Mapping Criminal Organizations: State Panel V1.0

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1 Overview

This document describes the procedures and sources used to produce the first version of our data on organized criminal group (OCG) presence by state and month from January 2007 to December 2015 (*State Panel V1.0*).

State Panel V1.0 combines and processes information from government and expert sources with a nationwide scope. It is the result of work in three parts.

First, we hand-coded data on territorial presence found in over 60 documents from 11 sources, including Mexican and U.S. government agencies, specialized sources, and experts. We selected our sources carefully to set a uniform standard for inclusion of OCGs and minimize sources of bias. Then we extracted all of the relevant data points from those documents, including the names of the groups, factions, or cells involved; the territory in which they were reported to be present; how that presence was characterized (activities, level of influence in illegal markets, etc.); and the relevant period.

Second, we carried out supporting research to identify unique groups and track their composition and evolution through time. This was necessary to organize the "raw" data extracted from our sources, which included 290 unique group names, many of which referred to the same core group, factions of a larger group, or a conglomeration of independent groups.

Finally, we transformed our raw dataset into one with uniform and stable group names and four categories of presence intensity (none, minor, significant, major) and used this "cleaned" data to fill in monthly time series for every group present in each state.

2 Scope

This dataset reflects the collective knowledge contained in the sources we chose. We deliberately collected only systematic sources containing nationwide OCG data, which excludes sources that focus on a specific region, state, or group. This was done to avoid imbalance in tracking OCG presence across regions. From a base set of documents from official and specialized sources, we coded and organized the information contained in them. This "top-down" approach contrasts with "bottom-up" alternatives such as producing histories for each state or for each OCG and then combining them into a national dataset.

An implication of this approach is that the groups included in this dataset are those that were large, relevant, or cohesive enough to be mentioned by our sources. Because we used only sources that provided snapshots of OCG presence for all states, regions, or municipalities in Mexico, some local groups important in their areas of operations—and thus potentially important for understanding local crime and violence dynamics—are excluded.

However, this effort involved more than simply combining pre-existing information, as sources varied in the type and quality of information they provided. Some sources contradicted each other; some sources were more reliable than others; the collection of data points left some gaps; and group names were not uniform. Thus, while the panel data is based on the sources we collected and processed, the dataset is also the result of significant background research that assured that the information from our sources was processed as accurately as possible.

We encourage users of this data to read on and learn what is contained in this database, how we conceptualized and operationalized our variables, and what rules we followed to address data gaps and uncertainty.

3 Document collection

We sought to process all documents (reports, articles, maps, tables, charts) from official and expert sources that provided *systematic* information on the presence of OCGs in Mexico from 2006 to 2016.[1] By "systematic" we mean that the documents provided information on criminal group presence for all groups (of some type) and for the entire country. For example, we did not code documents that focused on a single group or region. We did this for two reasons. First, to constrain the scope of this first output of the Mapping Criminal Organizations project, providing an initial reference dataset while working toward more exhaustive future mapping. Second, for balance: to ensure that variation in identified group presence was not caused by differences in data collection efforts across territories or groups.

We collected documents from two types of sources: U.S. and Mexican government agencies and non-government specialists or news media. There were 11 sources in total, from which we collected over 60 documents. The rest of this section describes the sources briefly; Appendix A provides the full list of documents.

From the Mexican government, we processed all reports listing drug trafficking groups and their presence at the state level shared by the attorney general's office (PGR)[2] and the Federal Police in response to

[1] Though our dataset runs from 2007 to 2015, we processed information from 2006 and 2016 to provide a clearer picture of the organized criminal landscape at the beginning of 2007 and the end of 2015.
[2] Procuraduría General de la República (PGR), now called Fiscalía General de la República (FGR).

freedom of information requests. To track them down, we carried out systematic searches of responses to information requests on the relevant portal.[3] There were eight unique reports from 2007 to 2015, though some were delivered multiple times by the PGR (and sometimes incorrectly reported by the press as new or updated information). Additionally, we processed a report published by the security cabinet and two reports that cited federal government sources.

From the U.S. government, we collected all of the Drug Enforcement Administration's *Drug Threat Assessment Summary* reports; all press charts referring to Mexican OCGs published several times per year by the Treasury's Office of Foreign Assets Control; all quasi-annual Congressional Research Service reports on Mexico's drug trafficking organizations; and a few internal Department of Homeland Security or Department of Justice reports that we found through searches of publicintelligence.net and wikileaks.org.

The expert and news sources we consulted synthesized official and open source reports to provide snapshots of Mexican OCG presence at the national level. They included all of Stratfor's quarterly and annual Mexican drug cartel updates, two surveys from organized crime expert Eduardo Guerrero Gutierrez, and one investigative news article with a national overview based on government sources and its own archives.

We identified several other maps and reports that provided comprehensive lists of OCGs and their areas of operations over our period of interest but contained no original data, as they simply compiled or replicated the unique sources that we had already processed.

Our background research also found that some sources appeared to be more reliable than others, so we did not place equal weight on all of them. We discuss this issue in Section 6.

4 Document processing

We coded a uniform set of information on each document: name and location, date of publication, period through which data is updated, groups and geographical units covered, unique ID, and comments on context, origins, and quality.

We next processed the information provided by the document by coding information on each "data points" on criminal group presence: the mention of presence of some criminal group in a certain period and location. This was our "raw" dataset. We coded the following fields:

- **Source ID**. A unique code linking each data point to its source document.
- **Data point ID**. A unique code for future tracking and cross-referencing.
- **Name.** Group name, faction name, and/or individual name as provided by the source (up to three fields). Individuals' names were provided only if they were potentially relevant for distinguishing between OCG factions.
- **Period.** Dates during which the group was reported to be present, by year and month if available. When the data points were snapshots in time, the period was simply the month for which the information was current. When the starting and ending dates were unclear, we coded the months that were "certain" and left the others open-ended (unknown start or unknown end). When the language referred to "historical" or "long-established" presence, we automatically assigned the period to the previous three years plus open-ended possible earlier presence. Importantly, when processing regularly published documents

[3] Plataforma Nacional de Transparencia (National Transparency Platform): www.plataformadetransparencia.org.mx.

from one source, we compared sequential documents to "connect" two periods when appropriate, thus providing a continuous period of presence instead of two snapshots.[4]

- **Location**. The state, region, municipality, and/or locality in which the group was reported to be present (four fields).
- **Type**. The strength or intensity of presence, and/or the group's relative position, usually using the source's own characterization. Examples of how a group's presence in a territory could be characterized include "base", "contender for control", "dominant", "minor operations", "area of influence", etc. Our coding rules provided for uncertainty ("at least" or "at most" some level of strength, or a range) or dealing with reported changes in strength during a period without information on exactly when the changes in levels occurred (e.g. "Group A went from being a minor player in this state in early 2012 to a dominant force by the time its leader was arrested").
- **Flag.** An indicator for whether the coder believes that the information is flawed or uncertain for any reason.
- **Comments.** An obligatory field to explain coding decisions, provide the relevant quotes and data location of information, and explain any "raised flags".

When coders encountered a common piece of information for multiple groups or factions or for multiple locations, the names or locations could be included in the same line (listed in the relevant field separated by commas).[5] There were almost 2,000 such lines that would eventually be expanded into 3,676 unique group-place-period data points.

Additional variables that were coded but not used to create this panel were the group's activities and whether the data point was reported owing to a violent event. This information will support future analysis.

Multiple principal investigators and research assistants coded the information. To ensure quality and uniformity, coders followed a common set of documented guidelines, and Patrick Signoret reviewed all data points.

5 Supporting work

Before producing the final panels, we carried out supporting research and work to organize the "raw" data.

Group names

Transforming the "raw" data points into clean panel data required extensive supporting research. Our raw set of 2006–2016 data points produced 290 unique combinations of group and faction names. Some group names were coded in periods in which they were factions of larger group; conversely, some groups were reported as factions of another but were actually no longer affiliated to that group (often because the broader group was no longer a single cohesive organization). Some groups changed names.

We therefore carried out what we call "group mapping" (as opposed to "territorial mapping"): investigating the origin, evolution, and affiliation of groups or factions to produce a unique set of named groups and

[4] For example, if a report has the Gulf Cartel present in Tamaulipas in December 2008 and an updated report one year later also has the Gulf Cartel present in the same state in December 2009 (with no additional information provided), then we assume that the same group was present continuously from December 2008 to December 2009. This helped transform our data points into full panel datasets.

[5] Strictly, then, data point IDs may refer to multiple groups or multiple places (but otherwise identical information).

establish when groups and factions were independent rather than part of another group. Using the raw dataset as an initial reference, we drew on a variety of resources including news archives, investigative magazines, websites and blogs focusing on Mexican OCGs, interviews with experts, and our own field work. All decisions and references are documented. We ended up recognizing and providing stable names to 38 groups that we deemed autonomous at some point between 2007 and 2015. Examples and illustrations of this research are provided in Appendix B; the list of 38 groups is in Appendix C.

Type of presence

Our raw dataset contained 86 unique labels for groups' position in a territory (in addition to "none"). We collapsed all positive presence into three categories: "minor", "significant", and "major". For a given territory and time period, we define and operationalize those categories as follows:

Minor. The group entered the territory occasionally without being based there or having recurring operations, or having recurring operations in only a relatively small part of the territory or small segment of illegal markets. There were relatively few characterizations in our source documents that we directly classified as "minor" presence. Examples include: "limited presence"; "a shadow of its former self"; "minimal levels of narcotics smuggling"; "associates are known to travel to and from Tijuana to train their allies". Much more frequent was conservative coding on our part of "*at least* minor". Examples of such situations: "has largely lost control of the area"; maps that painted a group as present in only small parts of a state; presence of a business alleged by the U.S. Treasury to launder money for a group.

Significant. The group has regular presence and activities in the territory but is neither dominant in nor in contention for control of criminal markets, or it is but criminal markets are relatively minor (no major drug market segments, fuel pipelines, extortion markets, etc.). Groups that assign members dedicated to the territory (a "head of *plaza*"), who have safe houses and other bases of operations, who have members regularly arrested in the territory, or who carry out violence and leave messages in public spaces have at least significant presence. Characterizations in our source documents that we directly coded as "significant" presence include: labelled as having "significant or increasing presence" in DEA maps; "area of influence"; participation in violent disputes without contending for control; "appeared on the scene"; "pays [other group] for access to the territory". To distinguish between groups with different strengths in a territory, we also code as "significant" (rather than "major") groups that are in contention for control of the territory—at war against a rival—but are characterized as the weaker party. And here, too, we frequently coded presence as "*at least* significant" when we were unsure whether the presence was "major". Examples of such situations: labelled as the organization with operations or influence in a territory in DEA, PGR, or Stratfor maps; labelled as having "substantial" presence; reported to have a person in charge of operations in the territory.

Major. The group is one of the area's main criminal actors, either dominant or a strong contender for control. Groups that have multiple levels of hierarchy in a territory, who are at war against rivals for control of criminal markets (but are not described as the relatively weak party), and who are described as firmly established or based in a territory are coded as having "major" presence. Examples of characterizations in our source documents that we directly coded as "major" presence: "The Sinaloa Federation has apparently made progress toward extending its control over the lucrative Tijuana, Baja California region"; "Acapulco is the traditional operating territory of Cartel del Pacífico Sur"; "the Zetas are entrenched in Monterrey";

"The Gulf cartel has managed to hold Matamoros despite several large offensives"; "its center of operations remains in Zacatecas, Coahuila, and San Luis Potosí".

As suggested above, we were often uncertain about groups' exact position for any given data point. Thus, almost half of our data points are coded to account for this uncertainty, documenting a minimum level of strength (e.g. at least significant), a maximum level of strength (e.g. at most major), a range (e.g. either minor or significant, not major), or a change in strength during the period (e.g. from minor to major). The idea is that the information about which we're uncertain can be combined with other data to obtain a clearer picture. To provide a simple example, if one source suggested that presence was at least significant and another suggested that it was at most significant, we can code "significant" presence with confidence.

Reclassified and organized data points

An R script imported the raw data points file, expanded all lines that listed multiple groups or states to have unique observations per group-state data point, used auxiliary tables documenting our group mapping and type of presence categories to recode those fields, attached information on the source document of each data point, then produced 32 final data files, one for each state, organized by group and period. These would be used to produce the final panels that coded each group's presence in all states in which it was potentially present for all months from 2007 to 2015.

6 Final coding and panels

The final step was to produce the full monthly panels of over 16,000 state-group-month observations corresponding to 260 state-group observations.[6] We proceeded methodically by considering all of the state's data points for a given group to determine in which months the group was present in the state and what was the level of presence in those months. To address data gaps and uncertainty with minimal arbitrariness, we set uniform guidelines and coded alternative values when needed. To ensure consistency, only principal investigators Marco Alcocer and Patrick Signoret carried out the coding, and Signoret reviewed all decisions.

Addressing data gaps and uncertainty

In an ideal world, data points would be spread across the entire period of a group's presence in a state, and multiple sources would complement each other to produce consensus decisions on statewide group presence and intensity. This was the case for many observations. For many others, however, we faced four problems: (a) some sources proved to be unreliable; (b) many data points were snapshots in a moment in time or were censored (at the date of publication of the source document), leaving some periods blank and starting/ending dates uncertain; (c) some data points referred not to statewide presence, but rather to presence within a specific region or city; (d) even after addressing the previous three issues, there remained some periods in which a group's level of presence in a state remained uncertain owing to scarce or contradictory data points. We discuss each of these problems and our solutions in turn below.

[6] This includes only state-group combinations for which there was at least one data point suggesting presence of a group in the state during the period (though sometimes we concluded that there was not enough information to confirm that presence in any month). For each state-group combination, only months for which the group existed were included (thus the panel's observations for Los Zetas begin in January 2010, the first month that we track that group separately from the Gulf Cartel).

Unreliable sources

Section 3 describes the origin of our source documents and alludes to the fact that we rejected documents owing to outdated or repeated data. Even among those that we kept, it gradually became clear that some included questionable or outdated information. During our group mapping, for example, we learned that anything that might have been called the "La Barbie" organization disappeared as a cohesive group after its leader and then his successor were arrested in late 2010. However, the PGR's list of drug trafficking organizations dated March 2013 names that group as active. That made us uncertain not only about the period of validity of the information in that report, but also of that agency's 2014 and 2015 reports. There were several instances in other source documents in which either the period of validity of the information was uncertain or the very existence of a group in a state was in question.

To address this problem we documented our concerns, flagged unreliable sources, and wrote guidelines for dealing uniformly with certain sources. For example, to determine how much confidence to place in the dates of one PGR report, we checked to see whether the same group-state was reported in the next report. Thus, if the PGR reported the presence of the BLO in Morelos in March 2013 and again in May 2014, we'd be more confident that it was present in March 2013 though still uncertain whether it was still present all the way through May 2014. We applied similar rules to weigh the information found in DEA maps and other sources. Some sources proved to be so doubtful that we used their data points only to corroborate others but never on their own.[7]

Snapshots and censored dates

Snapshot data points are those for which we had only a single month—the moment in which a source document reported presence. Censored data points are those in which the ending periods was unknown because the information was interrupted at the moment of publication of the source document. (Most snapshots—and most data points, for that matter—were censored.) This left many periods with no information on presence. Of course, if a group was reported present in two snapshots two months apart, it would be reasonable to impute the presence of that group in the empty middle month.[8] And if a group was present at the time that the source reported it to be so, it would be reasonable to think that the group was likely also present the following month. But what about two, three, or six months in between snapshots or after a censored date? We can't know, of course. Our approach was to set reasonable, uniform rules for all such cases. The two rules are as follows:

- When a data point is a snapshot, assume that the presence began at least three months earlier and continued at least two months later (for a total of six months).
- When a data point is censored, assume that the presence continued for at least two subsequent months.

[7] The sources we had least faith in were the Federal Police responses to freedom of information requests (provided seemingly outdated information) and the *Crónica* 2015 article citing PGR sources (referred to OCGs that weren't confirmed to have existed in other sources). Two sources were trustworthy but seemed to pool information from several years, leaving us uncertain about the precise period: Eduardo Guerrero 2010 and *Zeta Tijuana* 2012. See Appendix A for detail on these sources.

[8] Inasmuch as groups are most visible and most likely to be reported as present when they are involved in violent acts, imputing presence in between two periods of reported presence is one way to reduce the "violence-presence" bias. Of course, the group might actually have been absent in the period between the two known dates of presence; we must interpret such imputed data as what they are: educated guesses.

To be clear, those rules allowed us to expand our data points. However, those new data points were not automatically coded as confirmed presence; that was only done after considering what other sources did (or did not) report in the same period.

Local rather than statewide data

Because this dataset's geographical units are states, we required a rule for processing data points referring to local areas within states, such as a municipality or region. We decided on a simple process of "demoting" a group's presence when its presence was limited to a local area of the state. Whatever strength of presence was determined for a group in a certain local territory, that level would be lowered one notch when translated to statewide presence. For example, a criminal group with "major" presence in the city of Acapulco but nowhere else in the state of Guerrero would be coded as having "significant" presence at the state level. Exceptions were made and documented for sub-state regions that represented a major portion of the state, or at least of its organized criminal activity. For example, whatever strength of presence was determined for an OCG in the Monterrey metropolitan area, home to 90% of Nuevo Leon state's population, was assigned to the entire state.

Remaining uncertainty

Even after setting rules to address data quality and gaps, there were still instances in which the existence or strength of presence of a group was in question in some state and period. For those observations we coded two values: the conservative position (leaning toward weaker presence) in the main column and the liberal position (leaning toward stronger presence) in an alternative column. The V1.0 dataset and accompanying maps on the website are based on the main, conservative coding.[9] Four examples are illustrative:

(1) Data points on a group from one reliable source point to minor presence in some period, while data points from another reliable source suggest significant presence. We code main type 1 and alternative type 2.
(2) A reliable source reports the significant presence of one group but other reliable sources that cover the same period (and group) do not. Because our coding implicitly interprets the absence of evidence as the evidence of absence, what we find is a contradiction between reports of zero presence versus positive presence. Depending on other context, we code main type 0 or 1 and alternative type 2.
(3) Multiple sources provide data points that suggest at least significant presence, but none is more specific. We code main type 2 and alternative type 3.
(4) Data points about a group in some state are scant, with one cluster of points confirming presence in one year and another cluster confirming presence two years later, with uncertainty about their presence in between. Our main coding sticks strictly to what the source documents (do not) say and has a gap in the year in between, while our alternative coding assumes that presence was continuous throughout the period (though perhaps weaker in the middle year).

[9] There is alternative coding in 23% of all group-state-month observations, or 38% of observations where some presence detected. Note that this main/alternative coding rule is not the same as coding based on our judgement of what is more/less likely. In some cases, we judged that it was more likely that a group had "major" rather than "significant" presence in a state, yet our main coding was "significant" because that was the conservative possibility. The reason for this rule is two-fold: first, the uniform rule removes a layer of arbitrariness in our decision making, especially for borderline cases; second, it will allow researchers to compare results between a clearly more conservative and more liberal dataset rather than between a central dataset and another one with "noise" (alternative coding) going in both directions.

Final products

The main product of State Panel V1.0 is a dataset with 16,244 state-group-month observations, where, for each state, only the groups for which there were any "raw" data points suggesting presence were included and, for each group, only the months during which the group existed independently (anywhere in Mexico) were included. The file includes the following variables:

- **state_code:** State code (official code according to the national statistics office, Inegi).
- **state_name:** Full state name.
- **group:** Abbreviation for name of group as best identified in the period (key provided in Appendix C).
- **group_stable:** Abbreviation for name assigned to "core" group, a way to track groups across time even when their name changed or splinter groups broke off (examples and full names in Appendices B–C).
- **year, month, date:** Date variables.
- **type:** Position/type/level of presence (main coding).
- **type_alt:** Position/type/level of presence (alternative coding).

(Note: The website's visualizations use "core" group names (*group_stable*) and conservative coding (*type*). They are quarterly, where group presence type is the maximum monthly level observed during the quarter.)

7 About MCO

The Mapping Criminal Organizations project (MCO) addresses an obstacle in the analysis of organized crime and criminal violence: the lack of high-quality, publicly available data on key attributes of organized criminal groups, including their origins, structure, where they operate, and their alliances and rivalries with one another.

Realizing that tracking organized criminal groups is an inevitably complex endeavor, MCO combines methods and sources, from hand-coding data to scraping and processing entire archives using machine learning and natural language processing techniques, to collect and organize data at multiple levels. In its current stage, the project is producing five types of data:

- State-month data on presence (minor, significant, major), all states, based on hand coding.
- Municipality-year data on presence (minor, significant, major), some metropolitan areas, based on hand coding.
- Municipality-year data on presence, all municipalities, based on machine-aided data collection and classification.
- Group histories tracking the origin, composition, and evolution of criminal groups.
- Group dyad data on relationship status (allied, enemy) by period.

The Mapping Criminal Organizations project is led by four principal investigators: Patrick Signoret (founder and lead investigator), Fernanda Sobrino Macías, Marco Alcocer, and Cecilia Farfán Méndez.

The project is supported by the Center for U.S.–Mexican Studies at UCSD's School of Global Policy and Strategy, the Empirical Studies of Conflict Project, and the Data-Driven Social Science Initiative at

Princeton University. It has also received funding from the Mamdouha S. Bobst Center for Peace and Justice at Princeton University.

Read more about the project and its team at www.mexicocrimemaps.org/about.

Appendix A: Source documents

The total number of documents processed for this dataset is 59 plus the U.S Treasury OFAC press charts. If we count all the OFAC charts as one document, the total is 60. If we count each one individually, the total number of documents is 106. The table below lists the documents and their origins.

Many other sources were considered and inspected but either contained no new information or contained no location information at all. This includes, for example, the *National Drug Threat Assessment* reports for 2007–2014 and multiple "cartel maps" published in open sources that used outdated information or redesigned existing maps.

Source	Documents
Mexico attorney general's office	Five responses from the attorney general's office (*Procuraduría General de la República*, PGR) to freedom of information requests asking for lists Mexico's drug trafficking organizations or major criminal groups and their areas of presence: • Report on 7 cartels. Response to folio 0001700012307 (responded 19 Feb 2007); information undated but refers to events at least through Jan 2007. • Report on 7 cartels. Response to folio 0001700108207 (responded 27 Jun 2007); information undated but refers to events at least through April 2007. • Report on 8 cartels and 80 cells. Document SJAI/DGAJ/5211/2013 related to folio 0001700001913 as published by *Contralínea* June 2013[10]; information dated 25 Mar 2013. Available directly from PNT through folio 0001700221713 (responded 22 Nov 2013). • Report on 9 cartels and 43 cells. Response to folio 0001700202114 (responded 12 Sep 2014); information dated May 2014. Same list provided at least nine additional times through March 2015 and reported as new by some newspapers. • Report on 9 cartels and 36 cells. Provided in response to over 50 of requests from July 2015 through at least 2018. First response found on the freedom of information platform is to folio 0001700240615 (responded 15 Sep 2015). Initial responses dated the information 30 Jun 2015. Future responses provided either no dates or later dates, but the documents were identical to those dated 30 Jun 2015. Information was reported as new by several newspapers at least through 2019. One news article on new drug trafficking organizations that cited PGR as its source: • "Operan siete nuevos cárteles en México", *Crónica* Aug 2015.[11] Specifically, the article cited a document from PGR's organized crime unit.[12]
Mexico public security ministry	One report by a research network citing three public safety ministry sources: • "Los principales cárteles. 2007-2009." Table 111 of *Atlas de la seguridad y la defensa de México 2009*, Casede (2009).[13] Three responses to freedom of information requests asking the Federal Police to list Mexico's drug trafficking organizations or major criminal groups and their areas of presence: • Report on 7 cartels by antidrug division. Response to folio 0413100069210 (responded 28 Dec 2010). Information undated; presented as current. • Report on 10 cartels by antidrug division. Response to folio 0413100010511 (responded 11 Feb 2011). Information undated; presented as current.

[10] Nancy Flores for *Contralínea*, "Los 89 cárteles que arrasan México", 2 June 2013. Online here.
[11] Daniel Blancas Madrigal for *Crónica*, "Operan siete nuevos cárteles en México", 17 August 2015. Online here.
[12] *Subprocuraduría Especializada en Investigación de Delincuencia Organizada* (SEIDO).
[13] Colectivo de Análisis de la Seguridad con Democracia A. C. (Casede). *Atlas…2009* was edited by Raúl Benítez Manaut, Abelardo Rodríguez Sumano, and Armando Rodríguez Luna. Online here.

Source	Documents
	• Report on 6 cartels by antidrug division. Response to folio 0413100082511 (responded 17 Jan 2012). Information undated; presented as current.
Mexico security cabinet	Federal government report on organized crime that a secondary source attributed to the security cabinet: • "Información sobre el fenómeno delictivo en México", August 2010.[14]
U.S. Drug Enforcement Administration	Two annual reports with Mexico OCG location information:[15] • 2015 National Drug Threat Assessment Summary. • 2016 National Drug Threat Assessment Summary. Six maps of Mexican cartels' areas of influence / dominant influence dated as follows: • May 2009, found in Congressional Research Service 2009 (see below). • April 2011, found in Michael Lauderdale UT Austin blog *Failed State*.[16] • May 2011, found in Congressional Research Service 2012 (see below). • January 2012, found in Congressional Research Service 2013 (see below). • September 2013, found in Congressional Research Service 2015 (see below). • April 2015, in DEA "Mexico: Updated Assessment of the Major Drug Trafficking Organizations' Areas of Dominant Control", July 2015. No longer on DEA site; saved by Public Intelligence here.
U.S. Department of Justice	One report by the National Drug Intelligence Center (NDIC): • "Mexican Drug Trafficking Organizations: Developments Impacting the United States." May 2010. Downloaded from Wikileaks Global Intelligence Files (the Stratfor archive) here.
U.S. Congressional Research Service	Seven reports on Mexican drug trafficking organizations, all authored by June S. Beittel: • "Mexico's Drug Cartels." October 16, 2007. Online here. • "Mexico's Drug-Related Violence." May 27, 2009. Online here. • "Mexico's Drug Trafficking Organizations: Source and Scope of the Rising Violence." September 7, 2011. Online here. • "Mexico's Drug Trafficking Organizations: Source and Scope of the Rising Violence." June 8, 2012. Online here. • "Mexico's Drug Trafficking Organizations: Source and Scope of the Rising Violence." April 15, 2013. Online here. • "Mexico: Organized Crime and Drug Trafficking Organizations." July 22, 2015. Online here. • "Mexico: Organized Crime and Drug Trafficking Organizations." April 25, 2017. Online here. Though published in 2017, included updates that allowed us to extend information from the July 2015 report through the end of 2015. (There was no 2016 report.) All reports were authored by June S. Beittel. Some of these reports contained DEA maps of cartel presence that were not available elsewhere. We distinguish between those maps (listed in the DEA section above) and the content found in the rest of these reports, which was based on open sources and interviews.
U.S. Department of Homeland Security	Two reports containing maps of Mexico OCG territories: • "Mexico: The Sinaloa Drug Cartel." October 28, 2010. Online via Public Intelligence here. Despite its focus on one cartel, the report contains a map of all cartels' presence. • "Mexico: Cross-Border Gangs and their Mexican Drug Cartel Affiliations." December 2011. Online via Public Intelligence here.
U.S. Treasury	Multiple office of Foreign Assets Control (OFAC) press charts:[17]

[14] Government report archived online here. Referenced by Jorge Ramos for *El Universal*, "Gobierno revela mapa de guerra entre cárteles", 28 Aug 2010 (online here).
[15] The 2007–2014 *National Drug Threat Assessments* contain no information on Mexican OCG presence in Mexico.
[16] April 4, 2012 blog post by Michael Lauderdale titled "Austin from a Different Perspective" containing the article "Mexican Drug Cartel Influence in Austin, Texas", by Gregory Thrash, which included the DEA April 2011 map (not found elsewhere). Online here and archived here.
[17] New OFAC press charts online here. Current press chart archive (2011–2018) online here. Original archive (2002–2017) is no longer available on the U.S. Treasury site but is archived here.

Source	Documents
	• 47 OFAC press charts on Mexican groups from 2006 to 2016 that contained location information. (An additional 26 charts had no territory data but supported our qualitative research on group structures and affiliations.) These are the charts that accompany press releases announcing kingpin sanctions on "significant narcotics traffickers". They provide information on the players in and structures of such trafficking organizations, including the locations of businesses they allegedly use to launder money.
Stratfor	27 annual and quarterly reports by consultancy Stratfor, variously titled "Mexican Drug Cartels", "Mexican Drug War Update", or "Mexico's Drug War". • Annual reports 2008–2016. • Mid-year update in 2010 and quarterly updates from 2011 to 2015. • Annual reports 2017–2019, which contained some data points that covered the 2007–2015 period. These reports were based on open sources and include 10 distinct maps of cartel territories through 2014. Stratfor tracked Mexican OCGs closely during most of this period, including through weekly updates for its subscribers.
Zeta Tijuana	One article by investigative news magazine *Zeta Tijuana* providing a national overview based on a combination of government sources and its own archives: • "28 carteles en México". *Zeta Tijuana*, Jan 2012. Archived online here.
Eduardo Guerrero / Lantia Intelligence	Two reports by Mexican organized crime expert Eduardo Guerrero Gutiérrez, co-founder of Lantia Intelligence, based on systematic tracking of open sources from 2007 to 2011: • "Los hoyos negros de la estrategia contra el narco." *Nexos* August 2010. Online here. • ""Security, Drugs, and Violence in Mexico: A Survey." *Lantia Consultores*, prepared for the 7th North American Forum, Washington DC 2011. Online here.

Appendix B: Group mapping examples

Section 5 describes the supporting "group mapping" research that we carried out to investigate the origin, evolution, and affiliation of groups or factions to produce a unique set of named groups and establish when groups and factions were independent rather than part of another group. This appendix provides two examples.

Example: Gulf Cartel

In the late 1990s, the Gulf Cartel created a group of enforcers called Los Zetas. After 2003, when top boss Osiel Cárdenas Guillén was arrested, and especially after 2007, when he was extradited to the United States, the Zetas grew increasingly strong and autonomous. From 2007 to 2009, some sources referred to the joint organization as "Golfo-Zetas" rather than just "Golfo", and others considered the Gulf and Zetas groups independent—and increasingly tense—allies. By January 2010, they were outright enemies, never to reunite under one boss again. We decided to consider the Gulf Cartel to be "whole" through 2009, still considering Zetas a faction and conceiving of any conflict between Golfo and Zetas in this period as internal rather than inter-group. Starting in 2010, we coded them separately. Our pre-2010 decision owed largely to a key practical consideration: few sources distinguished between Golfo and Zetas presence.

Over the following three years, the Gulf Cartel came under severe strain from its war against the Zetas and by repeated arrests or deaths of its leaders, and internal tensions again reached a breaking point. We consider Mario Ramírez ("X-20" or "El Pelón") to be the last individual that had any plausible claim as boss of all Gulf Cartel factions. After his arrest in August 2013, various factions continued to claim the Gulf Cartel mantle and to use its name—and various sources to this day continue to refer to "the Gulf Cartel" as a single

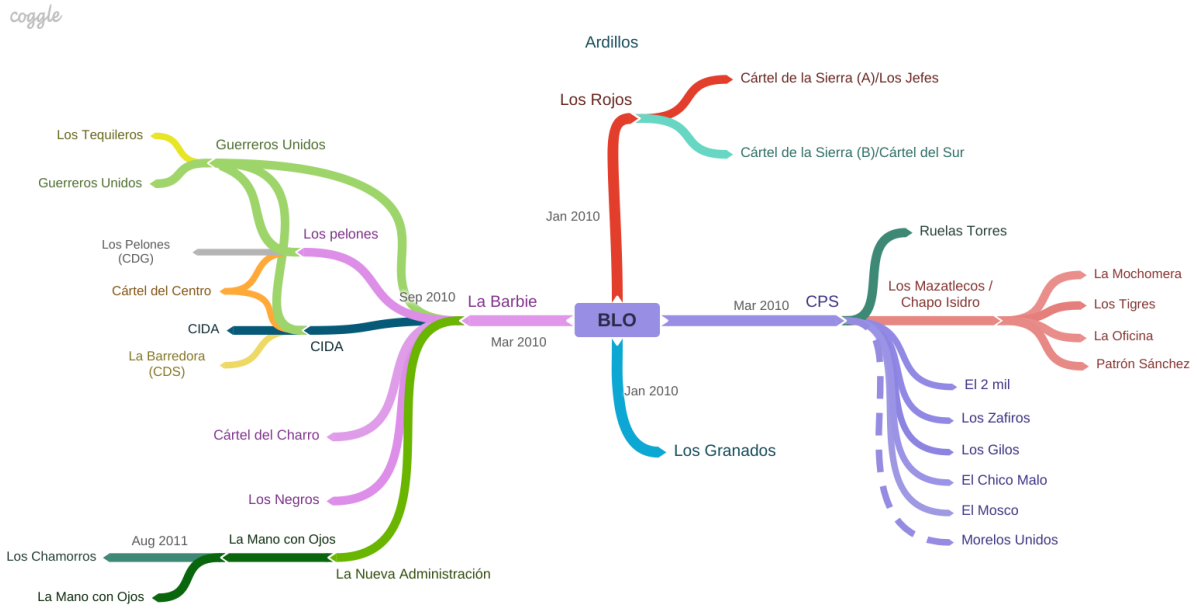
group. We, instead, consider the Gulf Cartel to be extinct since September 2013, split up into various independent successor groups.

Meanwhile, the Zetas suffered their own fragmentation, having the "Talibanes" faction break off in 2012 and then splitting into two in March 2015, with the Treviño / Nuevo Laredo faction calling itself "Cartel del Noreste" and other factions eventually adopting the name "Old School Zetas" (Zetas Vieja Escuela). We treat the "Old School" faction as the core, rump group, and thus combine mentions of "Zetas" or "Zetas Vieja Escuela" under the *stable_group* abbreviation "zetas".

Example: Beltrán Leyva Organization

Before 2008, the Beltran Leyva brothers were so closely associated with Joaquín Guzmán ("El Chapo") and Ismael Zambada ("El Mayo") that the entire conglomerate was considered one organization (called the Sinaloa Cartel or the Pacific Cartel, among other names). Internal problems led the Beltrán Leyva Organization (BLO) to split off violently—we consider it to be an autonomous group starting in February 2008. After the Mexican Navy killed top boss Arturo Beltrán Leyva in December 2009, the group began to disintegrate. We consider the "core" group to have continued under Arturo's brother, Héctor Beltrán Leyva, under the name "Cartel del Pacífico Sur", and then to have survived (and continued to be referred as BLO) as a conglomeration of Los Mazatlecos, the Patron Sanchez ("H2") family, and enterprises linked to Fausto Isidro Meza Flores ("El Chapo Isidro"), all of which we combine under the abbreviated name "Mazatlecos-Meza-Flores".

Meanwhile, former factions of the BLO went off on their own, and some split into even more factions. The following chart summarizes our understanding of the Beltrán Leyva Organization's evolution after 2009.



Notes: (a) Each independent group has a different branch color. (b) Cells of a group have the same color of the upper organization they belong to. (c) We use a dotted line when, given the information found, we are not confident enough to conclude the group belonged to the upper one. (d) When a splinter group joined another organization after splitting-off, we add this name in parentheses.

Appendix C: The 38 groups

The following are the 38 "core" organized criminal groups that we recognize in State Panel V1.

Full name	Abbreviation	Notes
Arellano Felix Organization	afo	Also known as Tijuana Cartel.
Los Teos	teo	Faction of AFO that we consider independent starting Apr 2008.
Remnants of AFO	afo-remnants	Remnants of AFO (no specific name identified).
Cartel de Sinaloa	cds	Sinaloa Cartel (CDS by its Spanish acryonym). Also known as Cartel del Pacifico.
Cartel del Poniente	poniente	Faction of CDS that we consider independent starting Jan 2011. Also known by the names "Los Dannys", "Los Bardales", "Cartel de La Laguna", and "Cartel de Occidente".
Remnants of CDS	cds-remnants	Remnants of CDS (no specific name identified).
Beltran Leyva Organization	blo	Begins as independent organization starting Feb 2008, following split from Sinaloa Cartel. After further fragmentation in 2010, this is the rump group led by Héctor Beltrán Leyva (for a time going by the name Cartel del Pacifico Sur). After Beltrán Leyva's arrest in October 2014, we deem the core of the group to have survived as a conglomeration of Los Mazatlecos, the Patron Sanchez (H2) family, and enterprises linked to the Meza Flores (Chapo Isidro) family (Mazatlecos-Meza-Flores, *mmf*).
Los Granados	granados	Faction of BLO that we consider independent after Dec 2009.
Guerreros Unidos	guerreros	Faction of BLO that we consider independent since 2010 or 2011.
Los Rojos (BLO)	rojos-blo	Faction of BLO that we consider independent since Jan 2010.
Remnants of BLO	blo-remnants	Remnants of BLO not belonging to other named successors of BLO.
La Barbie	barbie	Organization of Edgar Valdez Villarreal, who worked for CDS, then BLO, then split from BLO in Mar 2010. Recognizable group with that name (and, briefly, the name "Cartel del Charro") lasted until Nov 2010.
Cartel Independiente de Acapulco	cida	Faction of the La Barbie group that we recognize as independent starting Dec 2010.
La Mano con Ojos	mano	Faction of the La Barbie group that we recognize as independent starting Sep 2010.
Los Pelones	pelones	Faction of La Barbie that we consider independent starting Sep 2010 and probably broke up into independent branches.
La Barbie remnants	barbie-remnants	Remnants of the Barbie group after Nov 2010 different from those named elsewhere in our dataset.
Cartel del Milenio	milenio	Also known as "Cartel de Los Valencia". We treat as independent until it broke up in Jul 2010, though some think it had previously been subsumed under CDS.
La Resistencia	resistencia	One of two main successor remnants of Milenio starting Aug 2010.
Cartel Jalisco Nueva Generacion	jng	One of two main successor remnants of Milenio starting Aug 2010. Initial membership may have also included former CDS hitmen "Matazetas". We also treat "Los Cuinis" as part of CJNG, though some think they are closely allied but distinct organizations.
La Familia Michoacana (pre-2011) / Los Caballeros Templarios (post-2010)	familia-templarios	The group known as La Familia Michoacana until 2010 and Los Caballeros Templarios after the group split in Jan 2011. The bulk of the original La Familia group changed names—that's why we consider it the core group even though the other faction retained the "La Familia" name.

Full name	Abbreviation	Notes
Los Viagras	viagras	Group originally part La Familia, then Los Templarios, then split from Templarios some time in 2013.
Remnants of Templarios	templarios-remnants	Remnants of Templarios (no specific name identified).
La Familia Michoacana (post 2010)	familia-familia	The smaller of the pieces of La Familia that was left after the 2011 split and which retained the "Familia" name.
Cartel del Golfo	golfo	Gulf Cartel (CDG by its Spanish acronym), of which Los Zetas was a faction until 2009. We treat CDG as a plausibly cohesive organization until Aug 2013, then as split into rival factions that each continued to use the CDG name but were not led by a single boss or committee.
Los Metros (CDG)	golfo-metros	One of two major factions of CDG, which we consider independent starting Sep 2013. Also known as the Reynosa CDG.
Los Rojos (CDG)	golfo-rojos	One of two major factions of CDG, which we consider independent starting Sep 2013. Also known as the Matamoros CDG. During our time horizon, includes factions related to the Cardenas family, Los Ciclones, and Los Escorpiones. Not to be confused with the Los Rojos group that originated in BLO and was based in Guerrero.
Los Dragones (CDG)	golfo-dragones	A smaller successor faction of CDG active in Tampico, Tamaulipas for some time.
Golfo Sur (CDG)	golfo-sur	A smaller successor faction of CDG sometimes referred to as the "Tampico" or "CDG Sur" faction that succeeded or included "Los Fresitas" and, confusingly, also sometimes called itself "Los Rojos".
Remnants of CDG	golfo-remnants	Remnants of CDG not belonging to other named successors of CDG.
Los Zetas	zetas	Former enforcer arm of CDG that we consider independent since Jan 2010. After a major split in March 2015, we treat the rump group that continued to call itself "Los Zetas", then "Zetas Vieja Escuela" (*zve*), as the core group.
Los Talibanes	talibanes	Faction of Zetas associated with the Velazquez Caballero brothers that we consider independent since Jul 2011. The group, or some of its associates, also used the names "Sangre Zeta", "Los Legionarios", and "Los Hijos del Diablo".
Cartel del Noreste	cdn	Name of the group associated with the Treviño brothers and the city of Nuevo Laredo that split from Zetas starting Apr 2015 and branded themselves "Northeast Cartel".
Cartel de Juarez	juarez	Also known as the Carrillo Fuentes organization. In our time horizon, included faction called "La Linea".
Cartel de Colima	colima	Also known as the Amezcua Contreras organization.
Cartel de Oaxaca	oaxaca	Also known as the Diaz Parada organization.
Los Ardillos	ardillos	Group that we consider independent throughout our time horizon, though some link it to BLO.
Gente Nueva del Sur	gente-nueva-sur	A group reported to be present in southeastern states starting in 2014, characterized as independent.
Other	other	Other presumably independent groups not named by our sources.