variable that takes a value of 1 if a municipality had at least 100 hectares of coca cultivation between 1999 and 2012 (the year peace talks began) and 0 otherwise.

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53. Indepaz releases periodic reports on the presence of armed groups at the municipal level, which are produced by synchronizing across five sets of sources: a comprehensive database of news reports; government agencies such as the police, the office of the attorney general, and the human rights observatory; reports from NGOs; direct communication with local or regional organizations; and fieldwork by Indepaz researchers. Indepaz 2013; Posso et al. 2021.
54. Kalyvas 2006.
55. Weintraub et al. 2023.

FARC Presence in 2012 (Pre-Agreement)
Splinter Group Resurgence by 2020

FIGURE 2. *Mapping splinter group emergence in former FARC territory*

Results: Effects of Coca Cultivation on Splinter Group Emergence

Table 1 shows the results of three empirical strategies in which I test the relationship between coca cultivation and the emergence of FARC splinter groups. Columns 1 and 2 show the unadjusted difference in means for the effect of coca cultivation, operationalized as a binary variable and a continuous measure, respectively. The coefficient estimate of 0.27 in column 1 indicates that going from a non-coca-producing municipality to a coca-producing municipality increases the probability of seeing a splinter group faction by 27 percent, while the coefficient estimate of 0.04 in column 2 indicates that doubling a municipality's area of coca cultivation is associated with an increase of 0.04 (roughly 4 percentage points) in the probability of FARC splinter group presence in a municipality.

While this relationship between coca cultivation and the emergence of FARC splinter groups is consistent with my hypotheses, it is vulnerable to confounding by other variables that might affect conditions for both drug production and rebellion. In the subsequent sections I outline two strategies to address such problems.

Kernel Weighting Approach to Adjust for Observed Confounding

The first strategy involves identifying a set of plausible confounding variables and adjusting for them directly. For example, coca is often cultivated in relatively poor,

rural areas, and comparing these areas to relatively wealthy towns would risk confounding the effects of coca cultivation, poverty, and remoteness. However, this problem could be resolved by comparing municipalities with and without coca cultivation that are otherwise equally poor and remote, either by identifying municipalities with matching characteristics, or by weighting certain municipalities such that the weighted distribution of remoteness or poverty matched the distribution in the coca-producing municipalities.

TABLE 1. *Effects of coca cultivation on FARC splinter group emergence*

	Dependent variable: *Splinter group presence (binary)*				
	(1) Difference- in- means	*(2)* Difference- in- means	*(3)* Covariate- adjusted	*(4)* Instrumental variables	*(5)* Instrumental variables
(INTERCEPT)	0.31*** (0.04)	0.29*** (0.04)	0.21* (0.09)	−0.10 (0.23)	−0.16 (0.23)
COCA CULTIVATION binary	0.27*** (0.06)		0.37*** (0.10)	0.30*** (0.09)	
COCA CULTIVATION continuous		0.04*** (0.01)			0.05*** (0.01)
Agriculture control				✓	✓
Flood control				✓	✓
Observations	260	260	258	260	260
First-stage *F*-stat				240.27	242.14
Anderson–Rubin CI				[0.10, 0.49]	[0.03, 0.08]

Notes: The dependent variable is a binary indicator for the presence of FARC splinter groups in a municipality as of 2020. The independent variable in models 1 and 3 is the logged maximum annual coca cultivation (in hectares) in a municipality between 1999 and 2012, and in models 2, 4, and 5 a binary indicator that takes a value of 1 if annual coca cultivation exceeded 100 hectares in any year during this period. The full sample consists of 260 FARC municipalities, with two observations dropped from model 3 due to missingness in the covariates. In model 3 I generate weights on the covariates of interest (literacy, electricity, population, percent rural, rough terrain, highway coverage, and the three distance variables) with kernel balancing and estimate the model using weighted least squares. The instrument in models 4 and 5 is a municipality-level index of soil (acidity, nitrogen, carbon, and drainage) and weather (temperature, sunlight hours, annual rainfall, and humidity) variables combined using OLS for the continuous coca measure, and logit for the binary measure. The instrumental variable models include controls for agricultural productivity, defined as the logged maximum annual hectares under cultivation with legal crops between 2009 and 2014, and flooding, defined as the average number of flood-related alerts per municipality per year between 2017 and 2020. All models use HC2 heteroskedasticity-consistent standard errors. $*p < .05$; $**p < .01$; $***p < .001$.

I adjust for several categories of potential confounders. The first category includes basic features of a municipality, such as its population size and whether it is rural or urban, based on census data. The second category includes variables that correspond to features identified as important in previous conflict research, such as ruggedness of terrain, infrastructure, wealth, and education.[56] I include a proxy for wealth using

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56. Collier and Hoeffler 2004; Fearon and Laitin 2003.

census data on the percentage of the population with access to electricity; education, using the percentage of the population that is literate; infrastructure, by calculating the length of highway per square kilometer; and rough terrain as the standard deviation of elevation. Last, I include a set of geographic variables (the distance from three major cities) to account for spatial clustering. This last step ensures that I compare municipalities that not only have similar characteristics but are also in the same region of the country.

I employ kernel balancing to adjust for these covariates,[57] a method that can achieve approximate balance on a range of highly flexible and complex functions of covariates while minimizing the worst-case bias from imbalance on unknown or unspecified functions of the covariates. In practice, there are multiple plausible non-linear relationships in the data: perhaps rebellion is most likely in areas that are neither cities nor entirely depopulated, implying a curvilinear relationship; or perhaps the effect of rough terrain on rebellion is present only where infrastructure is poor, implying an interaction between the two variables. These nonlinearities suggest that kernel balancing is the best approach for covariate adjustment, and I show in Figure A.1 (in the online supplement) that kernel balancing indeed improves balance both on observable variables included in the balancing equation and on interactions between them. I also show in Figure A.2 that the results are broadly consistent when using more standard mean balancing or matching procedures.

Column 3 of Table 1 shows the result of this approach. Because the dependent and independent variables are both binary in this model, the result of this analysis indicates that going from a non-coca-producing municipality to a coca-producing municipality increases the probability of seeing a splinter group emerge by thirty-seven percentage points (95% CI = 17 to 58).

A causal interpretation of this estimate relies on the assumption of no unobserved confounding. In other words, there is not some other unobserved or omitted variable that causes both coca cultivation and rebel resurgence. In the next section, I describe an additional strategy that seeks to address potential unobserved confounders.

Instrumental Variables Approach to Adjust for Unobserved Confounding

Even after adjusting for observed confounders, there is a risk that some omitted or unobserved variable might bias the result. For instance, suppose that corrupt local officials inhibit effective government action against both coca cultivation and armed groups, allowing both to thrive in their jurisdictions in return for kickbacks. Such corruption would be difficult to observe or measure, but this relationship would bias estimates of the effect of coca cultivation.

Instrumental variable (IV) analysis addresses concerns about unobserved confounders by exploiting exogenous variation in the independent variable, here coca

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57. Hazlett 2020.

cultivation. Like most crops, coca plants require a specific set of climatic and soil conditions, so some parts of Colombia are better suited for its cultivation than others. I rely on the assumption that these instruments are exogenous; that is, it is unlikely that some other variable causes soil and weather conditions and causes rebel resurgence. However, I also address potential violations of this assumption by controlling for variables like agricultural productivity that are plausibly correlated with both the instrument and the outcome, as well as by performing sensitivity analysis to test the robustness of the results to such violations.

Many soil and weather conditions might plausibly affect coca cultivation. In my preferred specification, I use a list of weather and soil variables derived from agricultural analyses of the coca plant.[58]

Columns 4 and 5 of Table 1 show the results of these analyses of the effect of coca cultivation on the presence of FARC splinter groups. Model 5 shows the result with a continuous measure of coca cultivation, while model 4 shows the results with the binary measure. These results do not diverge sharply from the unadjusted and covariate-adjusted difference-in-means estimates, suggesting that the extent that observed or unobserved confounding drove those effects was limited, and providing further evidence for H1.

Instrumental variable analyses depend on a set of identifying assumptions: the instrument must have a strong effect on the treatment variable (relevance); it must not be correlated with other variables that affect the outcome (ignorability); and it must affect the outcome only through the treatment variable (exclusion restriction).[59]

Straightforward diagnostics allow me to test the assumption of relevance, or rule out what is commonly termed the problem of "weak instruments." The first-stage *F*-statistic of 231 is very strong, well above commonly cited benchmarks such as 10. And the Anderson–Rubin confidence intervals,[60] which are robust to weak instruments,[61] exclude a negative or null effect.

Weather and soil affect not only coca crops but also licit agriculture, which could violate the exclusion-restriction assumption. If the weather and soil conditions that favor coca cultivation also favor licit crops, then it might be that municipalities with such conditions are wealthier than others and this wealth, rather than the coca cultivation, might attract rebel groups. Conversely, if the weather and soil conditions that favor coca cultivation have negative effects on licit crops, then the inhabitants of these areas might be particularly impoverished, and more vulnerable to recruitment by a rebel group.[62] Similarly, the weather and soil conditions that permit coca cultivation might also affect rebel groups by causing floods. Flooding could wash out

58. FAO and IIASA, n.d. I provide a detailed view of the instrument construction in Table A.6 and map the distribution of these indexes in Figure A.3.
59. Angrist, Imbens, and Rubin 1996.
60. Anderson and Rubin 1949.
61. Staiger and Stock 1994.
62. Caruso, Petrarca, and Ricciuti 2016.

roads and bridges and make certain areas difficult for the state to access and govern, thereby allowing rebel groups to thrive.

Models 4 and 5 control for both of these potential violations. I control for municipalities' agricultural productivity, which I operationalize as the maximum area under cultivation with any legal crop in any year between 2009 and 2014. I also control for the average number of flood-related alerts per municipality per year between 2017 and 2020. In this case, I intentionally use data from the "post-treatment" period, because the relationship of interest is whether the instrument is correlated with flooding during the period when FARC splinter groups emerged. In both cases, the IV estimates for the effect of coca cultivation remain positive and significant, which alleviates the concern that the effect of the instrument might be driven by these other variables.

In the appendices, I perform a number of additional robustness tests. In Table A.3 I limit the dependent variable to municipalities with FARC splinter group presence as of 2017. In Table A.8 I use Conley standard errors to adjust for two-dimensional spatial dependence in the error term.[63] I also address a further set of exclusion-restriction-violation concerns specifically associated with using rainfall as an instrument.[64] I drop annual rainfall from the list of soil and weather variables included in the coca suitability index, and show that the estimate is of similar magnitude and significance (Table A.7).

It is still possible, however, that some other omitted variable exists that violates the exclusion or ignorability assumptions. I use sensitivity analyses to assess the threat to inference posed by unknown violations of the exclusion or ignorability assumptions.[65] The intuition behind this approach is to quantify how strong the relationship between the instrument, the outcome, and some other unobserved variable would have to be to change the substantive result of the analysis.

In my main specification, I find that an unobserved confounder would have to explain more than 22.8 percent of the residual variance of both the weather and soil instrument and splinter group emergence to bring the reduced-form estimate to 0, or 12.8 percent for the reduced-form estimate to lose statistical significance (Table A.9). This result indicates that the IV analysis is robust to even moderately strong violations of the key assumptions.

In sum, there is extensive evidence that coca cultivation facilitated the emergence and expansion of splinter groups (H1). In the next section, I provide evidence that the relationship between opportunities for profit and the emergence of rebel splinter groups can be observed not only in locations of coca cultivation but also in sites of cocaine trafficking.

63. Conley 1999.
64. Mellon 2024.
65. Cinelli and Hazlett 2022.

Effects of Cocaine Trafficking on Splinter Group Emergence

The second set of analyses focus on the effect of drug *trafficking* on splinter group emergence. I contend that splinter groups could profit, not only by capturing coca cultivation sites, but also by capturing locations highly important for drug trafficking. What territory is valuable for drug trafficking? Building on work by Idler,[66] I focus on trafficking chokepoints or "hubs": locations where multiple drug trafficking routes intersect or converge.

As with drug production, the risk of confounding by unobserved variables is clear. Drug traffickers want to avoid interdiction and may favor routes through areas where, for example, the state is particularly weak, or government officials are particularly corrupt, and these same factors might facilitate rebellion. Conventional measures of drug trafficking based on seizures or interdictions are vulnerable to such confounding: low levels of drug seizures in a certain region, for example, might indicate that the region is not important for drug trafficking routes; that the state is too weak or too corrupt to seize the drugs passing through; or, conversely, that the state is so strong that it has effectively deterred trafficking through the region.

I attempt to address the problem of unobserved or omitted confounders by exploiting features of geography that influence the potential locations of trafficking hubs. The intuition here is simple: cocaine must travel from the fields where coca is cultivated to land or sea borders, and basic features of geography constrain the set of plausible routes between cultivation sites and the borders, and by extension where these routes intersect. I use these geographic features to simulate trafficking routes, and use these simulated routes to predict the locations of trafficking hubs. Because it is derived from a complex array of geographic features, this measure of potential drug trafficking is less vulnerable to confounding than drug seizures, for example.

The technical procedure for generating this measure is as follows. I generated starting points for cocaine trafficking routes by aggregating remote-sensing data on coca cultivation from 2001 to 2015 and using *k*-means spatial clustering to identify 200 clusters of coca cultivation. I then used a least-cost-path algorithm to map the most efficient routes between each coca cultivation zone and Colombia's ports and border crossings.[67] I input pairs of start and end points, as well as a high-resolution map (raster) with rivers, roads, mountains, and other surfaces and their associated travel speeds,[68] and the algorithm returned routes that minimized the cost (in time) of travel between the start and end points, resulting in 3,600 potential routes. For each cultivation zone, I identified the most efficient route to a seaport, from which cocaine reaches overseas destinations, and to the border with a neighboring country, from which the chemical precursors required to process cocaine are typically

66. Idler 2020.
67. van Etten 2017.
68. Weiss et al. 2018.

smuggled.[69] This yields 400 routes, which are visualized graphically in Figure 3 (*left*). Finally, to identify potential trafficking hubs, I located every point at which multiple simulated routes converged or intersected, which produced 377 potential trafficking hubs.[70]
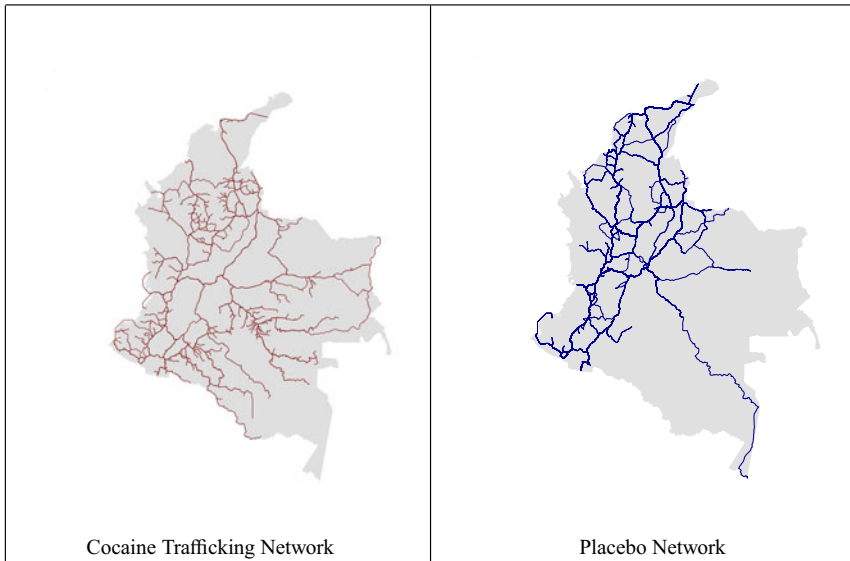
Notes: *Left*: least-cost paths from 200 coca cultivation clusters to a land border crossing and to a sea port. *Right*: least-cost paths from (continental) Colombia's 200 most populous municipalities to a land border crossing and to a sea port.

FIGURE 3. *Simulated trafficking routes and placebo routes*

Table 2 shows the estimated effect of my cocaine trafficking measure on the outcome of FARC splinter group emergence. Since the independent variable in column 1 is a count of trafficking hubs, this estimate suggests that one additional trafficking hub increases the likelihood of splinter group presence in a municipality by six percentage points. I interpret this result as the reduced form of an IV analysis in which the first stage is missing. In a standard two-stage least-squares equation, the reduced-form estimate (also called the intent to treat) is the numerator and is divided by the first stage or "compliance ratio" to estimate the local average treatment effect. Thus, the fact that the reduced-form estimate is positive and statistically

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69. This procedure omits transit by air, as this mode of trafficking is relatively rare. UN Office on Drugs and Crime 2020.

70. See Figure A.5 in the online supplement for a graphical depiction of this procedure.

significant suggests that there is a positive relationship between drug trafficking and the emergence of splinter groups, but because the ratio in the denominator is missing, the size of this effect could be larger or smaller than the estimate.

TABLE 2. *Drug trafficking hubs and FARC splinter group emergence*

	DV: Splinter group presence (binary)			DV: Coca paste seizures (log kg)
	(1)	*(2)*	*(3)*	*(4)*
(INTERCEPT)	0.35***	0.29***	0.28***	2.64***
	(0.03)	(0.04)	(0.04)	(0.21)
TRAFFICKING HUBS (count)	0.06***	0.04***		0.27***
	(0.01)	(0.01)		(0.07)
PLACEBO HUBS (count)			0.01	
			(0.03)	
Coca cultivation (log ha)		✓	✓	✓
Observations	260	260	260	260
F-statistic	28.47	17.67	9.84	99.38

Notes: The dependent variable in columns 1–3 is a binary indicator for the presence of FARC splinter groups in a municipality as of 2020. The dependent variable in model 4 is a municipality-level measure for the maximum yearly seizure of coca paste between 2010 and 2016 in logged kilograms. The independent variable in columns 1, 2, and 4 is a municipality-level count of predicted hubs for cocaine trafficking. The independent variable in model 3 is a municipality-level count of predicted transit hubs for travel and business. Columns 2–4 include a control for the logged maximum annual coca cultivation (in hectares) in a municipality between 1999 and 2012. The sample consists of 260 former FARC municipalities. All models use HC2 heteroskedasticity-consistent standard errors. $*p < .05$; $**p < .01$; $***p < .001$.

In column 2, I seek to isolate the effect of cocaine trafficking by controlling for historical municipality-level coca cultivation. I include this control because the simulated routes start, by design, in coca-producing municipalities, which are intersected by at least one simulated route and are therefore potentially more likely than non-producing municipalities to be the location of a trafficking hub. While the magnitude of the estimate is attenuated slightly, it remains positive and statistically significant, indicating this measure is not merely a proxy for production but captures an additional dimension of the value of territory to splinter groups.

In column 3, I use a placebo test to address two potential threats to inference. First, because the cost raster used to simulate trafficking routes includes roads, this measure could still be correlated with factors that influence road construction, such as state capacity, corruption, or even rebel governance capacity.[71] Second, nodes where the legitimate transportation network intersects might be valuable for various reasons from a political, military, or trade perspective, and if this legitimate network overlaps significantly with my simulated trafficking network, my measure could be capturing general economic activity rather than the cocaine trade specifically. I address these concerns with a placebo test, in which I generate an additional

71. Arjona 2016.

set of routes whose origins are the 200 most populated cities or towns in Colombia rather than 200 coca cultivation zones, but which uses the same set of ports and border crossings as destinations and the same cost raster for travel-time calculation. This network appears in Figure 3 (*right*). The rationale for this measure is that it should capture the most important hubs in the transportation network for legal trade and travel. If the results in columns 1 and 2 are driven by some omitted variable that leads to road construction, or by economic activity associated with trade and travel, we might expect to observe similar effects for this placebo measure. Instead, I find weak and statistically insignificant effects on the presence of FARC splinter groups.

As a final test of the validity of this measure, in column 4 I estimate its relationship to government seizures of coca paste. As noted earlier, seizure data may not fully reflect the true volume of drug traffic because it measures only traffic that is detected and interdicted by authorities. Nevertheless, an observed correlation between the measure of simulated drug trafficking hubs and seizures of drug shipments provides additional confidence that at least some drug traffic passes through these predicted hubs. I focus on seizures of coca paste, an intermediate product between coca leaves and cocaine that is frequently transported, but not typically consumed without further refinement. The results indicate a strong relationship between the simulated trafficking hubs and government seizures; the presence of one additional hub in a municipality is associated with a nearly 30 percent increase in the quantity of coca paste seized.

Alternative Explanations for the Pattern of Splinter Group Emergence

I have argued that FARC splinter groups emerged in areas where opportunities to profit from the cocaine trade were greatest. However, because coca is typically cultivated by peasant farmers in remote rural areas, at least two plausible alternative arguments related to a military or political strategy might explain this pattern. First, if remote rural areas are harder for the Colombian military to access and control, it is plausible that the pattern of splinter group emergence reflects strategic imperatives rather than profit seeking. Second, if the people in these areas were generally more sympathetic to the FARC's ideology, which emphasized redistributing land and resources to peasants, the pattern of splinter group emergence might be the product of a political strategy instead of profit seeking.

Do Splinter Groups Emerge Where the State Cannot Reach Them?

The cross-national literature on civil war onset finds that rebel groups are more likely to emerge in countries with low state capacity and rough terrain.[72] One compelling

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72. Collier and Hoeffler 2004; Fearon and Laitin 2003.

explanation for this pattern is that weak states lack the military power to prevent rebels from assembling recruits and capturing territory, particularly when that territory is remote and rugged. A similar argument might predict that within countries, local variation in military capacity or terrain might influence patterns of rebel activity.

TABLE 3. *Competing explanations for splinter group emergence*

	Dependent variable: Splinter group presence (binary)					
	(1) Difference-in-means	(2) IV	(3) Difference-in-means	(4) IV	(5) Difference-in-means	(6) IV
(INTERCEPT)	0.42***	0.42***	0.42***	0.42***	0.42***	0.42***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
COCA CULTIVATION	0.13***	0.17***	0.14***	0.20***	0.11***	0.15***
	(0.03)	(0.04)	(0.03)	(0.04)	(0.03)	(0.04)
MILITARY BASE DISTANCE	−0.00	−0.02				
	(0.03)	(0.03)				
TERRAIN RUGGEDNESS			0.04	0.06		
			(0.03)	(0.03)		
FARC PARTY SUPPORT					0.09***	0.08***
					(0.03)	(0.03)
Observations	260	260	260	260	260	260
F-statistic	9.70	9.53	10.41	11.20	19.58	19.69

Notes: The dependent variable is a binary indicator for the presence of FARC splinter groups in a municipality as of 2020. In the instrumental variable (IV) models, the instrument is a municipality-level index of soil (acidity, nitrogen, carbon, and drainage) and weather (temperature, sunlight hours, annual rainfall, and humidity) variables, combined using the predicted values from an OLS regression on historical coca cultivation. *COCA CULTIVATION* is the logged maximum hectares of coca cultivation between 1999 and 2012. *MILITARY BASE DISTANCE* is the distance in kilometers between the closest military base and a municipality's centroid. *FARC PARTY SUPPORT* is the vote share of the FARC's party in the 2018 legislative (senate) election. For an alternative measure of political support, see supplemental Table A.11. *TERRAIN RUGGEDNESS* is calculated as the standard deviation of elevation within the municipality. For an alternative measure of terrain ruggedness, see supplemental Table A.10. All independent variables are scaled. All models use HC2 heteroskedasticity-consistent standard errors. $*p < .05$; $**p < .01$; $***p < .001$.

This argument poses a potential challenge to my results linking the emergence of FARC splinter groups to areas valuable for coca cultivation. Because coca cultivation sites are often remote and rugged, it is plausible that the association is driven instead by local variation in the ability of the Colombian military to project power to these areas and prevent rebels from taking control.

I evaluate two dimensions of this argument empirically. First, I operationalize military power projection capacity as the distance of each municipality from the nearest Colombian military base. I geocoded the locations of Colombian army, navy, and air force bases and calculated the distance to the center of each municipality. Second, I used a high-resolution digital elevation model to calculate the roughness of terrain in each municipality.

I find little evidence that either proximity to military bases or terrain roughness influences the probability of FARC splinter group emergence. Neither the military

proximity variable (Table 3, columns 1 and 2), nor the terrain ruggedness variable (columns 3 and 4), attenuates the direct or IV estimates of the effects of coca cultivation on splinter group emergence.

Do Splinter Groups Emerge Where the Population Supports the FARC's Ideology?

A growing body of literature in conflict studies focuses on how rebel groups' ideologies guide their behavior.[73] In the case of the FARC, the group's professed goal was a Marxist revolution that would redistribute land and wealth from the elites to farmers and peasants. In contrast to my argument, which emphasizes opportunities for profit as an explanation for the FARC's fragmentation, splinter group commanders often claim in their statements and interviews that their goal is to complete the FARC's political project, which they argue the peace agreement failed to achieve.[74]

The argument that the emergence of FARC splinter groups was dictated by revolutionary political goals poses a potential challenge to my results on the effects of coca cultivation. Coca is often cultivated by farmers in neglected rural areas, where the FARC's calls for redistribution of land and wealth might be particularly popular. Thus, it is plausible that splinter groups emerged in these areas not because of the opportunities for profit but because these are the areas where the FARC's ideology has enjoyed support from the civilian population and where FARC splinter groups could rebuild its political movement.

To measure variation in support for the FARC's ideology, I use the vote share of the FARC's political party in the 2018 legislative elections. In this election, the group's party campaigned as the Partido FARC (FARC Party) and put forward former commanders as candidates for office, decisions that were criticized by observers at the time as evidence that the group had not broken with its legacy.[75] In this context, a vote for or against the FARC's political party plausibly represents support for or opposition to the group's cause.

This measure does not directly capture support for FARC splinter groups; indeed, civilians who voted for the FARC's political party might have perceived such groups as illegitimate. Rather, these voters are the constituency most sympathetic to the FARC's ideology, and by extension the ideology espoused by the FARC splinter groups.[76]

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73. Leader Maynard 2019.

74. Frente Primero 2016; Segunda Marquetalia 2019.

75. Arbeláez 2017.

76. Another plausible criticism of this measure is that by 2018, FARC splinter groups were already active in some municipalities, and their presence could have influenced election results. In supplemental Table A.11, I use an alternative measure of support based on the vote share of the FARC's political wing in the 1986 presidential election, in which the FARC was allowed to compete under the terms of a ceasefire.

I find that this measure of political support for the FARC has positive and statistically significant effects on the probability of splinter group emergence (Table 3, columns 5 and 6). Thus, I cannot rule out the possibility that public support also played a role in determining where FARC splinter groups emerged. In neither model, however, does accounting for political support nullify the estimated effect of coca cultivation.

Conclusion

In this paper I set out to explain the emergence of rebel splinter groups after Colombia's 2016 peace agreement with the FARC. In contrast to the dominant models of rebel group fragmentation during peace processes, which portray a top-down process driven by ideological disputes or factional infighting, I argued that the Colombian case represented an instance of middle-out fragmentation driven by mid- and low-level commanders and facilitated by profits from the illicit economy.

I presented an array of descriptive and statistical evidence from Colombia in support of these arguments. I showed descriptively that fragmentation of the FARC started with mid- and low-level commanders; the FARC's top commanders did not play a pivotal role. I further used analysis of the spatial distribution of FARC splinter groups to demonstrate that these groups were most likely to emerge in areas where opportunities for profit were greatest—areas valuable for drug production and drug trafficking. These findings are robust to an array of sensitivity checks and are more powerful than alternative explanations related to military strategy or political support.

Broadly, these results highlight a threat to peace processes that has received little attention in the empirical literature: profit seeking by mid- and low-level rebel commanders. This result has implications for peace building in Colombia and beyond. In Colombia, shortly after president Gustavo Petro took office in 2022, he opened the door to talks with all of the country's armed groups, including other guerrilla groups like the ELN, paramilitary groups, and the FARC splinter groups.[77] My findings suggest that any agreement with these groups must effectively address the economic incentives created by the drug trade, or it risks replicating the pattern that has hindered previous peace processes. For example, while the 2016 peace agreement included ambitious plans for rural development and coca crop substitution, their implementation was so delayed and poorly resourced that by 2019, the UN reported that only 10 percent of participants in the crop substitution program had received the full subsidies they were entitled to, and more than 40 percent had received nothing at all.[78] In this context, it is no surprise that coca cultivation increased, rather than decreased, in the ensuing years. A similar logic may apply in other contexts like the Democratic Republic of the Congo, where the number of armed groups in

77. Guerra and Hege 2022.
78. Puerta and Chaparro 2019.

resource-rich regions like Kivu has expanded despite the implementation of three successive disarmament, demobilization, and reintegration programs intended to demobilize them.[79]

This research has limitations that leave fruitful ground for future research. First, I argue that opportunities for profit heighten the risk of middle-out fragmentation, providing evidence from Colombia's illicit cocaine trade. However, rebel groups profit from a wide variety of resources, and evidence suggests that the types of resources armed groups can exploit influence their incentives to emerge and govern.[80] Further research on this topic might investigate whether, for example, licit resources generate different postconflict dynamics than, for example, illegal drugs. Second, while my theoretical and empirical claims focus on the resources available to splinter groups, the degree of competition over resources, territory, and recruits may also be an important constraint, particularly in multiparty conflicts. In Colombia, for example, FARC splinter groups faced fierce competition from other armed groups like the ELN and AGC in some regions. Last, while this paper focuses on the causes of middle-out rebel group fragmentation, an equally important question is what consequences this mode of fragmentation has on rebel group behavior. In light of recent research demonstrating that leaders' characteristics and experience influence rebel groups' propensity to employ terrorism, for example,[81] the emergence of splinter groups led by mid- and low-level rebel commanders could have far-reaching implications that merit scholarly attention.

Data Availability Statement

Replication files for this article may be found at <https://doi.org/10.7910/DVN/OFZSOI>.

Supplementary Material

Supplementary material for this article is available at <https://doi.org/10.1017/S0020818324000213>.

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