

Dismantling Criminal Networks through Internationalized Investigative Bodies
Assessing the Efficacy of the UN and the CICIG in Guatemala

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The International Commission against Impunity in Guatemala (CICIG) is one of the world's most innovative models of internationalized prosecution for corruption, criminality, and human rights violations. A hybrid model involving joint actions of the United Nations and Guatemala's Public Prosecutor and National Police and operating under Guatemala's laws, the CICIG has succeeded in dismantling powerful networks of illegal armed groups and clandestine security forces that emerged during the country's civil war and that, enjoying protection from state agents, evolved into powerful criminal networks in the post-conflict era. While we know about the prosecutorial success of the CICIG, we know little about its impact on the extent of corruption, criminal violence, and human rights violations. Using the synthetic control method, this paper offers a first test of the likely impact of the CICIG on Guatemala's long-term homicide rate trajectory. The method allows us to compare the actual evolution of the homicide rate after the CICIG went into effect against a counterfactual scenario in which Guatemala did not adopt the CICIG. The results show that in the absence of the CICIG Guatemala would have experienced twice as much violence as it currently does. While the raw data show that after the CICIG the homicide rate declined from 46 murders per 100,000 population to 28 in 2016, our analysis shows that the net effect was much larger: in the absence of the CICIG, the homicide rate in Guatemala would have risen to approximately 60 murders per 100,000 population. Thus, our evidence shows that the CICIG saves lives.

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The United Nations–sponsored International Commission against Impunity in Guatemala (Comisión Internacional contra la Impunidad en Guatemala or CICIG) is widely recognized as one of the most innovative models of internationalized prosecution for corruption and criminality in the world today. The CICIG is a hybrid model in which UN representatives work hand in hand with Guatemala’s public prosecutor’s office, security forces, and legislature to dismantle the networks of corruption, criminality, and human rights violations that emerged under military rule and during the bloodiest episodes (1977–1982) of the country’s three-decade civil war (1960–1996). Known as Clandestine Illegal Security Forces (CIACS), these networks were created by former and incumbent elite members of the military secret services and by members of death squads who used their unique access to the highest levels of government and to privileged political information, their comparative advantage in violence, and the impunity for gross human rights violations to become the leaders of organized crime and criminal industries. After the peace accord, as different factions of the CIACS went to war over the control of the criminal underworld (1996–2000s), including the drug trafficking industry, Guatemala turned into one of the world’s most violent countries, reaching by 2006 a murder rate of 40 homicides per 100,000 population.

Created by an agreement between the UN and the Guatemalan government in 2006, only ten years later was the CICIG recognized as a success story of internationalized prosecution of networks of corruption and criminality and of the development of the rule of law. Multiple internal and external reports have underlined the CICIG’s unique features and its unprecedented law enforcement efficacy. Assisted by the CICIG and operating under Guatemalan law, Guatemalan judicial and legislative authorities have followed a dual track of dismantling networks of corruption, criminality, and human rights violations while at the same time changing the country’s laws and institutional practices to facilitate continuous law enforcement operations. The CICIG has arrested three Guatemalan presidents and hundreds of corrupt and repressive officials, and it has dismantled dozens of networks of corruption, criminality, and human rights violations linked to CIACs. It has also introduced major changes in Guatemala’s legal system to empower domestic prosecutors to continue dismantling criminal networks.

In spite of this remarkable list of achievements, it remains unclear whether the CICIG represents a model for the reduction of corruption, criminality, and human rights violations. While we know that with CICIG support the Guatemalan public prosecutor’s office has taken unprecedented actions to investigate, prosecute, and convict government officials, members of security forces, and criminals, *we do not know whether these actions have resulted in less corruption, lower murder rates, and fewer human rights violations*. Some of the most widely used international indicators on corruption and human rights violations would raise questions about the CICIG’s efficacy. For example, the Political Terror Scale (PTS), one of the most influential indicators of state repression, shows no significant change after the CICIG’s implementation in 2007. And Transparency International’s Corruption Perceptions Index shows no clear change in the deep perceptions about corruption in Guatemala after the CICIG’s creation.

Has one of the world’s most ambitious and internationally heralded models of internationalized prosecution to dismantle networks of corruption, criminality, and human rights violations resulted in measureable outcomes? Has the CICIG yielded any tangible social benefits to Guatemalan society?

Assessing the efficacy of the CICIG is crucial not only for Guatemala but for numerous countries in Latin America and elsewhere in the world facing major waves of large-scale criminal

violence, in which repressive security forces forged under an authoritarian era or during a protracted civil war became intimately involved in the operation of the criminal underworld and in the production of criminal violence in the post-conflict era. From Mexico to Colombia and from Honduras to El Salvador, a wide variety of civil society organizations have been actively discussing whether the hybrid model represented by the CICIG – combining joint international and domestic prosecutorial actions – would be a viable option for countries that have experienced the outbreak of major criminal wars, some resulting in higher death tolls than those averaged in the civil wars of the second-half of the twentieth century.

Evaluating the efficacy of the CICIG also has important theoretical implications for scholarly debates in international politics and international human rights law about the role of international and domestic institutions in confronting gross human rights violations. While the debate has centered on the benefits and pitfalls of international interventions when domestic prosecution fails (e.g., the International Criminal Court), the case of the CICIG offers a possible success story of a *hybrid model* in which international and domestic actors, acting under a country's domestic laws, cooperate to jointly dismantle networks of criminality, corruption, and gross human rights violations.

In this paper we present the first systematic evaluation of the likely causal impact of the CICIG on one specific outcome variable: the homicide rate. Our aim is to isolate the net causal effect of the implementation of the CICIG on Guatemala's long-term trajectory in homicide rates. As different studies have shown, in countries experiencing criminal wars and murder epidemics – that is, homicide rates above 10 per 100,000 population – a large proportion of homicides are perpetrated by organized criminal groups. In the case of Guatemala the competition for turf among various factions of CIACs allied with different Mexican and Colombian cartels accounted for a large amount of the dramatic upsurge of criminal violence in the early 2000s. Changes in the murder rate over time would be a good indicator of the CICIG's ability to affect Guatemala's networks of corruption, criminality, and human rights violations.

In assessing the CICIG's likely causal impact on the long-term trajectories of criminal violence, we take advantage of an exogenous shock that affected Guatemala's and Central America's criminal underworld. In 2007 the Mexican government launched a major War on Drugs, in which the federal government deployed the military across Mexico's most conflictive regions, to dismantle the country's leading drug cartels. Geographically located mostly in states along the US-Mexico border and along the Pacific coast and the Gulf of Mexico, cartels quickly shifted some of their trafficking operations to central and southern Mexican states and to Central America's Northern Triangle – Guatemala, El Salvador, and Honduras. This meant that, as the CICIG began operations at the end of 2007, Guatemala was exposed to a major exogenous shock, by which Mexico's leading cartels sought to establish strategic alliances with Central American local cartels, powerful local families of landowners, and criminal organizations, shifting their turf wars from North into Central America.

The raw data show that after the 2007 Mexican shock the murder rate in Honduras and El Salvador doubled or tripled, while in Guatemala the homicide rate has continuously declined since 2008. Is this long-term decline the result of the implementation and actions of the CICIG, or is something else driving violence down? Did the CICIG help Guatemala to absorb the Mexican shock, setting the country onto a different trajectory?

To estimate the net causal impact of the CICIG on Guatemala's long-term trajectory of homicidal violence, we use a quasi-experimental technique: the synthetic control method (SCM). Developed on the basis of a counterfactual causal logic, the SCM was specifically developed to assess the impact of a major policy change on an outcome of interest in country X against the counterfactual in which a shadow case, say country X', did not adopt such a policy. Crucially, the SCM offers the opportunity to estimate the net causal effect comparing the trajectory of the outcome variable in the presence of the policy change and in its absence. For purposes of this paper, the SCM allows us to assess the evolution of the murder rate in Guatemala after the adoption of the CICIG against a counterfactual (*Synthetic*) country that resembles Guatemala in most dimensions except for the adoption of the CICIG. The synthetic case is a weighted average of a number of relevant Latin American cases estimated through the SCM.

Results unambiguously reveal that the CICIG had a large and meaningful causal effect on Guatemala's trajectories of violence, slowing down the country's murder rate in significant ways. Not only did the CICIG equip Guatemala to absorb the Mexican shock, but it became a key institutional mechanism to begin a sustained long-term reduction in the country's homicide rate. Our analysis shows that had Guatemala not adopted the CICIG in 2007, the country would have experienced a murder rate two and three times greater in the following decade. In fact, the gap between the murder rate of Guatemala (with the CICIG) and the counterfactual scenario of *Synthetic* Guatemala (without the CICIG) shows that over the course of ten years the CICIG helped Guatemala save thousands of lives. A number of permutation and time and space placebo tests show the robustness of the results.

The article is divided into five sections. We first provide an analytic history of the factors that led to the creation of the CICIG and discuss how the CICIG works and summarize its achievements. In the second section we assess the likely impact of the CICIG on criminal violence. Using synthetic control models we show and discuss the large deterring effect the CICIG had on the long-term trajectories of Guatemala's homicide rate. In the third section we offer a preliminary discussion of the mechanisms by which the CICIG's work may contribute to reducing Guatemala's murder rate. In the fourth section we put the CICIG into a broader comparative framework of different internationalized and domestic strategies for confronting large-scale criminal violence and gross human rights violations around the world. In the conclusion we assess the impact of the CICIG to the broader process of peace-building, transitional justice and the development of a democratic rule of law in Guatemala.

THE MAKING OF THE CICIG

How Did the CICIG Come into Existence?

War atrocities under dictatorship

Guatemala's 36-year civil war was one of the longest and bloodiest conflicts in 20th-century Latin America. Spanning 1960 to 1996, the war reached its most lethal stage in the 1977–1984 period known as La Violencia – a period marked by intense social mobilization and subsequent military coups, in which various military governments resorted to brutal anti-insurgency campaigns, including the widespread use of scorched earth policies to destroy the social bases for rebel support.

Elite military forces trained in the United States and in Israel (the *Kaibiles*), in conjunction with numerous death squads and vigilante groups, led the anti-insurgency campaign. As data from the Commission for Historical Clarification reported, military forces and their informal allies were responsible for 90% of the 200,000 murders committed during the civil war – the majority of which took place during La Violencia. Beyond the death toll, in the height of the conflict 45,000 people were disappeared, up to one million people were displaced from their place of residence, 664 massacres were committed, and one quarter of a million people fled the country and took refuge on the Mexico-Guatemala border. As the Commission for Historical Clarification concluded, 88% of the victims during La Violencia were Mayan Indians, who were brutally killed in anti-insurgency actions that constituted genocide.

A truncated peace and transitional justice process

After La Violencia, Guatemala transitioned from military rule to democracy in 1986, but the military remained as the shadow power and the violence continued until 1996, when the UN brokered a peace agreement that put an end to three decades of civil war. Although the peace agreement called for the launching of a transitional justice process, starting with a truth and clarification commission, the top leaders of the military and various death squads working for the military-controlled secret service used their political and coercive power to block any attempt at holding the state's security forces accountable for their atrocious actions. On the legal front, following the peace agreement, the military forced the country's legislative leaders to pass a blanket amnesty. And on the coercive front, anyone who demanded the implementation of the agreement would be threatened or eliminated. Despite the peace agreement and the UN's best intentions to launch a transitional justice process, the military and the country's shadow powers sent a clear signal that accountability was out of the question and that *impunity would prevail*.

Fearing that the UN-sponsored truth commission would be dominated by foreign diplomats who would have few connections with the victims and would be easily blocked by the military, Bishop Juan Gerardi, then director of the Archdiocese of Guatemala's Human Rights Center (ODHAG), launched a major historical memory campaign, REMHI – a truth-seeking process coordinated by the Catholic Church that took place from 1997 to 1998. Based on 6,000 testimonies and a serious investigation, REMHI's multi-volume report presented thousands of life histories of victims, gathered systematic evidence of hundreds of collective massacres, and provided names of perpetrators. Focusing on the modus operandi of the massacres, the REMHI team was able to disclose the existence of clandestine illegal networks (CIACS) that methodically conducted the majority of the 664 massacres. This was a major *accountability shock* against the military's policy of impunity.

The military immediately reacted to the REMHI report, and 48 hours after Bishop Gerardi made an appearance on national television to present the report, making it publicly available, the bishop was brutally murdered. Within 24 hours the government of Alvaro Arzú reported that the assassination had been a crime of passion, in which the bishop's alleged "partner" had ordered a German shepherd to attack and kill him. The bishop's murder and the smear campaign that tried to portray him as a shady character gave a new powerful signal from the military that *impunity would prevail* and that anyone who tried to dig into the country's past would pay a high price.

Following the publication of the REMHI report and the assassination of Bishop Gerardi, the UN completed the work of the Commission for Historical Clarification (CEH) and released a new report in 1999. With greater technical capacity than that of the Catholic Church personnel, the UN-sponsored truth commission report provided systematic evidence of 200,000 killings, concluding that the military was responsible for 90% of the killings and that 88% of victims were Mayan Indians. The report produced compelling evidence of crimes against humanity and genocide. Building on the fieldwork and testimonies collected by REMHI, the CEH confirmed that CIACS had been involved in the execution of most of the atrocities. The report could have been *a new accountability shock* if the evidence of gross human rights violations had had any legal consequences. But the potential anti-impunity impact of two truth-seeking processes was neutralized by a blanket amnesty that protected the military and their shadowy allies.

The extent of the prevailing impunity for gross human rights violations and the limitations of the transitional justice process became evident when young human rights activists and lawyers from the ODHAG demanded a new judicial investigation into the assassination of Bishop Gerardi. After nearly a decade of investigations (1998-2007), in which an estimated 35 people, including potential witnesses, were assassinated and the original judge presiding over the case had to flee the country, the Guatemalan justice system condemned Colonel Byron Lima to life in prison. A colonel whose most immediate family had played a key role in the anti-insurgency campaign, Byron Lima was a central player in the networks of corruption, criminality, and human rights violations that emerged after the war. From behind bars he would go on to become the number one trafficker in Guatemala. Although the evidence of the trial showed that he did not act alone in murdering the bishop or in any of his illegal deals, his superiors were left untouched.

Civil war legacies:

The CLACS and criminal violence in post-conflict Guatemala

Protected by the amnesty law and by the de facto power of the armed forces, in the aftermath of the peace process top military officials, leading members of the military secret services, the police, and the country's numerous death squads used their positions of power to take control over Guatemala's vast criminal underworld, particularly drug trafficking operations from South America into Mexico and the United States. But these networks did not act as a bloc. As Mexican and Colombian cartels began moving operations into Guatemala, different factions of the Guatemalan security forces and the CIACS built strategic coalitions with local strong families in rural areas to facilitate the transit of transnational cartels through Guatemala's territory. Conflicts between different factions and cartels triggered major turf wars that resulted in a serious hike in the murder rate. Between 2000 and 2007 Guatemala reached a murder rate of 40 per 100,000 population – becoming one of the world's most deadly countries. In these years the death toll of criminal wars reached similar levels to the death toll associated with the civil war.

Demanding an international commission against impunity

The prevalence of impunity and the escalation of criminal violence, despite the peace agreement and two truth commissions, led the Catholic Church and the UN to reevaluate the entire transitional justice process. The long, cumbersome, and bloody process to bring those responsible for the assassination of Bishop Gerardi to justice left two crucial lessons for the ODHAG team and Guatemala's human rights community:

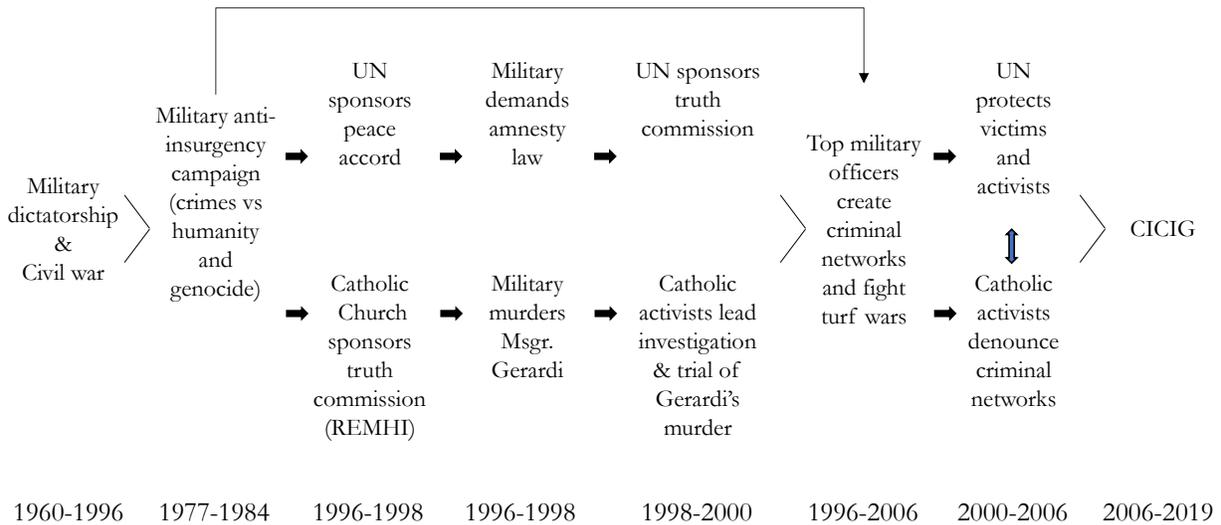
First, it became evident to Guatemala's human rights community that the CIACS, the shadowy security networks that had perpetrated genocide and crimes against humanity during the civil war – and that had been identified and exposed by the REMHI report – were at the forefront of the new criminal wars and were ready to assassinate any social leader who sought to expose them (such as Bishop Gerardi) and bring them to justice (such as the 35 people who died in the course of offering their testimony to the investigation into Gerardi's murder). These were powerful networks of corruption, criminality, and human rights violations in which state security forces colluded with criminal organizations to control the criminal underworld and to exercise social and political control in Guatemala. In the post-conflict era, it became evident that the construction of peaceful development would require the dismantling of these powerful criminal network structures.

Second, the human rights community realized that without direct UN support, justice and the prosecution of perpetrators for gross human rights violations would be practically impossible. The UN Mission for the Verification of the Implementation of the Guatemalan Peace Accord (MINUGUA) had played a key role in protecting the judge and the prosecutors in the trial of Byron Lima for the murder of Bishop Gerardo. Without MINUGUA protection, the investigation would not have progressed, the witnesses would not have offered their testimonies, and the judge would not have sentenced Lima to life in prison. To dismantle the CIACS, Guatemalan judges and the country's civil society would need international protection from the UN.

These two lessons led the Catholic-sponsored human rights movement and Guatemala's civil society to reach out to the UN to demand a more extensive intervention to dismantle the CIACS and to bring members of the state security forces who were at the center of these networks to justice. Between 2000 and 2006, Guatemalan civil society organizations, assisted by international NGOs, launched a major campaign of international mobilization and lobbying to demand from the UN the creation of an International Commission against Impunity to engage in the investigation, prosecution, and punishment of the state's shadowy forces that had survived the civil war, transformed themselves into major organized criminal actors, and were responsible for the production of criminal violence and swelling of homicide rates.

Figure 1 summarizes the process that led to the rise of the CICIG in December of 2006. It reveals that the CICIG was the response of Guatemala's civil society – particularly the Catholic Church – and the UN to rescue a peace process and a transitional justice program that had been hijacked by the military and their informal allies in the criminal underworld. It suggests that the CICIG was a strategic outcome of conflict: a byproduct of the struggles between pro-impunity and anti-impunity forces, in which the convergence of a civilian mobilization from below, supported by the Catholic Church, and the UN intervention led to the development of the institutional mechanisms that set Guatemala on a path to overcome a long history of impunity, corruption, criminality, and human rights violations.

Figure 1. The Historical Sequence of the Rise of the CICIG



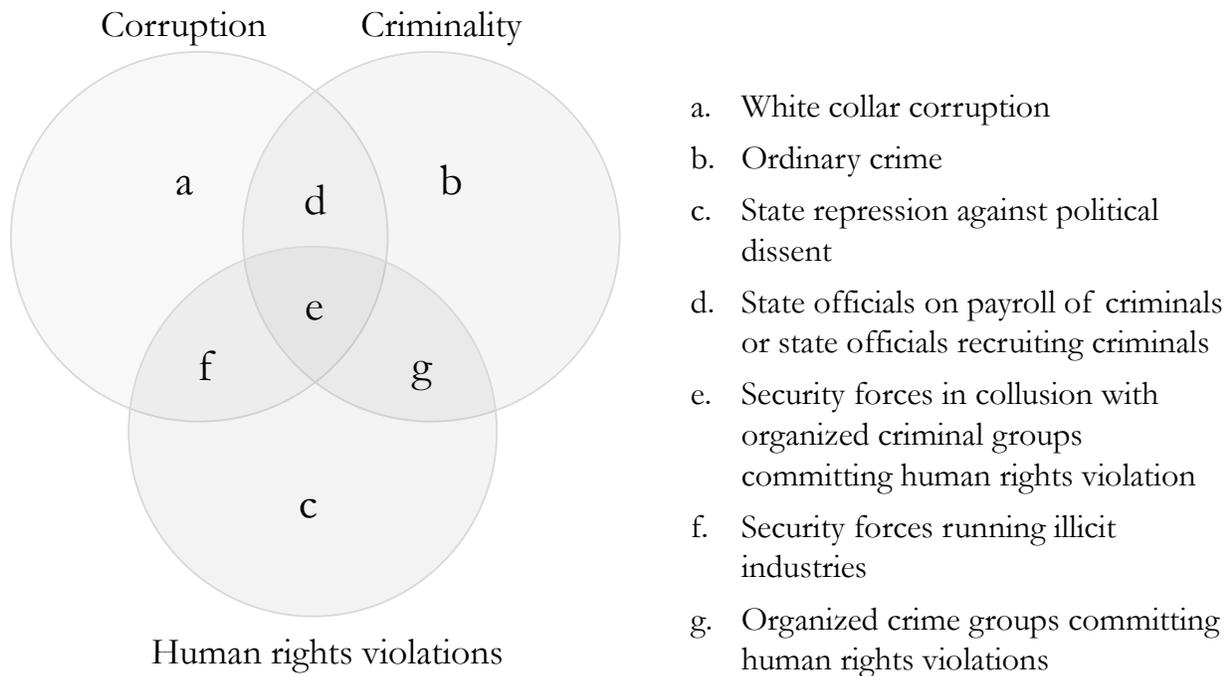
A new analytic language:

Networks of corruption, criminality, and human rights violations

In persuading the UN that the construction of a peaceful social order in post-conflict Guatemala required the dismantling of the CIACS, Guatemalan civil society and the international NGOs that assisted them invented a new grammar and a new analytic language. Two major conceptual innovations were made: First, rather than think of state human rights violations, state corruption, and criminality as separate spheres, Guatemalan civil society and their allies began using the language of *overlapping spheres*. And second, instead of thinking about perpetrators of state violence or corrupt state officials or criminal lords as independent actors, they began thinking of them as individuals connected through *network structures*.

Figure 2 provides a visual illustration of the overlapping network structures among the spheres of corruption, criminality, and human rights violations. A stylized image, the figure allows us to identify the network structures that were producing most of the violence in Guatemala and for which the country needed international assistance.

Figure 2. The Network Structures of Corruption, Criminality, and Human Rights Violations in Guatemala



The key discovery was that actors and networks located in the intersections of the three spheres were responsible for the production of criminal violence and gross human rights violations in post-conflict Guatemala.

To understand Figure 2, it is worth stating at the outset that the focus was not on actors situated outside the overlapping areas. Although civil society organizations in Guatemala recognized the existence of white collar corruption (a), ordinary crime (b) and state human rights violations (c), their focus was on more specific types of actors and violations. They were concerned with zone (d) where state officials were on the payroll of cartels or where state officials actually regulated criminal industries; zone (e) where security forces in collusion with organized criminal groups committed gross human rights violations; zone (f) where security forces were colluded with state officials in corrupt operations; and zone (g) where organized criminal groups committed gross human rights violations.

In the case of Guatemala, the military and its secret service, which had a strong presence in the Office of the President, were suspected of operating a number of corruption and criminal networks using the state's privileged access to information and the comparative advantage in violence that these actors exercised through the CIACS – the clandestine security groups – to run a wide variety of illicit industries, including drug trafficking, human smuggling, human organ smuggling, the production of fake passports, extortion, and kidnapping for ransom. These actors used coercive violence to subdue political and social dissidents and journalists or any social activist who attempted to shed light into these gray zones where political and criminal power overlapped.

When actors and networks located in these zones fragmented, following the initial move of Mexican and Colombian cartels into Guatemala in the 2000s, the country experienced the outbreak of multiple turf wars, which led to swelling murder rates.

Although a great deal of the international attention to the CICIG misleadingly focuses on zone (a), the reality is that it was the illicit actions and violence that happened in zones (d), (e), (f), and (g) that actually led civil society organizations in Guatemala to demand international intervention in the first place. The type of corruption, criminality, and state repression illustrated in zones (a), (b) and (c) can be endogenously confronted through proper state judicial institutions. There is no need for outside intervention. But the overlapping zones not only generate more violent contexts but create powerful shadow structures that are difficult to dismantle because they are led or protected by the very state agents who would be in charge of investigation and prosecution. In the years in which civil society organizations identified these intersections of corruption, criminality, and human rights violations, they did not hesitate to claim that “corruption kills” and that “impunity perpetuates incentives for corruption, criminality, and gross human rights violations.”

How Does the CICIG Operate?

Approved by an agreement between the UN and the government of Guatemala in December 2007 and ratified by the Guatemalan Congress in August 2007, the CICIG was created as an independent international entity that operates under Guatemalan law and whose mandate is to assist Guatemala’s Public Prosecutor’s Office, the National Police, and other state judicial and security institutions in “conducting investigations into the existence of illegal security structures and clandestine security networks that commit crimes that affect citizens’ fundamental human rights.” In collaboration with state institutions, as the UN-Guatemala agreement states, “the CICIG will seek to dismantle these [illegal and clandestine security networks]...and promote the investigation, prosecution, and sanction of its members.” The CICIG will finally provide recommendations to the Guatemalan state to adopt “the necessary judicial and institutional reforms”... “to eradicate these illegal security networks.”

As the mandate entails, CICIG was created as a *hybrid model* of internationalized domestic prosecution in which international actors empower domestic actors to investigate, prosecute and punish major violators of human rights. These are state specialists in violence and their informal allies who constituted networks of corruption, criminality and human rights violations. These are specialists in violence who led anti-insurgency operations during the Guatemalan civil war, who survived the peace process, and became a shadow power – one in which its members used their comparative advantage in violence and access to privileged information to run the criminal underworld and killed anyone who opposed them or who became a threat to their illicit operations.

To fulfill its mandate, the CICIG operates a *two-level game*. At the prosecutorial level, it collaborates with and supports Guatemala’s public prosecutors in dismantling the networks of corruption, criminality, and human rights violations. The CICIG provides technical advice to the Public Prosecutor’s Office on criminal investigations and has the legal capacity to participate as a complementary prosecutor (*querellante adhesivo*). The CICIG also has the legal capacity to make administrative complaints against public officials who may obstruct CICIG and Public Prosecutor’s Office investigations. As part of the investigations, the CICIG can offer witnesses and expert witnesses special protection. At the institutional level, the CICIG promotes legislative reforms of

Guatemala's legal system and judicial institutions to facilitate the continuous dismantling of criminal networks.

After ten years of operation, the CICIG has had remarkable achievements. On the prosecutorial front, the CICIG and the Public Prosecutor's Office have investigated fifteen powerful criminal networks and have dismantled at least five of them. The CICIG and the Public Prosecutors' Office have led 200 investigations, which have resulted in charges against 160 current and former high-ranking government and military officials. One former president has been convicted on corruption charges and two others are imprisoned awaiting trials for participating in major corruption rings. One of them, Otto Pérez Molina, was head of the country's military secret service during the final years of the civil war and has long been suspected of being one of the leaders of an influential faction of the CIACS. At lower levels, the CICIG has led investigations that resulted in the removal of 1,700 police officers and over 50 public prosecutors, who played a key role in the every-day operations of criminal networks. At the same time, the CICIG has actively promoted major legal changes to enable prosecution, including improving the wire-tapping abilities of prosecutors, the creation of high-risk courts, and the development of important witness protection programs.

The question remains whether the successful dismantling of these criminal network structures and the sentencing of hundreds of state officials from all different ranks, including the remarkable number of three former presidents, has had a significant impact on measurable outcomes. In the following section we assess the impact of the CICIG on Guatemala's long-term trajectories of criminal violence, using the homicide rate.

ASSESSING THE CICIG'S CAUSAL EFFECT ON CRIMINAL VIOLENCE

Empirical strategy:

A counterfactual analysis

In this paper we seek to assess the effect of the CICIG on the long-term trajectory of criminal violence in Guatemala. Addressing this question raises a series of methodological challenges. While a small-N qualitative research design may be useful for shedding light on causal mechanisms, finding a comparable case to Guatemala may be less straightforward, given the CICIG's particularities. Although conducting a large-N statistical analysis may be useful for establishing the likely impact of different forms of international, internationalized, and domestic prosecution on criminal violence, this empirical strategy would not solve the problem of confounding variables and potential endogeneity. Aware of these challenges, we adopt an alternative approach that uses in-depth knowledge about the Guatemalan case and of Latin American countries to construct a plausible counterfactual case. Leveraging quantitative and qualitative information, we explore the likely causal association of the CICIG on criminal violence.

We use the synthetic control method (SCM), a recently developed method that builds on John Stuart Mill's Method of Difference, to estimate the effect of a particular treatment on an outcome (Abadie, Diamond, and Hainmueller 2015). The SCM is a quasi-experimental technique that compares a treated unit with a weighted average of other untreated units with characteristics that resemble those of the treated unit. Existing literature has applied the synthetic control method to investigate a number of questions, including the impact of the impact of reunification on the

German economy (Abadie, Diamond, and Hainmueller 2015), the effect of terrorism on economic activity in the Basque country (Abadie and Gardeazabal 2003), and the impact of homicide-prevention strategies in Rio de Janeiro (Freire 2017).

The SCM operates as follows. Given a sample of units (e.g., countries), there is one ‘treated unit’ that has been exposed to an intervention of interest (e.g., a new government program, or international intervention, war, etc.), whereas the remaining units constitute the ‘donor pool’, or a set of potential comparison units. More formally, X_1 is a matrix of the pre-intervention characteristics of the treated unit (e.g., Guatemala) and X_0 is a vector with values for the units in the donor pool. The difference between the pre-treatment characteristics of the treated unit and the synthetic control is given by $X_1 - X_0W$, where W is a vector of weights. The objective is to select the synthetic control W^* that minimizes the size of this difference. Once this is accomplished, the causal effect of the intervention is then given by $Y_1 - Y_0W^*$, that is, the difference between the post-treatment outcomes of the treated unit and those of the synthetic control.

The SCM operates under the assumption that the pre-intervention characteristics of any treated unit can be more accurately approximated by multiple untreated units than by a single untreated unit. Hence, a synthetic control is defined as “a weighted average of the units in the donor pool” (Abadie, Diamond, and Hainmueller 2010). In our case, since we are interested in understanding whether the CICIG’s mandate in Guatemala had any causal effect on changes in criminal violence, we must compare the evolution of criminal violence in Guatemala against a weighted combination of other countries with characteristics that resemble Guatemala’s before the CICIG’s intervention. We will refer to this case as *Synthetic Guatemala*. Once we have constructed *Synthetic Guatemala*, the net causal effect of the CICIG’s intervention will be the difference in the post-intervention period (the year when the CICIG went into effect) between the homicide rate of Guatemala and of *Synthetic Guatemala*.

Data and Sample

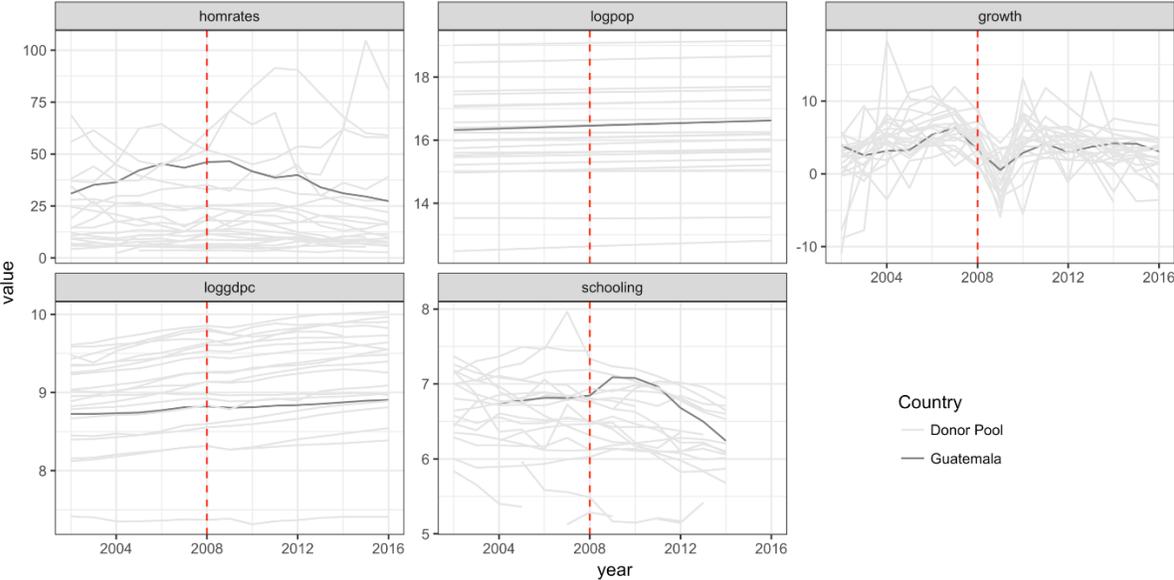
We construct a country-level panel of Latin American countries between 2002 and 2015. The CICIG was created by an agreement between the UN and the Guatemalan government in December 2006, it was ratified by Congress in May 2007, and it went into effect in 2008, when it began making recommendations and investigating high-profile cases. Therefore, we set the treatment period to be 2008, which leaves us with six pre-treatment years and eight post-treatment years. This series is a reasonable span of time to construct a plausible counterfactual for pre-CICIG Guatemala and assess its effect on the long-term trajectory of violence.

While it would have been possible to include other non-Latin American countries in the donor pool, the geographic proximity to the US and a common history of drug-trafficking and corruption make Latin American countries a fairly comprehensive source of counterfactuals. Our initial donor pool consists of 15 countries – Argentina, Brazil, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela. We exclude Chile, Bolivia, and Cuba for lack of homicide data over the entire period. As a robustness check, we try an alternative donor pool that excludes Argentina, Uruguay, Costa Rica, and Peru, countries with different levels of violence and development from the rest of the pool. In either case our results remain robust and consistent. In the remainder of the paper, we use the larger sample.

To construct *Synthetic Guatemala*, we use five predictors of criminal violence: Ln GDP per capita, GDP growth, Ln population, Schooling, and a One-year Lag of the Homicide rate. Figure 3 contrasts the temporal trajectories of our five predictors in the donor pool with those of Guatemala. The information shows that although the donors in the set have differing values across variables compared to Guatemala, on average the countries in this group constitute good comparison units. For example, while Venezuela has notably a higher GDP per capita than Guatemala and the rest of the donor pool, it is similar to Guatemala on other covariates, particularly the lagged values of homicide rates.

Our central outcome of interest is the count of homicides per 100,000 population. While we could have tested for the impact of the CICIG on corruption perception or state repression, we used the homicide rate because it is better suited for assessing the CICIG’s impact on the dismantling of networks of corruption, criminality, and human rights violations. First, as Trejo, Albarracín, and Tiscornia (2018) suggest, in countries experiencing homicide rates well above the threshold of 10 murders per 100,000 population – as in Guatemala – the international experience shows that the majority of these homicides are associated with conflicts between states and organized criminal groups and among criminal organizations themselves. In the Guatemalan case, swelling murder rates in the 2000s were associated with turf wars between different coalitions of CIACS with Mexican and Colombian cartels in search for monopolistic controls over drug trafficking routes and to the state and the CIACS’ use of violence to keep civilians under control. Because the CICIG was tasked with supporting Guatemalan institutions to investigate, prosecute, and dismantle networks of corruption, criminality, and human rights violations, which were at the forefront of the production of criminal violence, the use of homicide rates matches the CICIG’s mandate more closely than other variables. Data on homicide come from the Igarapé Institute.

Figure 3. Temporal Trajectory of Homicide Predictors across Sample Countries



To construct our synthetic counterfactual, we include a series of covariates of homicide rates. Our predictors are GDP per capita, measured in current US dollars (logged); the annual percentage growth rate of GDP; the natural logarithm of the country’s total population; and the proportion of males and females with primary education. We retrieved these variables from the World Bank and averaged them over the pre-intervention period (2002–2007). Lastly, because current numbers of violence are dependent on previous patterns of violence, we included the lagged average number of homicide rates over the 2000–2007 period.

Results

We construct *Synthetic Guatemala* as a weighted combination of 15 countries in the donor pool that resemble Guatemala before the implementation of the CICIG. Table 1 shows the weights of each country in the construction of *Synthetic Guatemala*. All of the 15 countries in the donor pool exhibit some weight in the resulting synthetic control. Of these, however, El Salvador, Venezuela, and Brazil provide a total weight of around 80 percent, with the remaining 20 percent distributed among the remaining countries.

Table 1. Synthetic Weights for Guatemala

Country	Synthetic Control Weight	Country	Synthetic Control Weight
Argentina	0.005	Mexico	0.024
Brazil	0.061	Nicaragua	0.014
Colombia	0.002	Panama	0.013
Costa Rica	0.013	Paraguay	0.033
Dominican Republic	0.020	Peru	0.005
Ecuador	0.018	Uruguay	0.036
El Salvador	0.361	Venezuela	0.371
Honduras	0.023		

To corroborate that *Synthetic Guatemala* is a valid comparison unit, Table 2 compares the pre-treatment characteristics of actual Guatemala (Treated) with those of *Synthetic Guatemala* (Synthetic). As a benchmark, the table also reports the sample mean. A comparison of the homicide rate reveals that the Guatemala (Treated) and *Synthetic Guatemala* more closely resemble each other than the sample mean in the donor pool. The results show that before the CICIG began operations in 2008, the average homicide rate in the 13 selected countries (22.246) was substantially lower than in Guatemala (38.867). But the average homicide rate of *Synthetic Guatemala* (38.814) is almost identical to Guatemala’s (38.867) actual rate. The same can be said about the averages of the other predictors in the synthetic control, all of which are a close approximation to those of Guatemala. A good counterfactual must resemble the treated unit in its main characteristics as well as in its temporal trajectory, and Table 1 shows that this is indeed the case.

Table 2. Predictor Means Prior to the CICIG

Variable	Treated	Synthetic	Sample Mean
Population (ln)	16.376	16.450	16.468
GDP per capita (ln)	8.752	9.188	9.100
Growth	4.082	4.087	4.620
Schooling years, 2002–06	6.687	6.689	6.680
Homicide rates, 2002–07	38.867	38.814	22.246

Figure 4 presents the main graphical results of the synthetic control analysis. It depicts the evolution of the homicide rate in Guatemala (the solid line) and *Synthetic Guatemala* (the dashed line) for the 2002–2016 period. From 2002 until 2008, Guatemala and its shadow case experienced practically the same homicide rate, reaching a high point at around 40 homicides per 100,000 population. However, after the CICIG went into effect in 2008, the two cases diverge. The homicide rate in Guatemala (the treated case) begins to decline from a peak of 46 homicides per 100,000 population to 28 by 2016. In contrast, in *Synthetic Guatemala*, which depicts what Guatemala would have looked like in the absence of the CICIG, the murder rate increases from 42 to around 60 per 100,000 population by 2016. While the raw data show a decline of nearly 20 points in the homicide rate, from 46 to 28, the CICIG’s net causal effect is significantly greater – the gap between the actual homicide rate and the rate the country would have reached in the absence of the CICIG. For example, in the absence of the CICIG, the homicide rate in 2015 would have been 65 murders per 100,000 population (as opposed to the actual rate of 30) and in 2016 it would have been 58 (instead of the actual 28).

Figure 4. Homicide Rates for Guatemala and Synthetic Guatemala, 2002–2016

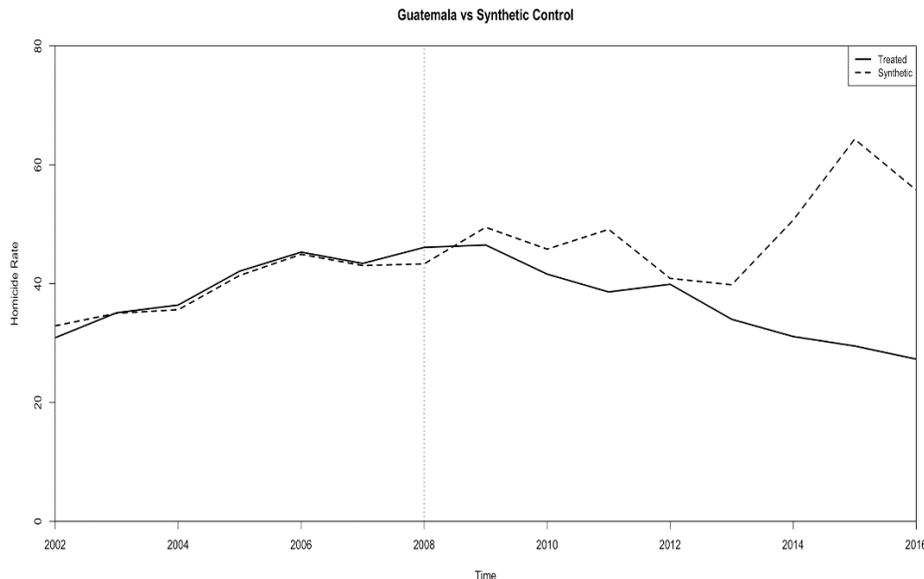


Figure 4 provides compelling evidence that the CICIG has saved tens of thousands of lives after more than ten years of operation. The CICIG helped Guatemala to absorb the 2007 Mexican shock, whereby Mexican cartels were relocating many of their operations to the Northern Triangle of Central America (Guatemala, El Salvador, and Honduras), following the Mexican government's declaration of a war on the cartels. As the counterfactual scenario shows, in the absence of the CICIG Mexican cartels would have been able to take full control over Guatemala's criminal underworld, triggering more intense turf wars and greater levels of violence, as happened in neighboring Honduras. After years of effectively dismantling networks of corruption, criminality and human rights violations, Mexican cartels found in Guatemala weaker criminal structures on which to build strategic trafficking coalitions, compared to Honduras and El Salvador. With a more extensive law enforcement infrastructure, Guatemala was able to contain the narco penetration than more effectively its neighbors.

In the appendix we offer three robustness checks – in-space and in-time placebo tests and a permutation test – that show that the causal effect of the CICIG on Guatemala's murder rate stands on solid grounds.

In the following section we explore how the CICIG developed the institutional mechanisms to contain and reduce criminal violence and to absorb the Mexican shock.

EXPLAINING THE CICIG'S EFFICACY (pending fieldwork interviews)

What are the specific mechanisms by which the CICIG contributes to diminishing the murder rate? We offer three potential explanations:

Reducing criminal competition. By dismantling networks of corruption/criminality/human rights violations, the CICIG is reducing the number of players fighting for turf. As the literature on organized crime shows, levels of violence are intimately associated with competition for turf. By reducing such competition, the CICIG contributes to reducing the murder rate – the lower the number of competitors, the lower the levels of violence.

Deterrence of state-criminal collusion. By reforming the country's judicial institutions and by using these reformed institutions to end impunity, the cost to the country's security forces for colluding with criminal organizations has dramatically increased. The CICIG's success has caused state security forces – specialists in violence – to update their beliefs about the probability of getting caught and has provided powerful incentives to stay away from organized crime.

Deterrence of state security agents using iron-fist policies. By reforming the country's judicial institutions, the CICIG has succeeded in constraining security forces in the use of iron-fist policies to fight crime. As the evidence shows, the use of iron-fist policies often stimulates, rather than deters, criminal wars and contributes to the swelling of murder rates.

THE CICIG IN THE LANDSCAPE OF PROSECUTORIAL MODELS

Table 3 provides an analytic framework to identify different models of prosecution that help us situate the CICIG. We distinguish two dimensions: the sources of prosecution and the mandate. We distinguish three institutional sources: exogenous (international), hybrid (joint international and domestic) and endogenous (domestic). And, following the example of the CICIG, we identify three different prosecutorial categories: corruption, criminality, and gross human rights violations. Moreover, the table provides two additional columns to identify when two or three of these categories are simultaneously explored. We provide different examples from Latin America to identify the different models.

Table 3. Different Models of Prosecution by Source of Intervention and Mandate

	Corruption (Co)	Criminality (Cr)	Gross Human Rights Viol. (HRV)	Co/Cr or Co/HRV or Cr/HRV	Co/Cr/HRV
<i>Exogenous</i>					
Foreign Intervention* (e.g. US; Spain)		*Extradition of narcos from Mexico to US	*Extradition of dictators or military officials *ICC *International tribunals	*OAS/GIEI (Mexico, Ayotzinapa for Cr/HRV	
International Intervention (e.g. ONU)					
<i>Hybrid</i>					
Joint International/ Domestic (e.g. ONU + Domestic Prosecutor)	*MACCIH (OAS + domestic prosecutor in Honduras)				*CICIG (ONU + domestic prosecutor in Guatemala)
<i>Endogenous</i>					
Domestic Prosecution	*Brazil (Lava Jato)	*Mexico (Narcos)	*Peru (President Fujimori)	*Colombia (Parapolítica for Co/HRV)	

Note: For the distinction of the different sources of intervention, see Sikkink (2011). For the distinction of the mandate that drives the intervention, see WOLA (2015).

*We exclude Foreign Imposed Regime Change, because we focus on interventions guided by international norms and regulations and not by force.

Table 3 allows us to identify three features that are unique and innovative about the CICIG and explain why, in countries facing similar challenges, networks of corruption, criminality, and human rights violations coalesce to produce uncommon levels of violence. We highlight three of these features:

- 1) The CICIG is a *hybrid* model of internationalized prosecution in which an international institution (the UN) operating under domestic law (Guatemala's) cooperates with the Public Prosecutor's Office, the police, and the justice system to confront deep-rooted problems of corruption, criminality, and gross human rights violations. Unlike models of pure international intervention, in which, say, the International Criminal Court (ICC) intervenes only when sovereign states fail to prosecute perpetrators for atrocities, the CICIG model is established on the premise of joint action.
- 2) Unlike most other forms of intervention, which specialize in one type of violation, the CICIG's mandate includes *three types of violations*: corruption, criminality, and gross human rights violations. A key innovation is the proposition that these three violations often overlap. Advocates of the CICIG often denounce that "corruption kills" and that "organized criminal groups can commit gross human rights violations." This means that perpetrators can be state actors, state actors colluded with organized crime, and organized crime groups. In general, internationalized prosecution has focused mainly on cases of gross HRV (crimes against humanity, war crimes, or genocide), and domestic prosecution has focused mostly on corruption or criminality. But Guatemala and the CICIG have innovated by suggesting that the overlap of the three phenomena creates a different type of context that requires joint action – international protection and technical assistance to empower local prosecutors to bring to justice security officials who are colluded with organized crime and who are part of a gray zone of criminality.
- 3) Unlike most models in which prosecution centers around individuals, the CICIG's mandate is to dismantle *networks* of criminality, corruption, and human rights violations. The CICIG does not look at individuals in isolation; rather, it investigates powerful individuals located at the central nodes of networks as well as other actors connected through these webs of complicity. As Table 3 shows, those models in which investigators or prosecutors look at the overlap of different violations (columns 4 and 5), often take a network approach and speak about "structures of criminality," "corruption rings," or "shadow powers."

CONCLUSION (pending)

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APPENDIX

Checking the counterfactual's validity: Placebo and permutation tests

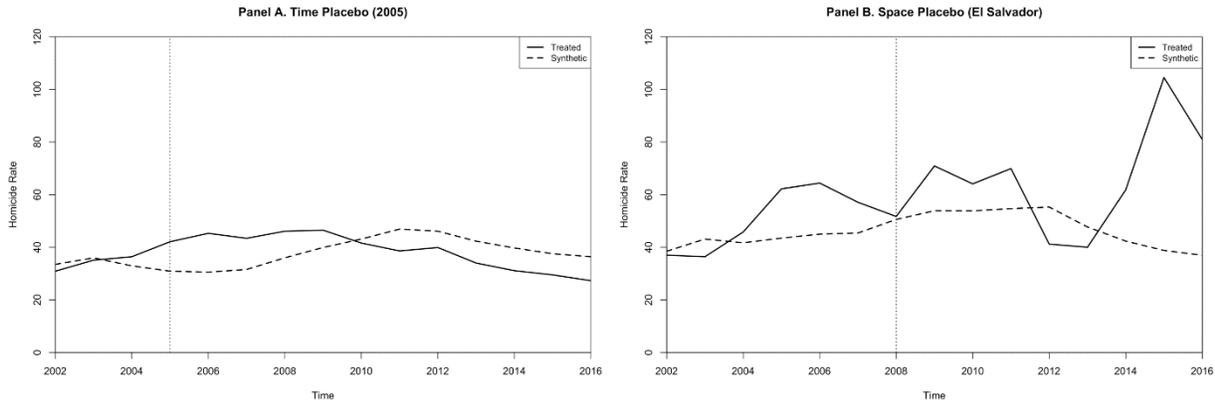
While the empirical results provide robust evidence in favor of a causal effect of the CICIG's mandate on the long-term trajectories of criminal violence in Guatemala, it is important to rule out potential problems that could undermine our confidence in the results. A key assumption of our analysis is that the outcomes of the untreated units are not affected by the intervention (Rosenbaum 2007; Abadie et al. 2010). In our case, the violation of this important assumption, known as the non-interference assumption, would mean that homicide rates of our donor pool (El Salvador, Honduras, Venezuela, etc.) are affected by the treatment effect, namely, the CICIG's mandate.

We argue that this violation is unlikely. First, although the CICIG is in part an international mechanism, it is a hybrid court that works hand in hand with Guatemala's domestic institutions. As such, the commission's mandate is purely domestic and the impact of its most consequential decisions is intended to affect – and has thus far affected – domestic actors. While criminal violence is indeed shaped by international factors, most of the criminal networks in Guatemala are the legacies of the civil war's violent groups and security sector, a purely domestic development. A second reason why countries from the donor pool were unlikely to be affected by the CICIG, at least in the short run, is that the CICIG had an immediate effect on homicide rates in Guatemala. We believe it is implausible that the commission had the ability to affect other countries' corruption and criminal networks at all and certainly not in such a short period of time.

To empirically substantiate these claims and make sure that our causal effect is not driven by confounding factors, we provide three robustness checks (see, e.g., Abadie, Diamond, Hainmueller 2015). First, we conduct an in-time placebo, which assigns a different point in time as the treatment year. Should our inferences about the CICIG's effect be valid, we should not expect to find a different year to have a sizeable and systematic effect on the outcome variable. Panel A in Figure A.I shows the graphic result of the in-time placebo, which assigns 2005 as year of intervention. Clearly, the graph shows that the placebo year does not have the expected effect on the homicide rate, giving us confidence that the reduction (and prevention of more) homicides was not due to different events at a different time but to the CICIG's launching in 2008.

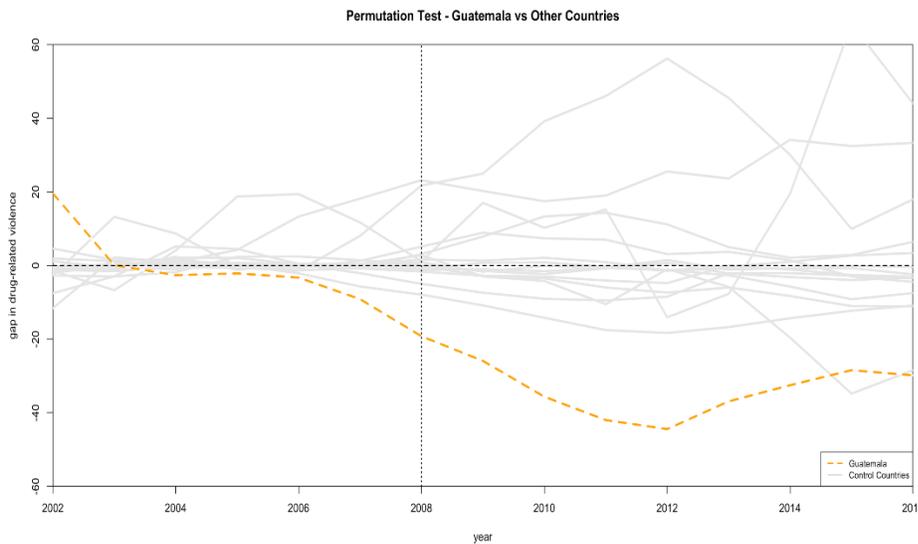
Second, we conduct an in-space placebo, by assigning the intervention to a different country of the donor pool. In Figure A. I (Panel B) we assign El Salvador as the treated unit instead of Guatemala. While both countries share a similar past of civil war, have comparable levels of economic growth, similar levels of development, and weak legal institutions, El Salvador did not have a CICIG-like hybrid court with a specific mandate of dismantling corruption and criminal networks. This test provides additional evidence in favor of our results: not only is the fit between synthetic and real El Salvador before the intervention poor and noisy, but also the counterfactual's trend during the post-treatment period runs *contrary* to both our theoretical expectations and main empirical finding for Guatemala.

Figure A.I. In-Space and In-Time Placebo Tests



Lastly, we conduct a permutation test, whereby we construct a synthetic control for every possible unit in the donor pool including Guatemala. Figure A.II plots the homicide gaps between a country and its synthetic version over time: lines closer to zero indicate a small treatment effect, while lines farther away from zero indicate larger effects of the intervention on the outcome variable. As the plot illustrates, Guatemala, represented by the dashed line, has a notably larger and consistent effect over time. As should be expected, homicide gaps in Guatemala before the intervention were close to zero. In the post-treatment period, however, homicide gaps for Guatemala experience a drastic downward trend away from zero, whereas other countries experience a much more modest negative effect and some even experience a positive causal effect.

Figure A.II. Permutation Test: Homicide Gaps in Guatemala vs. All Countries



Results from both the main analysis and multiple placebo tests provide us with sufficient confidence that our inferences about the CICIG’s deterring causal effect on homicide rates in Guatemala are valid and not confounded by alternative explanations.