

Methodology

The Global Organized Crime Index (henceforth 'the Index') is based on an expert-led assessment of two main components – criminality and resilience to organized crime. The current iteration, the 2025 Index, reflects crime-resilience dynamics as captured throughout 2024.

The following document outlines the detailed methodology of the Index and supplements the Index report.

1. Index model

Modelling an index on organized crime is no easy feat. The inherently clandestine nature of illicit economies, with their ever-changing forms and environments, and the nebulous concept of organized crime itself carry the risk of the Index becoming an overly complex analytical tool. At the same time, oversimplifying the Index would risk sacrificing the kind of nuanced analysis needed to inform stakeholders of the conditions within their countries and help guide them in developing effective strategies to combat organized crime.

With this in mind, the Index is based on three constituent elements:

- The scope, scale and impact of specific criminal markets.
- The structure and influence of criminal actors.
- The existence and capacity of countries' resilience measures against organized crime.

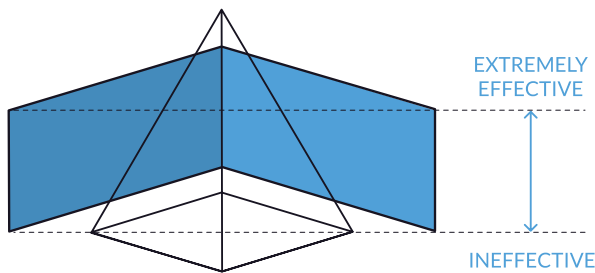
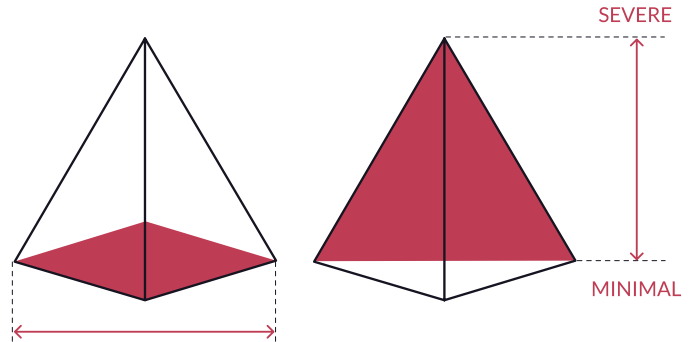
These are then used to assign each country a criminality score and a resilience score. Both components of the Index, criminality and resilience, are scored by experts based on data collected and research carried out by the Index team, as well as on their own knowledge and expertise.

All elements of each component and subcomponent were evenly weighted. While no explicit weightings were applied, implicit weighting does exist. For example, drug markets clearly predominate in the illicit economies considered in the criminality component of the Index, even though heroin, cocaine, cannabis and synthetic drugs are considered as independent illicit markets. Nevertheless, this majority does reflect the predominance of drugs in terms of value when compared to other criminal markets.

How to read the representations of this report

Pyramid width and height

The **criminal markets** score is represented by the pyramid base size and the **criminal actors** score is represented by the pyramid height on a scale ranging from 1 to 10.

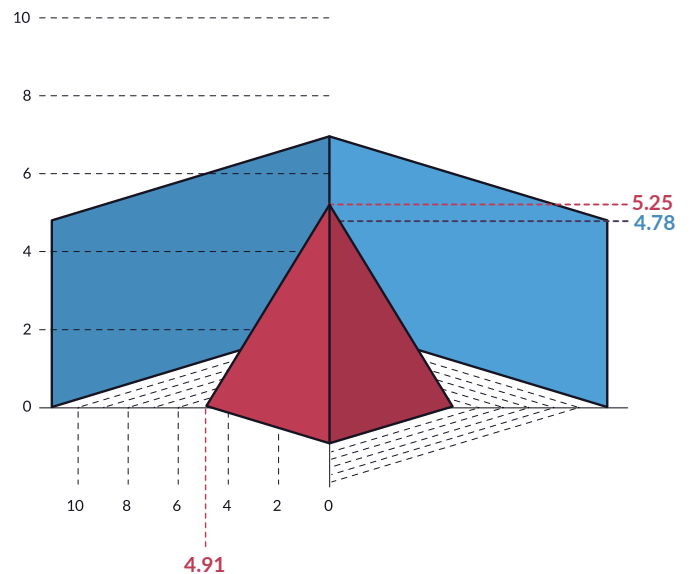


Panel height

The **resilience score** is represented by the panel height, which can be identified by the side of the panel.

Global average score

The pyramid shape represents the criminality score, the simple average of the criminal markets and criminal actors scores. The global **criminality** score is **5.08**, composed of the global **criminal markets** score of **4.91** and the global criminal actors score of **5.25**. The global **resilience** score is **4.78**.



Criminality score

The Global Organized Crime Index builds on the work of the 2019 ENACT Organised Crime Index for Africa. To determine which criminal markets to measure for the Index, ENACT (Enhancing Africa's response to transnational organized crime) drew on a knowledge base and identified illicit economies by balancing the availability of data with the feasibility of integration into a state-centric tool. However, for the 2023 iteration, in order to provide a more comprehensive tool, one that could better reflect the current organized crime climate, the spectrum of the criminality indicators covered by the Index was expanded. With that in mind, five additional markets were added to the original 10 as well as an additional criminal actor type.

All countries in the Index are assigned a criminality score, which comprises two subcomponents. The first reflects the prevalence of criminal markets. This subcomponent considers both the forms of organized crime as well as their scope, scale and impact, and classifies manifestations of crime within 15 illicit markets. If applicable, each crime type is disaggregated into sub-crime types or 'commodities' (i.e. their lowest denominator), under a commodity-based measurement framework. In assessing criminal markets, the Index considers both the value and reach of each market. While the value refers to the entire value chain (e.g. from income generated from the production of the commodity to profits earned selling finished products), reach may be thought of as the non-monetary impact of a criminal market – in other words, the level of pervasiveness that a particular illicit market has achieved in a society. The 'reach' of a market may be determined by a number of factors, including the number of people affected; the number or kinds of victims; the extent of illicit flows; the degree of violence involved in the market; and whether the commodity is in decline and/or renewable. The evaluation of both the value and reach of each criminal market is based on expert assessments and supplemented with information gathered during the data-collection period.

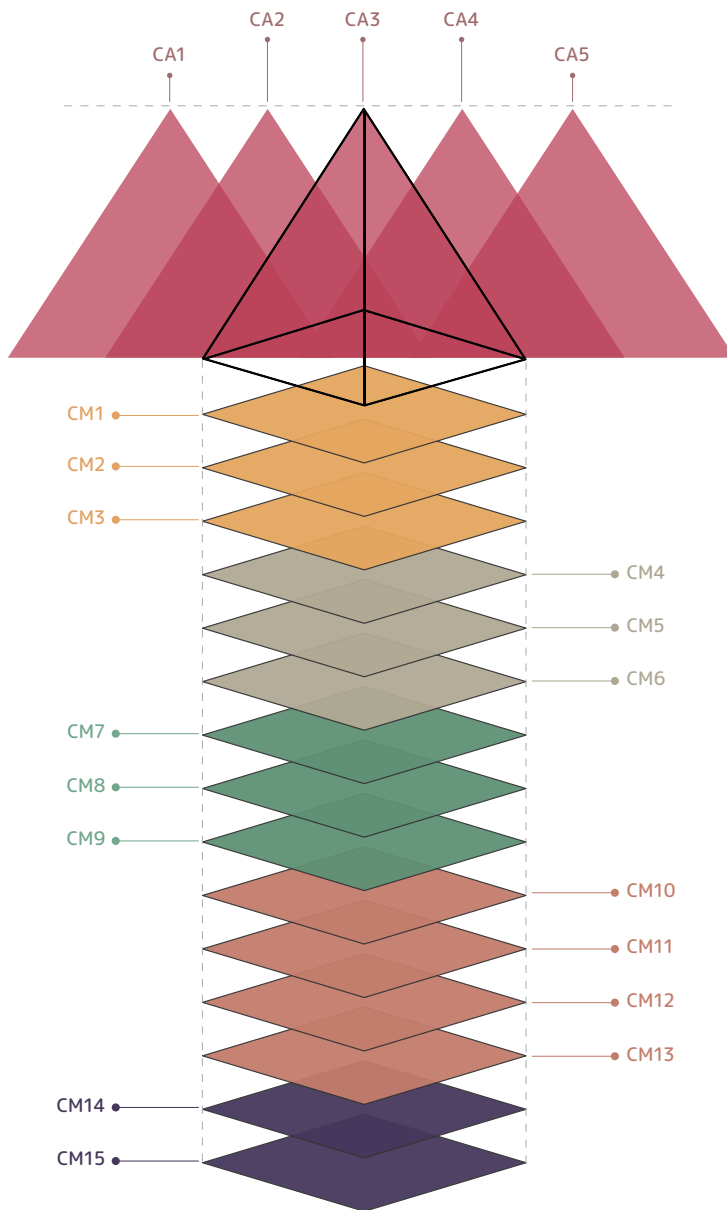
To focus solely on criminal markets, however, offers a limited lens through which to view the evolving organized crime landscape in a given country. The term 'organized' does not reflect the activity being undertaken, but rather the nature of the perpetrators. The other sub-component of the Index's criminality score is criminal actors. Criminal actors refer to the types or structural forms of criminal organizations and their influence in the political, economic and social spheres of the countries they operate in. The criminal actors sub-component comprises five criminal-actor types:

- Mafia-style groups
- Criminal networks
- State-embedded actors
- Foreign actors
- Private sector actors

Often, these categories are not always clear-cut or readily definable. Just as forms of illicit activity vary and adapt to changing social, security and economic landscapes, criminal actors may evolve, oscillating between modalities, routes, degrees of violence and commodities in pursuit of material benefit. For more detailed definitions and explanations, see Appendix 2.

FIGURE 1

Criminality indicators



CRIMINAL ACTORS

- ▲ **CA1.** Mafia-style groups
- ▲ **CA2.** Criminal networks
- ▲ **CA3.** State-embedded actors
- ▲ **CA4.** Foreign actors
- ▲ **CA5.** Private sector actors

CRIMINAL MARKETS

- ◆ **CM1.** Human trafficking
- ◆ **CM2.** Human smuggling
- ◆ **CM3.** Extortion and protection racketeering
- ◆ **CM4.** Arms trafficking
- ◆ **CM5.** Trade in counterfeit goods
- ◆ **CM6.** Illicit trade in excisable goods
- ◆ **CM7.** Flora crimes
- ◆ **CM8.** Fauna crimes
- ◆ **CM9.** Non-renewable resource crimes
- ◆ **CM10.** Heroin trade
- ◆ **CM11.** Cocaine trade
- ◆ **CM12.** Cannabis trade
- ◆ **CM13.** Synthetic drug trade
- ◆ **CM14.** Cyber-dependent crimes
- ◆ **CM15.** Financial crimes

Resilience score

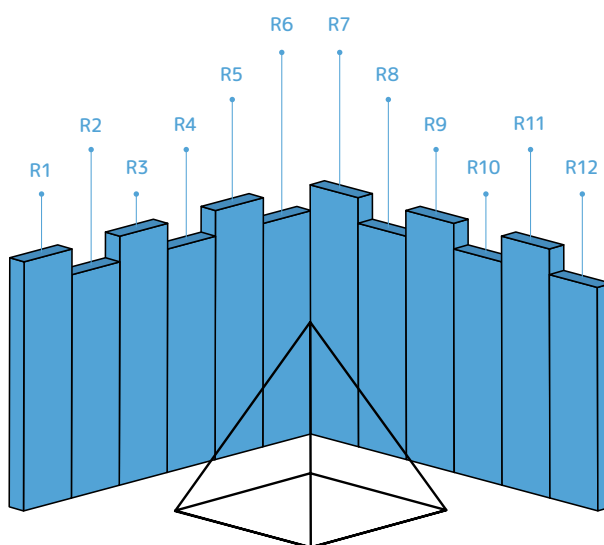
The ultimate purpose of the Index as an analytical tool is to help identify and implement practical measures to successfully combat organized crime. Whereas the criminality score allows users to identify problems and their scale, the resilience score is an indicator of the kinds and effectiveness of measures that countries have in place to achieve solutions to the problem. Resilience capacity and effectiveness are evaluated to assess the level at which states have established appropriate legal, political and strategic frameworks to address organized crime. The resilience component of the Index therefore provides essential analysis of data that have political and practical repercussions.

The goal of the resilience component of the Index is to help users understand which policies and other responses tangibly reduce the value and reach of organized crime. Although the relationship between resilience and impact may never be linear, the Index does nevertheless identify key response factors. Along with the other two elements of the tool, these provide a means by which states can monitor and evaluate the success of their interventions, and a base from which to develop new anti- organized crime strategies.

In determining the overall resilience scores, the Index identifies 12 underlying 'building blocks' of country resilience to organized crime, covering a range of areas, including political leadership, policies and laws, government transparency and economic regulatory capacity, among others. Although each building block is treated as a discrete indicator of resilience, natural groupings of the resilience blocks do emerge, reflecting the political, legal, criminal justice, economic and social spheres of society that have the potential to provide holistic and sustainable responses to organized crime. The resilience blocks are presented below. Notably, the number of resilience indicators has remained unchanged from previous iterations.

FIGURE 2
Building blocks of resilience

- **R1.** Political leadership and governance
- **R2.** Government transparency and accountability
- **R3.** International cooperation
- **R4.** National policies and laws
- **R5.** Judicial system and detention
- **R6.** Law enforcement
- **R7.** Territorial integrity
- **R8.** Anti-money laundering
- **R9.** Economic regulatory capacity
- **R10.** Victim and witness support
- **R11.** Prevention
- **R12.** Non-state actors



Given the wide range of areas and information covered by resilience, it is important to unite the 12 blocks in a meaningful way, and to underscore the importance of a holistic and multisectoral approach to organized crime. In measuring the influence of each resilience block, the Index asks two fundamental questions:

- Does the resilience measure or framework exist in a given country?
- Is the resilience measure or framework effective in combating the organized crime conditions in the country?

The resilience score assesses anti-organized crime measures in place and other state actions that may be used to combat organized crime, while noting that capacity and will are precursors to actual implementation. The aim of these two fundamental questions is to ensure that countries' efforts reflect local conditions – it is not to reward or penalize states for having resilience measures in place for organized crime problems that do not exist within their territories.

The Index takes a pragmatic approach by relying on both empirical data and expert assessment in its analysis of resilience capacity and effectiveness. Evaluating resilience in this way is particularly pertinent, as it captures the dynamics of resilience and allows Index users to identify which measures, if any, have been taken to combat organized crime.

Disclaimer

Small discrepancies of 0.01 in calculations of differences between 2021, 2023 and 2025 scores might occur due to binary round-off errors. As a result, values that increased by less than 0.0049 are rounded and displayed as '+0.00', with an arrow pointing up and a '+'.



2. Scoring and verification process

Scoring

Together, criminal markets, criminal actors and resilience are combined in the Index to provide a multifaceted overview of each country's relationship with organized crime and of the impact of illicit flows. While the Index serves as a tool offering a holistic framework of a state's overall relationship to organized crime threats, its constituent elements allow users to disaggregate the information and determine correlations with various impact areas in any given country and/or region.

These components and subcomponents also allow for flexibility in future iterations of the tool. The Index will serve as a longitudinal study, aiming to show how organized crime has evolved, as well as its current state in a particular country. Impact areas are highlighted, adding value over time as the Index develops into a comprehensive picture of individual and global trends. Sharp changes in crime trends, both transnationally and within countries, will be reflected in data gathering and collection. This way, the Index is intended to be used as both a political tool and an assessment, illustrating the effects of specific policies and allowing stakeholders to better refine their efforts to combat organized crime. The scores are based on an expert-led assessment, supplemented with data gathered.

Index scores for all indicators were based on a scale from 1 to 10. For criminality, a score of 1 signifies the best-possible scenario, in which a criminal market or actor group is non-existent, or no information could be found to indicate their existence. A score of 10 signifies the worst-case scenario, in which no aspect of society is untouched. Conversely, for resilience the scoring system is inverted, with 10 the best possible scenario and 1 the worst. Notably, even if a country exhibited a total absence of a criminal market, actor type or resilience indicator, it was assigned a score of 1. Rather than exclude an indicator completely from the analysis, it was given a minimum score for non-existence to ensure comparability between, and consistency among, countries.

In addition to numeric scores and score justifications, all expert verifiers were asked to provide a 'confidence level' score for each indicator where they provided input. Confidence level scores acted as a safeguard when experts were not knowledgeable about every aspect of a specific country. At the same time, they allowed the Index team to cross-reference expert inputs on the same indicator or country. Confidence level scores were based on a scale of 1 to 10. A score of 1 indicates the expert had no knowledge of a particular component. A 10 meant that the expert was completely certain in their verification assessment of a particular component.

All experts asked to verify and/or score were given an overview of the structure and methodology of the Index. A series of documents, including a guiding questions note, framed definitions for each component of the tool; highlighted questions to consider in the assessment of all scores and justifications; and outlined data sets and information gathered that were available for consideration during scoring and/or verification. Additionally, a set of criminality and resilience thresholds were provided to add a framework of standardization to the assessment process.¹ These documents are available on the website (www.ocindex.net/downloads).

FIGURE 3

Scoring thresholds – criminality

1	2	3	4	5	6	7	8	9	10
NON-EXISTENT TO LITTLE INFLUENCE			MODERATE INFLUENCE		SIGNIFICANT INFLUENCE		SEVERE INFLUENCE		

FIGURE 4

Scoring thresholds – resilience

1	2	3	4	5	6	7	8	9	10
NON-EXISTENT OR EXTREMELY INEFFECTIVE			MODERATELY EFFECTIVE		SUFFICIENTLY EFFECTIVE		HIGHLY EFFECTIVE		

Process

The scoring and verification process of the Index involved five stages:

1. INITIAL RESEARCH

Extensive open-source research was carried out by the Index team to create preliminary profiles for each of the 194 countries included in the Index.² Preliminary profiles were updated by a selected pool of research assistants to reflect the organized crime and resilience environment in 2023–2024. The desk research and both qualitative and quantitative data collected by the Index team was consolidated into a so-called ‘justification’ for each of the 15 criminal markets, five criminal actor-types and 12 resilience indicators.

2. ROUND 1 SCORING

The preliminary country profiles were sent to country experts, largely drawn from the Global Initiative Against Transnational Organized Crime (GI-TOC) and its Network of Experts, who were asked to provide scores for each of the 32 indicators, along with confidence level scores for the same, based on their own expertise and the data provided from the initial research phase. Experts were also asked to critically review the ‘justification’ for each indicator and provide any suggested adjustments, corrections and/or additions.

3. ROUND 2 SCORING

The second round of scoring comprised two separate, parallel streams of both country and thematic scoring. The scores and justifications resulting from the Round 1 scoring phase were then verified by a second, separate, set of experts with extensive knowledge on organized crime at a country level. These country experts were asked to repeat the process from the previous phase, by providing their own indicator scores, confidence level scores and reviews of the indicator justifications. In parallel, a third set of experts – thematic experts with expertise in specific criminal markets for a particular region – also verified the scores and justifications derived from the Round 1 scoring phase.

4. REGIONAL EXPERT GROUP MEETINGS/ALGORITHM VERIFICATION

Following the consolidation of all scores and justifications from the first two rounds of scoring, the fourth review stage would typically involve a series of virtual and in-person regional meetings, where experts would be presented with the up-to-date profiles for each country in their respective region. They would then have had the opportunity to provide feedback on the scores as well as justifications to ensure that the scores were accurate in the geographic context and for regional comparisons.

However, slight modifications to this stage had to be made as a result of the directive issued by the Index's main donor right before the commencement of the expert group meetings (EGMs) to halt all global foreign assistance funding and activities.³ As part of the substitute review stage, three Python algorithms were designed (one for each of the three Index components: criminal markets, criminal actors and resilience). These scripts take in the textual data for each indicator for all 194 countries – the indicator justifications – to assess the influence of a criminal market or actor or a resilience indicator alongside scoring and confidence level inputs from earlier rounds of reviews and data from previous Index iterations. The algorithms clean the text and calculate weighted scores based on the scores from Rounds 1 and 2, as well as the confidence levels. In addition, the algorithms produce four other variables, enabling a final score to be determined for each indicator.

- Semantic recommendation: Using a special language model (SBERT), the algorithm compares and matches the input justifications against a set of predefined thresholds for criminal markets, criminal actors and resilience indicators.
- Analyzing trends: The algorithms use a natural language processing tool (spaCy) to identify words that indicate an increase or a decrease in a given indicator, considering the context in which these words are used. The weighted score for 2025 was also compared with the scores for 2021 and 2023, and the algorithm blended the two signals to produce a final assessment of crime trends. The script gives the textual signal more weight (70%) as it may contain nuances, while the numerical change accounts for 30% of the assessment.
- Grouping of justification: Again using the SBERT model, the scripts examine each justification text across individual indicators, comparing all 194 countries. Each justification is grouped in clusters based on similar meaning (i.e. similar semantic content). This allows comparisons to be made between a weighted score and those with similar text. Within each group (or cluster), the scripts calculate what is called a z-score. For each country, the z-score is calculated using the following formula:

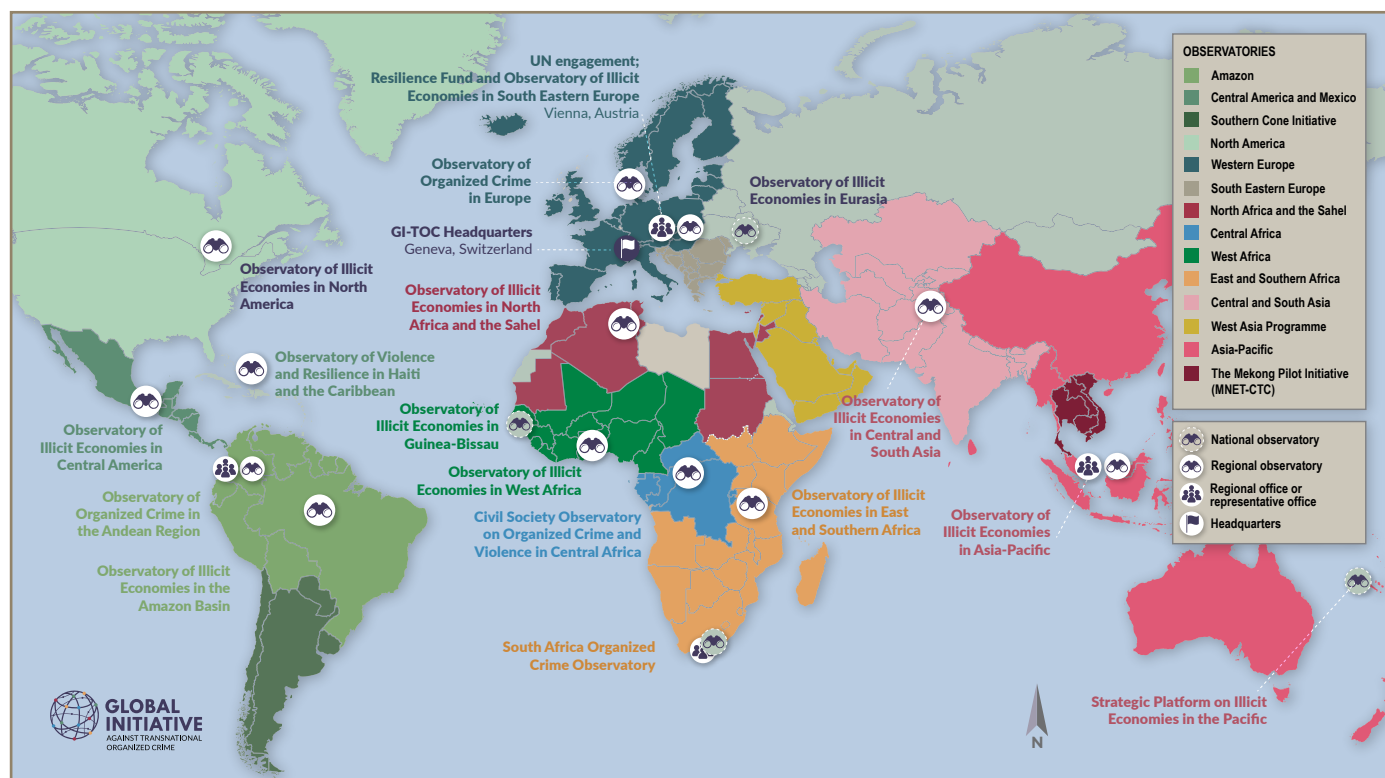
$$\text{Cluster_Z} = \frac{\text{Weighted_Score} - \text{Cluster Mean}}{\text{Cluster Standard Deviation}}$$

The z-score helps to identify any scores that may indicate an anomaly within a cluster. It is an indication of how far a country's weighted score deviates from the norm within its cluster. A high absolute z-score (typically greater than 2 or less than -2) suggests that the country's score is an outlier compared to other countries' scores within that cluster.

5. INTERNAL CALIBRATION

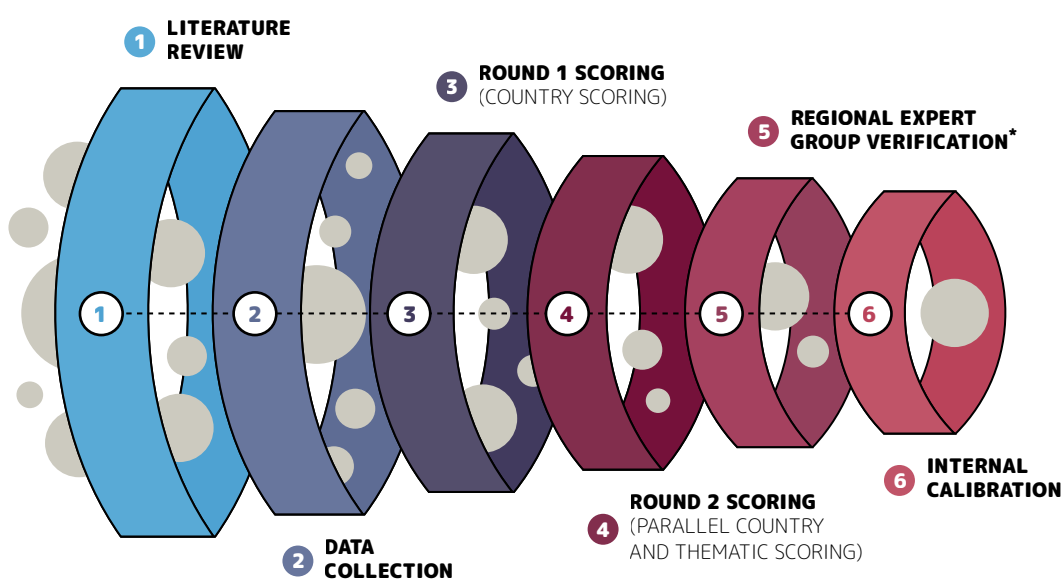
Following the algorithm verification round, and taking expert input from previous rounds into consideration, scores were adjusted and calibrated on a global scale, and reviewed a final time by the GI-TOC's regional observatories. As a result of the replacement of the regional group meetings with algorithm verification, extended consultations with the GI-TOC's regional observatories were held to further calibrate the 2025 Index scores.

FIGURE 5
GI-TOC regional observatories



These adjustments allowed the GI-TOC to continue with the development of the 2025 Index on schedule, while adapting to the temporary financial and time constraints.

FIGURE 6
Index scoring process



* This stage was modified for the 2025 Index.

Experts at all stages were provided with an overview of the structure and methodology of the Index, the country scores, justifications and the original country research, and were asked to justify and substantiate any proposed changes. The same guiding questions and scoring thresholds were provided to standardize the assessment process. (These documents are available on the website: ocindex.net.) Scorers and reviewers were kept anonymous to all beyond the Index team to mitigate the likelihood that scores might be influenced.

Information gaps

Data collection on organized crime presents a number of challenges, as information varies in terms of availability, reliability, uniformity and compatibility. Nevertheless, the GI-TOC has sought to overcome such challenges by cross-checking data sources where available and identifying proxy indicators, as needed.

These challenges and others were addressed through discussions with an expert technical reference group (see below) to enhance transparency and minimize obstacles in developing and disseminating information to the greatest extent possible.

Expert selection and expert groups

The successful implementation of the Index depends not only on its tailored structural conceptualization and data collection, but also on its ability to offer sound and reliable information to stakeholders and policymakers in their fight against organized crime. The input provided by hundreds of independent technical, thematic and regional experts ensures credibility, accountability and transparency of the Index. The experts who were consulted throughout various stages of producing the Index were selected as representatives from numerous areas of expertise. Broadly speaking, they can be divided into three general groups:

- A technical reference group, who were convened to provide guidance on the necessary steps to undertake for expanding the scope of the Index by incorporating new criminal markets and actors.
- Experts specializing in the study of organized crime in specific countries and/or regions.
- Thematic experts specializing in the study or understanding of specific forms of organized crime were consulted during the scoring and verification phase.
- A group of regional experts with expertise in countries and/or regions beyond organized crime provided a final review and verification mechanism for the Index scores and justifications.

Drawing on a large pool of experts, the Index team selected all individuals based on their academic backgrounds and extensive work experience in relevant fields. All experts had to be able to show evidence of their knowledge in a particular area, such as publication and conference presentation records. Notably, no serving government officials were invited to participate in developing the Index to ensure independence in analysis.

The input all experts involved in the production of the tool have provided ensures the Index's credibility, accountability and transparency. All data, scores, justifications and reports have undergone a rigorous evaluation process, ensuring the tool's criminality and resilience scores provide detailed insight into states' overall relationship to organized crime.

Limitations

Recognizing the difficulties in creating a tool that studies a subject matter that is incredibly varied and inherently clandestine, the Index, framed as an expert-led assessment, naturally comes with limitations and potential biases. Nevertheless, the Index can be described as a worthwhile exercise, although with certain limitations, that we hope will become a catalyst for further debate.

On a methodological note, there are considerations that must be considered when interpreting the scores. First and foremost, the Index relies heavily on individual expert knowledge and experience, which introduces the possibility for an implicit bias, where experts' personal convictions might affect their judgement. The ramifications in this case are diametrically opposed. On the one hand, experts might have been too critical, given their knowledge of a specific country's deficiencies, and on the other, they might have been tempted to be too lenient. Although the latter was presumed more probable prior to the evaluation rounds, it was observed that experts tended to be more critical and often held countries, especially developed ones, to a higher standard. Throughout the development of the tool, we have attempted to control that bias by providing preliminary country profiles as a basis on which experts could make their assessments as well as specifying scoring thresholds to guide the scoring process. In addition, all countries underwent a number of anonymous verification rounds, comparing the scores across indicators and regions in an attempt to account for the implicit bias.

In the initial geographic scoring rounds, experts provided scores that were presented to other experts in the following thematic scoring round. This created an opportunity for a confirmation bias, whereby subsequent reviewers would confirm the scores assigned in previous rounds. To address this, the original methodology included an additional score verification round, in which groups of representatives from various areas of expertise came together for moderated regional discussions to debate and scrutinize the scores and justifications for each country. These EGMs were implemented in the first and second iterations of the Index. However, due to the directive to halt all global foreign assistance funding and activities, this round was replaced in part by an algorithm verification, as outlined above. Although the algorithms reduce the human element in the assessment, they have their own set of limitations.

One of the main disadvantages of using algorithms to verify the Round 1 and Round 2 scores, compared to the expert assessments derived during the EGMs, is that this version of the scripts cannot work with data other than that input into the programme. Although the initial country profiles and the indicator justifications were written to capture nuances and have been updated to cover the whole of 2024, important dynamics may still be lost in the process of automating the final review stage. Furthermore, while the algorithm can, in theory, objectively analyze and cross-reference the information with a set of predefined thresholds, there is still the possibility of bias in previous rounds of scoring. This is because the Index relies heavily on expert knowledge and input, meaning the presence of implicit bias cannot be ruled out. If experts' own convictions and worldview have influenced their judgement, and consequently the written narratives that are fed into the algorithm, this would suggest that the algorithm is processing biased information.

However, as pointed out, the Index' methodology has been designed to control for implicit bias. At the first level of control, experts are provided with preliminary country profiles built on a rigorous set of guiding questions, with the utmost care taken to ensure the adequacy of the sources used. Additionally, these profiles undergo a number of anonymous and independent rounds of verification during the scoring process, in which both the scores and the narratives are scrutinized. While the same narrative could be scored slightly differently by experts, the algorithm would assign an objective score.

In addition, as one aspect of the Index tool is to help policymakers improve their approach to organized crime, it is fundamental to understand where harms for different markets are coming from. It is undeniable that many of the harms associated with specific markets stem from existing policies. One example of that is the cannabis trade. Policies related to the policing and use of cannabis differ from country to country, and even within countries. Thus, evaluating the impact associated with that market has been rather ambiguous. While an increasing number of states are moving to decriminalize or legalize cannabis, there is some room for illegality, like trafficking cannabis to countries with stricter policies, for instance. Thus, to be as consistent as possible, the importance of capturing that aspect of illegality when evaluating the market was emphasized to expert scorers. Nevertheless, consistency in that case has been difficult to achieve.

Another critical issue of concern during the scoring process was the debate on the harm and impact of markets, namely whether harms are comparable across markets.

Here lies another limitation of the tool – the weighting of different components of the Index. Currently, as has been already specified, indicators are weighed evenly. Nevertheless, four of the 15 markets are drug-related, which puts implicit weight on the impact of drugs, which, depending on the context, may pose issues.

Environmental criminal markets in Europe, for example, are almost non-existent. Yet they are weighted equally with more pervasive markets, such as human trafficking and the synthetic drugs trade. That has, on a number of occasions, raised the obvious question among experts on European organized crime whether this approach was justified. However, environmental crime has had a significant impact in Africa and Oceania, for instance, where it has endangered entire ecosystems and even threatened the very existence of coastal communities. Arguably, the impact of environmental crime markets has been more severe there than human smuggling, for example, which is perceived as problematic in a European context.

Thus, the current weighting of indicators might lead to some curious results. What often occurs is that two countries that perhaps would not be expected to rank on the same level criminality-wise, turn out to be very similar to one another. This is where we advise caution and recommend readers to look at the disaggregated scores, because countries might have similar or the same overall ranking but for different reasons.

Following up on previously identified limitations, necessary steps were taken to build a more accurate representation of organized crime globally, adding five criminal markets during the 2023 assessment (financial crimes, cyber-dependent crimes, illicit trade in excisable goods, trade in counterfeit goods, and extortion and protection racketeering), and a criminal actor type (private sector actors). In addition to the difficulties in measuring organized crime in general, incorporating cross-cutting illicit activities, such as financial crimes and cyber-dependent crimes, comes with its own set of challenges. As a result, expert technical groups were set up to assess whether these markets would fit into the existing Index methodology.

Expectedly, given the sheer volume of criminal activities that fall under these two crime types, financial crimes and cybercrime were the most difficult to define and measure. Therefore, the definitions of these two criminal markets include a set of specific criminal activities. Narrowing down the types of offences that would fall under the respective markets allows us still to adequately measure a specific market while avoiding double-counting (i.e. counting the same criminal activity under two different markets).

Needless to say, double counting would artificially increase the average criminality score of a country, skewing the overall results of the Index.

To illustrate, take the example of cybercrime. Our approach has been to distinguish between cyber-enabled and cyber-dependent crime. What are often described as cyber-enabled offences (i.e. activities carried out online to enable traditional 'offline' forms of crime) have already been captured under the first iteration of the Index. So, using the internet to target and recruit victims of human trafficking would be captured under the human trafficking market, for instance. In that sense, it is necessary for cyber-enabled and cyber-dependent crimes to be separated to avoid such significant overlaps between markets. To avoid issues stemming from such overlaps, a decision was made for the Index to measure cyber-dependent crime as a standalone market.

As a cross-cutting phenomenon, defining and measuring financial crime also came with certain challenges. Again, to avoid overlap when assessing financial crimes and to allow comparability with the previous iteration of the Index, any activities that can be attributed to another criminal market under the Index would fall under that respective market indicator. Procurement fraud for logging contracts is one such example, which is considered under the flora crimes market, as opposed to financial crimes. Notably, the laundering of illicit proceeds and bribery are not included in the financial crimes category either. Excluding money laundering where the illicit funds have been obtained from activities that fall under the Index' categorization of financial crimes, the general exclusion of money laundering is justified by the fact that it does not exist in itself but rather occurs as a secondary crime linked to illicit proceeds generated from a predicate offence. As the predicate crimes are already assessed under the various other markets (e.g. drug trafficking), the secondary offence – in this instance laundering of the proceeds of drug trafficking – would fall under that same market.



Trajectories: 2025 report methodology

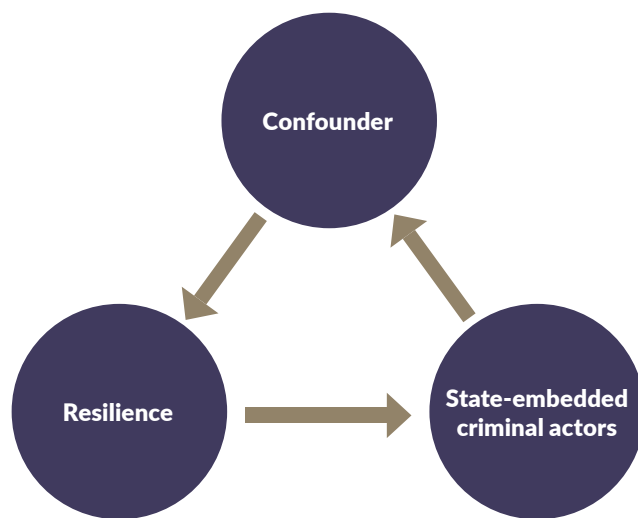
The wealth of data gathered across three iterations of the Index has allowed for a clear understanding of macro criminality–resilience dynamics on a global scale, which had not been done before the first edition of the Index. With the increased data points made available following the third consecutive global sweep of the Index, new insights into the possible evolution of organized crime could be drawn. These insights could also be used to identify the steps countries need to take to strengthen resilience and, in turn, reduce organized crime. This section of the broader Index methodology paper outlines the analysis behind the 2025 report.

Identification strategy

Understanding how building resilience can directly reduce the pervasiveness of state-embedded criminal actors is challenging because countries with high resilience may differ significantly from those with low resilience, in terms of both resilience itself and other observed and unobserved factors that might influence the prevalence of state-embedded actors. As such, estimating the impact of resilience on the pervasiveness of state-embedded actors is also difficult. For example, comparing the presence of state-embedded criminal actors in countries with differing levels of resilience, without accounting for these differences, would produce biased estimates, as illustrated in Figure 7.

FIGURE 7

Identification problem



To address this identification challenge, the 2025 Index report employed a difference-in-differences design – a quasi-experimental research design that identifies causal effects by comparing the temporal change in outcomes for units exposed to an intervention (treatment group) with the corresponding change for units not exposed to that same intervention (control group). This analysis used the state-embedded criminal actors indicator as the outcome variable and the resilience indicator as the treatment variable. Data for these variables is available across all three Index iterations – 2021, 2023 and 2025.

Since the treatment is continuous, the causal effect was estimated using the estimator proposed by Clément de Chaisemartin, Xavier d'Haultfoeuille and Gonzalo Vazquez-Bare (2024).⁴ Unlike the two-way fixed effects (TWFE) estimator, which is not robust to heterogeneity in treatment effects,⁵ the proposed estimator allowed for robust estimations in designs with multiple groups and heterogeneity across space and time.

All estimations included country and year fixed effects. The country fixed effects controlled for all country-specific time-invariant confounders, such as area and slow-changing trends in state capacity. The year fixed effects control for time-varying shocks common to all countries, such as economic crises and pandemics.

The central assumption in order for the difference-in-differences design to yield credible causal estimates was parallel trends. This assumption implies that the treated countries (those that experienced changes in resilience) would have followed the same trajectory as control countries with regard to the presence of state-embedded criminal actors.

To assess the plausibility of the parallel trends assumption, a placebo period was estimated. This refers to a period during which the treatment had not occurred. Testing the treatment effect in this pre-treatment period allows one to assess whether there are any effects when there should be none. If significant differences in the outcome variable (state-embedded actors) are observed during this placebo period, this would suggest that the parallel trends assumption does not hold. Conversely, a lack of significant placebo effects would provide strong support for the validity of the parallel trends assumption, and therefore for the validity of the design.

To strengthen the plausibility of the parallel trends assumption, covariates can be included in the difference-in-differences estimation. When time-varying covariates were included, the parallel trends assumption became a *conditional* parallel trends assumption. This means that if countries experienced differential trends in the presence of state-embedded criminal actors, provided that these trends are explained by changes in the covariates, the estimation remained robust.⁶

Importantly, in contrast to binary treatment settings, continuous treatments – such as the resilience indicator – pose specific challenges for causal inference. Notably, the sample did not contain switchers and not-yet-switchers with the same baseline treatment levels. This complicated the estimation of how outcomes would have evolved without changes in treatment. To address this, De Chaisemartin and D'Haultfoeuille propose an additional identification assumption, which posits that the counterfactual change in outcomes follows a polynomial relationship with the initial level of treatment.⁷

In practical terms, the estimator models the evolution of outcomes as a flexible polynomial function of the initial (period-one) resilience levels. Specifically, the model assumes that the counterfactual change in outcomes – had treatment not changed – can be expressed as a polynomial in the baseline treatment level. This assumption allows the estimator to recover unbiased effects even in the absence of groups with the same initial resilience levels, as long as the polynomial order is correctly specified. The estimation proceeds by residualizing changes in outcomes on these polynomial terms and their interactions with time, among untreated observations, and then applies a re-weighting scheme to compute average effects.

In terms of the implementation of the model, the analysis was conducted using the DIDmultipltDYN package in R and incorporated covariates. These included population size and per capita GDP from the World Bank,⁸ scores for mafia-style groups, criminal networks and overall criminal markets from the Global Organized Crime Index, as well as measures of civil society participation, polyarchy and corruption from the V-Dem project. Throughout, standard errors were clustered at the country level. Assuming that the country's counterfactual trends without a treatment change are linear in their baseline treatment, the specified polynomial was 1.

Main results and robustness checks

The average total effect (ATE) per treatment unit, which represents the sum of accumulated period-specific treatment effects, demonstrates that resilience causes a significant decrease in the state-embedded criminal actor indicator. The main specification includes one placebo and one effect period, country and year fixed effects, and covariate adjustment for pre-trends. The estimated effect on state-embedded criminal actors averaged -1.80 (S.E. = 0.57). The placebo period equals -0.00 (S.E. = 0.32), which is compelling evidence for the plausibility of the parallel trends assumption. The event-study graphic in Figure 8 displays the period-specific estimates. The x-axis represents the period before (–) and after (+) the change in the treatment, while the y-axis denotes the ATE. Before the treatment change, the estimated effect was virtually zero. After the treatment change, the effect was negative and significant. The period-specific effect suggests an average total decrease of 0.39 (S.E. = 0.12) in the state-embedded criminal actors indicator.

To assess the robustness of these results, alternative specifications and robustness checks were implemented. First, the sensitivity of the results to the specification of the order 1 polynomial was examined through a model with the polynomial order set to 2. The results remained stable, indicating that the estimated effects were not driven by the choice of a linear counterfactual trend (see Figure 8.1). Second, an alternative control group was used, consisting only of countries that never experience a change in resilience (never-switchers). This restriction ensures that the control group was entirely unaffected by treatment dynamics, and the resulting estimates remained consistent with the main specification (Figure 8.2). Third, standard errors were clustered at the regional level instead of the country level. The core findings persisted (Figure 8.3).

FIGURE 8

Period-specific effects of resilience on state-embedded criminal actors

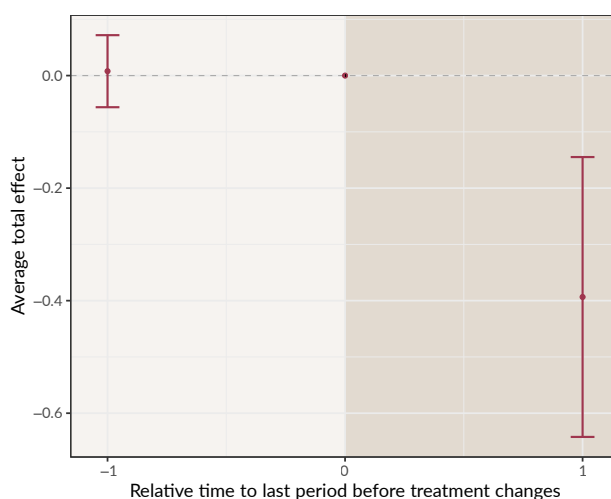
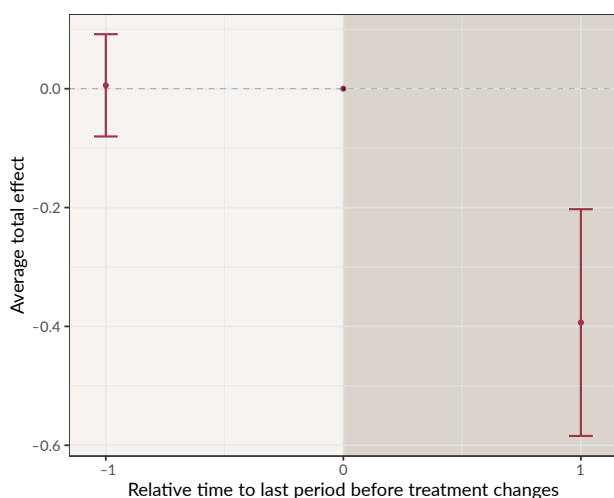
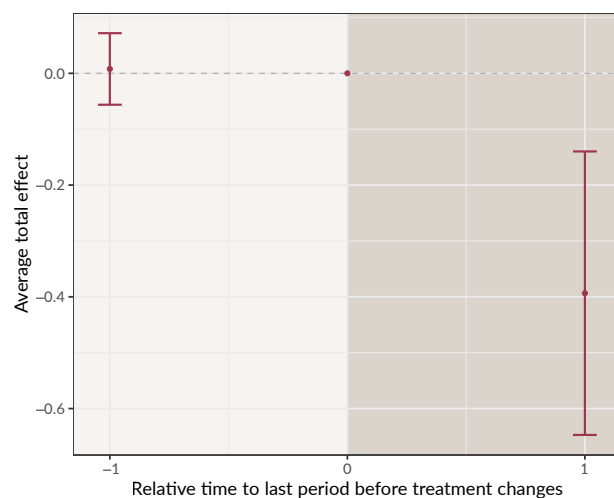


FIGURE 8.1

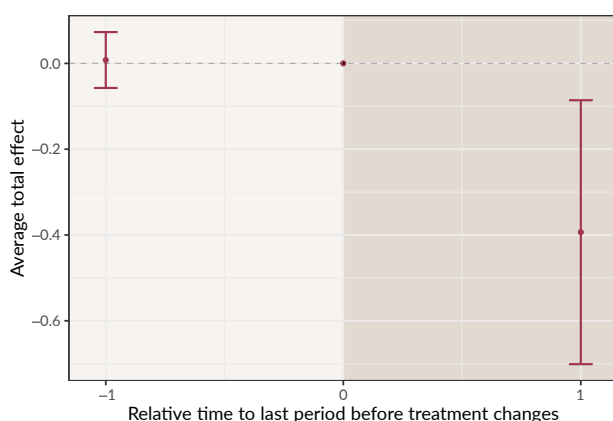
Order 2 polynomial (continuous = 2)

**FIGURE 8.2**

Only never-switchers in control group

**FIGURE 8.3**

Standard errors clustered by region



One additional robustness check – a leave-one-country-out test – was performed to further evaluate the consistency of the main findings. This test is designed to address concerns that the main results might be disproportionately influenced by any single country, particularly given potential outliers in resilience or the presence of state-embedded criminal actors. To assess this, the estimations were repeated iteratively, each time excluding one country from the sample. The results of these leave-one-country-out tests, illustrated in Figure 9, show that the estimated effects remained negative and statistically significant across all iterations. While minor fluctuations in magnitude were observed, the direction and significance of the treatment effect were consistent throughout. This provided strong evidence that the main findings were not driven by any single influential observation and reinforced the robustness of the estimated causal relationship between resilience and decreases in the state-embedded criminal actors indicator.

In addition to the tests presented above, TWFE results are reported for transparency. Four TWFE specifications were implemented to examine the sensitivity of results. The first specification included only the dependent and independent variables – state-embedded criminal actors and resilience, respectively. The second specification added controls for mafia-style groups, criminal networks, foreign actors and criminal markets. The third specification further included the logarithm of GDP per capita and population size. Finally, the fourth specification incorporated institutional and governance-related covariates from the V-Dem project: polyarchy, civil society participation and corruption. Standard errors were clustered at the country level. As shown in Appendix 1 (statistical analysis), the results were consistently negative and statistically significant across all four TWFE specifications, reinforcing the robustness of the estimated relationship between resilience and state-embedded criminal actors. In Model 1, the estimated effect of resilience was -0.3739 (S.E. = 0.0965), significant at the 1% level. As additional controls were

FIGURE 9

Leave-one-country-out test



introduced – first for organized crime dimensions (Model 2), then for economic and demographic factors (Model 3), and finally for governance indicators (Model 4) – the magnitude of the coefficient decreased slightly, but the negative direction and significance persisted throughout. Specifically, the effect remained significant at the 5% level in Models 2 (-0.2292), 3 (-0.2273) and 4 (-0.3044).

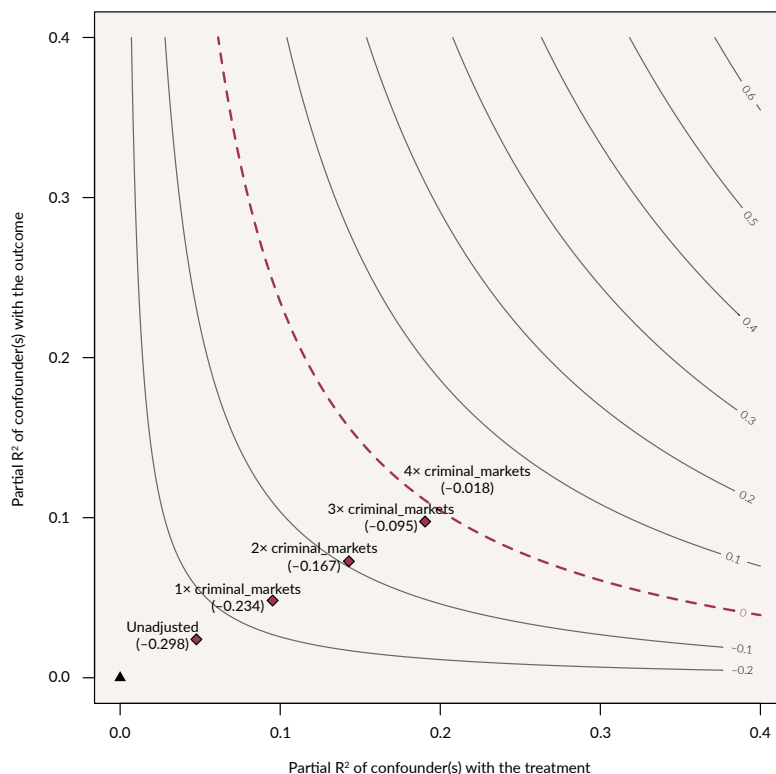
Despite not being robust to heterogeneous treatment effects, one advantage of the TWFE estimator is that it allows for the implementation of recent advances in partial identification techniques to assess the sensitivity of the estimated effects to omitted variable bias. Following Carlos Cinelli and Chad Hazlett

(2020),⁹ sensitivity analysis could be conducted using the robustness value (RV), which can be computed directly from standard regression output. The RV quantifies the minimum strength that an unobserved confounder would need to have – simultaneously with the treatment and with the outcome – to explain away the observed treatment effect. The estimated RV provides compelling evidence that the estimated effect of resilience on state-embedded criminal actors is not easily explained away by omitted variable bias. Using criminal markets as the benchmark – one of the strongest observed predictors of state-embedded criminal actors in the model – the RV indicates that an unobserved confounder would need to be roughly three times as strongly associated with both the treatment and the outcome as criminal markets to bring the point estimate to zero (Figure 10). Such a confounder is very difficult to justify. Criminal markets capture the scale, diversity and entrenchment of illicit economies in a country, which are deeply intertwined with state structures and governance. It is unlikely that an omitted variable exists that is not only orthogonal to criminal markets and the other covariates included but also exerts a substantially greater influence on both resilience and state-embedded criminality – particularly given that country and year fixed effects have already been absorbed.

Results by resilience indicator

Using the same difference-in-differences design, separate models for each of the 12 resilience indicators were implemented to disaggregate their influence on state-embedded actors. The cumulative effect panel in Figure 11 shows the average total effects, while the placebo panel tests for parallel pre-treatment effects – the latter used to assess the plausibility of the parallel trends assumption. As presented in the 2025 Index report, the cumulative effects suggest that eight of the 12 indicators have statistically significant negative effects on state-embedded criminal actors. These include ‘prevention’,

FIGURE 10
Sensitivity test for Model 4 (TWFE)



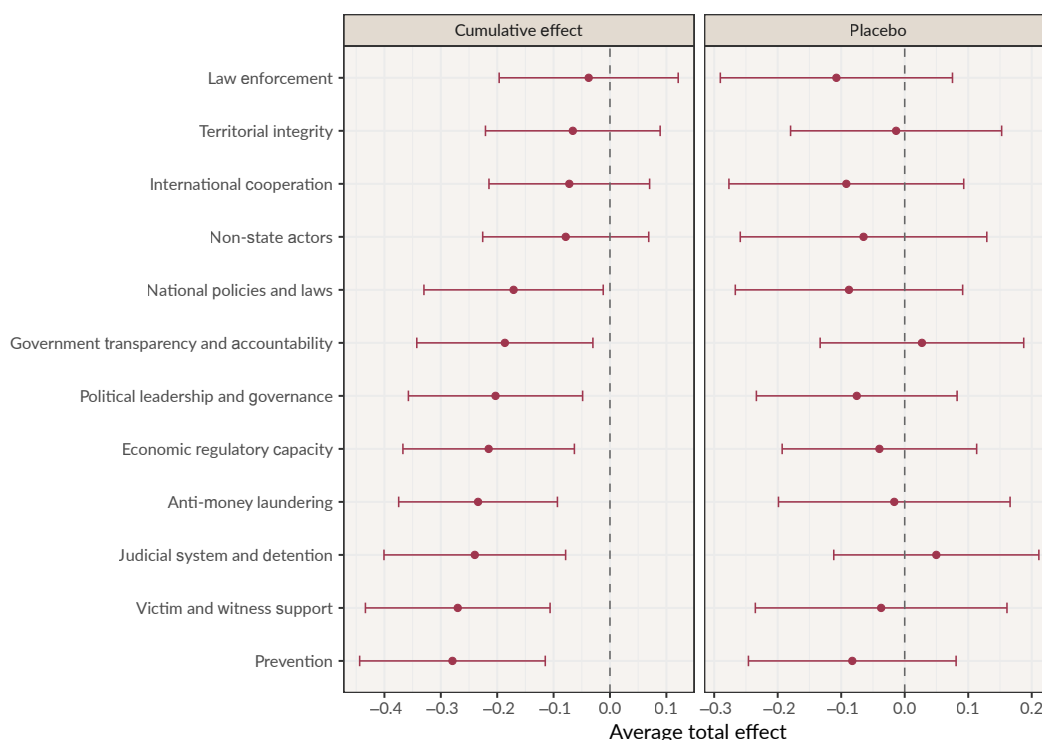
‘victim and witness support’, ‘judicial system and detention’, ‘anti-money laundering’, ‘economic regulatory capacity’, ‘political leadership and governance’, ‘government transparency and accountability’ and ‘national policies and laws’.

Each of these indicators showed a negative cumulative ATE with a confidence interval that did not include zero, indicating statistically significant reductions in the presence of state-embedded criminal actors following improvements in these areas. The remaining four indicators – ‘non-state actors’, ‘international cooperation’, ‘territorial integrity’ and ‘law enforcement’ – also exhibited negative point estimates but with confidence intervals that included zero, suggesting that their estimated effects are not statistically significant. Crucially, in all models, the placebo estimates were statistically indistinguishable from zero, lending support to the parallel trends assumption and the validity of the causal interpretation of the results.

Indicator	Cumulative effect	Placebo
Law enforcement	-0.03777 [-0.19652; 0.12098]	-0.10756 [-0.29035; 0.07524]
Territorial integrity	-0.06593 [-0.22082; 0.08896]	-0.01355 [-0.17972; 0.15263]
International cooperation	-0.07215 [-0.21459; 0.07029]	-0.09193 [-0.27677; 0.09292]
Non-state actors	-0.07851 [-0.22573; 0.06871]	-0.06484 [-0.25893; 0.12926]

FIGURE 11

Cumulative and placebo effects of resilience indicators on state-embedded actors



National policies and laws	-0.17095 [-0.32992; -0.01198]	-0.08777 [-0.26676; 0.09122]
Government transparency and accountability	-0.18642 [-0.34259; -0.03026]	0.02713 [-0.13314; 0.18739]
Political leadership and governance	-0.20299 [-0.35748; -0.04851]	-0.07553 [-0.23356; 0.08251]
Economic regulatory capacity	-0.21517 [-0.36722; -0.06312]	-0.03984 [-0.19297; 0.11328]
Anti-money laundering	-0.23397 [-0.37473; -0.09321]	-0.01645 [-0.19879; 0.16590]
Judicial system and detention	-0.23974 [-0.40080; -0.07867]	0.04977 [-0.11170; 0.21123]
Victim and witness support	-0.26999 [-0.43372; -0.10625]	-0.03710 [-0.23521; 0.16101]
Prevention	-0.27935 [-0.44394; -0.11476]	-0.08255 [-0.24605; 0.08096]

Forecasting models

With each iteration of the Index, the number of available data points expands, enabling deeper and more meaningful analysis. Drawing on data from Index coverage years 2020–2024, the 2025 Index introduces a predictive model that projects the trajectory of criminality across all countries. This section of the methodology paper provides an outline of how these projections were achieved.

Predicting the progression of organized crime is inherently challenging, given its clandestine nature and the rapidly changing factors that influence it. Limited and uneven data availability further complicates the task, leaving gaps in understanding that constrain the reliability of extrapolations. Without longitudinal data, forecasts risk underestimating the adaptability of criminal networks, making it essential for policymakers to interpret predictive models with caution while continuing to invest in stronger data collection and monitoring systems.

The Index was first launched in 2021 to address this knowledge gap, with one of its aims being that future iterations would provide the data needed for more consistent prediction models to be developed. The three sweeps of the Index allow for a first attempt at developing a predictive functionality that tells where countries' overall criminality levels are likely to head, assuming that all other factors remain equal.

Below, we outline the projection logic. The design favours transparency, parsimony and recency – so that single-year swings do not dominate, but that the most recent information is still decisive. All models are univariate and country-specific, using observed criminality scores from 2020–2024 and projecting to the next two Index data-gathering cycles (2026 and 2028). Projected values are limited to the Index's scale of 0–10.

1) Average of the last two changes

This approach takes the simplest view of momentum: where has the country been moving lately, and at what typical pace. It looks back at the two movements in the series, calculates how the change in score per calendar year for each step, and then averages these recent changes. Using two intervals rather than just the most recent one reduces the risk of a one-off swing driving the forecast, while still focusing on the latest dynamics. The method then extends the line from the latest observed year, applying that recent average pace. When only a single observation is available, the method defaults to carrying the latest level. As changes are calculated per year, irregular gaps in the data do not distort the implied pace of change.

2) Ordinary least squares (OLS) and the last change

This method balances a stable, longer trend with the immediacy of the last observed movement. First, a straight line is fitted through all available years to capture the overall direction of travel across the full window. Next, the last per-year change is calculated to reflect the latest shift in the series. The method

then forms a slope that leans towards the last change while keeping the longer-term trend in view; in practice, the last change is given strong but not exclusive weight (w of OLS = 0.3; w of last change = 0.7). The projection line is anchored so that it passes through the latest observed point, ensuring continuity at the boundary between observed and projected years. If the history is too short, the method falls back to holding the most recent value constant. This design lets the model react quickly when a series turns, without discarding the context provided by earlier years.

3) Damped last change

The damped approach assumes that the most recent movement may continue to influence the series for a while, but this influence should fade the further ahead we look. It starts from the latest observed value and adds increments based on the most recent per-year change. These increments are largest for the first forecast step, shrinking geometrically with each additional step into the future. The damping factor governs how quickly the influence tapers: a value closer to 1 means the effect persists for longer, while a smaller value means it fades more quickly (the chosen value is 0.7). Here, the damping is set to emphasize the near term while acknowledging the growing uncertainty by 2028. If only one observation exists, the level remains unchanged.

4) Recency-weighted regression

This technique draws a line through the entire dataset but deliberately gives more weight to the most recent years. The weighting scheme declines smoothly and exponentially as we move further back in time, meaning that the most recent year holds the most weight, with this weight decreasing with each subsequent year. The tuning parameter that controls this decline is chosen so as to privilege fresh information without rendering earlier observations irrelevant. The projected values are then taken from this recency-aware line. Because the fit still uses the entire series, it benefits from stability and noise averaging across multiple years, while remaining responsive to changes near the end of the sample. When only one observation is available, the method defers to a constant projection, mirroring the safeguards in the other approaches.

5) Ensemble

Rather than relying on a single view of the future, the final projection for each country and forecast year is the simple average of the four method-specific projections. Each method captures a different approach to how recent information should inform the future. Averaging these projections reduces the likelihood of idiosyncrasies in any one model influencing the results, and typically yields more stable and credible trajectories. This is a pragmatic guardrail that prevents a mechanical extrapolation from drifting outside the meaningful bounds of the metric. The entire process treats each country independently and computes changes per year, ensuring coherent projections even when years are missing or spacing is uneven.

These projections should be interpreted as directional scenarios, assuming that recent dynamics persist and major external conditions remain largely unchanged. They intentionally do not model structural drivers, policy reforms, enforcement shocks, market disruptions, or changes in reporting and coverage. Anchoring attention on the most recent years can still transmit short-term noise, even with damping and averaging. Nonetheless, the combination of transparency, recency awareness and ensemble averaging provides a consistent and reproducible baseline against which expert judgment and contextual intelligence can be layered.

As additional Index editions become available, this framework can evolve in a number of practical ways while preserving its clarity. For example, back-testing can quantify typical errors and inform horizon-specific calibration; uncertainty bands can be added to communicate the range of plausible outcomes rather than a single line; and hierarchical or partial-pooling strategies can stabilize estimates for countries with sparse histories without overwhelming country-specific signals. Until then, the current approach offers a clear, replicable starting point that prioritizes simplicity to make the most of the available data.

Appendix 1: Statistical analysis

FIGURE 12
TWFE models

Dependent variable	Model 1 State-embedded criminal actors	Model 2 State-embedded criminal actors	Model 3 State-embedded criminal actors	Model 4 State-embedded criminal actors
Resilience	-0.3739*** (0.0965)	-0.2292* (0.0882)	-0.2273* (0.0887)	-0.3044** (0.0951)
Mafia-style groups		0.0532 (0.0423)	0.0251 (0.0456)	0.0475 (0.0466)
Criminal networks		0.1000* (0.0501)	0.0982 (0.0522)	0.0866 (0.0501)
Foreign actors		0.0296 (0.0487)	0.0487 (0.0475)	0.0416 (0.0512)
Criminal markets		0.2930** (0.0899)	0.3203*** (0.0949)	0.2659** (0.0895)
GDP per capita (log)			0.0237 (0.1460)	0.0657 (0.1465)
Population (log)			0.9517 (0.7956)	1.062 (0.8318)
Polyarchy				-0.1358 (0.5033)
Civil society participation				0.3159 (0.3680)
Corruption				0.2579 (0.4490)
Country FEs	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Observations	579	579	553	496
R2	0.98459	0.98571	0.98575	0.98536
Within R2	0.04264	0.11242	0.11781	0.12093

Appendix 2: Definitions

Defining organized crime

Any index is a composite measure of variables using various data points. In the context of measuring organized crime, the parameters that this Index relies on are informed by definitions of organized crime, and related activities and concepts.

Organized crime, however, is a notoriously difficult concept to define. Although there is an awareness that the phenomenon exists everywhere, there are multiple forms of crime, enabled by different actors that fluctuate and adapt to various environments. In 2003, the United Nations Convention against Transnational Organized Crime (UNTOC), the principal international instrument against organized crime, came into force, compelling member states to consider a definition for organized crime. Unable to reach a consensus, however, the UNTOC does not actually provide a definition, but rather offers clarity on two constants within the broad context of organized crime.

The terms 'organized criminal group' and 'serious offence', outlined in the convention, offer the basic conditions for an activity to be deemed to be organized crime and the flexibility to address the widest possible range of concerns. For example, an organized criminal group may refer to a broad range of criminal associations, from hierarchical structures to loosely connected networks. Likewise, the convention's focus on the term 'serious offence' ensures a distinction is maintained between low-level criminality and organized criminal activity. Moreover, the convention specifically speaks to activities that are profit-driven, allowing for policies and responses to distinguish organized crime from solely politically motivated actions, such as terrorism. Today the consensus among the convention's member states is increasingly to refrain from definitional debates surrounding the term 'organized crime' and accept that it is flexible, that it refers to a broad spectrum of ever-changing activities and circumstances, and that there are many ways in which the label 'organized crime' can be understood and conceptualized.

Nevertheless, for an index to offer true insight and value, some form of definition is essential. While relying (though not exclusively) on international instruments to define various criminal markets, the Index considers both transnational organized crimes as well-organized criminal activities occurring within state boundaries.

Definition of organized crime

For the purpose of the Index, 'organized crime' is defined as illegal activities conducted by groups or networks acting in concert, by engaging in violence, corruption or related activities in order to obtain, directly or indirectly, a financial or material benefit. Such activities may be carried out both within a country and transnationally.

By defining organized crime in this way, the Index allows for a wide range of activities and perpetrators to be considered and measured. One key point to note in this definition is the issue of legality. Activities that are not designated as illegal or that have been legalized in a country fall outside of the scope of the assessment of that particular country, even if considered illegal in another. At the same time, activities that are not illegal but that violate international human rights standards are included under the Index.

Criminal market definitions

People

HUMAN TRAFFICKING

Drawing from a range of sources, the Index covers human trafficking within a modern slavery context and includes the trafficking of human organs. In line with common interpretations of human trafficking, this criminal market does not require the movement of individuals, and includes men, women and children. When movement is involved, it may include both cross-border and internal flows (such as from rural to urban locations). For the purposes of the Index, human trafficking includes activity, means and purpose, and reflects all stages of the illicit activity, from recruitment and transfer, to harbouring and receipt of persons. To distinguish this market from that of human smuggling, trafficking in persons involves a form of coercion, deception, abduction or fraud, and is carried out for the purpose of exploitation, regardless of the victim's consent. In line with the Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children, supplementing the UNTOC, exploitation includes, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour or services, slavery or practices similar to slavery, servitude or the removal of organs.

HUMAN SMUGGLING

Under the Index, human smuggling is defined as the criminalization of the illegal entry, transit or residence of migrants (by land, sea or air) by an organized criminal group for the purposes of a financial or material benefit. Activity in this criminal economy reflects all stages of the illicit activity, including producing, procuring, providing or possessing fraudulent travel or identity documents when committed for the purpose of enabling the smuggling of migrants. Although they are distinct crimes that are defined in different ways, human smuggling may turn into trafficking when the element of exploitation is involved.

EXTORTION AND PROTECTION RACKETEERING

Crimes of protection and extortion linked to an organized crime group or groups that exert control over a given territory or market – either legal or illegal – include:

- Activities of organized extortion, where the extortioner asks for money or other utility/benefit in exchange for a purposefully fake, fabricated or real need for protection (with or without an extortion request).
- Cartel racketeering, where an organized crime group acts as intermediary or mediator by handling external competition and solving disputes as gatekeeper by controlling access and exit to and from key markets.

The definition does not include such acts when committed by state officials (in which case, it is included under various indicators, such as state-embedded actors).

Trade

ARMS TRAFFICKING

The trafficking of arms involves the import, export, acquisition, sale, delivery, movement or transfer of arms, their parts and components and ammunition across national borders, as well as intentional diversion of firearms from legal to illegal commerce, without involving the movement of items across physical borders. 'Firearms' refers to any portable barrelled weapon that expels, is designed to expel or may be readily converted to expel a shot, bullet or projectile by the action of an explosive, excluding antique firearms or their replicas, as per the Protocol against the Illicit Manufacturing of and Trafficking in Firearms, Their Parts and Components and Ammunition, supplementing the UNTOC. 'Small arms' and 'light weapons' refer to a range of specific weapons, as outlined by the Small Arms Survey. Often, the trafficking of arms facilitates the commission of other organized crime activities.

TRADE IN COUNTERFEIT GOODS

Refers to the production, transport, storage, distribution and sale of counterfeit goods. Counterfeit goods are either deliberately and fraudulently mislabelled with respect to identity and/or source, or fraudulent imitations of registered brands and involve the theft of a trademark. Importantly, activities related to counterfeiting or distributing counterfeit currency are not considered under this specific market.

ILLICIT TRADE IN EXCISABLE GOODS

This market involves the illicit transport, distribution and sale of excise consumer goods, with the exception of oil, different types of fuels and gold (which are included under non-renewable resource crimes). An illicit market exists where the product is either transported or sold illegally (i.e. despite prohibition) or where the product is distributed outside regulated processes, the regulated trade market or the legal regulatory framework (e.g. for the purposes of tax evasion). This market does not include trade in counterfeit versions of such products (which falls under trade in counterfeit goods).

Environment

FLORA CRIMES

Crimes related to flora involve the illicit trade as well as possession of flora species covered by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), as well as other species protected under national law.

FAUNA CRIMES

Like flora crimes, crimes involving fauna species entail the poaching and illicit trade in animals and animal products, as well as the possession of species or animal products covered by CITES or protected by national law. The Index also considers protected marine species, and IUU fishing falls under this category.

NON-RENEWABLE RESOURCE CRIMES

The Index includes the illicit extraction, smuggling, mingling, bunkering or mining of natural resources. It also covers any illicit activities related to trade in such products, including price misinvoicing. The Index covers commodities including, but not limited to, oil, gold, gas, gemstones, diamonds and precious metals.

Drugs

HEROIN TRADE

The Index covers the production, distribution and sale of heroin. Consumption of the drug, while not in itself a form of organized crime, was considered in determining the reach of the illicit drug market. Synthetic opioids are considered under the synthetic drugs category (see below).

COCAINE TRADE

Like heroin, the production, distribution and sale of cocaine and its derivatives are covered by the Index. Consumption of the drug, while not in itself a form of organized crime, was considered in determining the reach of the illicit drug market.

CANNABIS TRADE

The illicit cultivation, distribution and sale of cannabis oil, resin, herb or leaves are covered by the Index. Consumption of the drug, while not in itself a form of organized crime, was considered in determining the reach of the illicit drug market. Recognizing the growing legalization of cannabis production, sale and consumption, the Index focused solely on areas where an activity was criminalized and/or where criminal groups were involved in the supply chain.

SYNTHETIC DRUG TRADE

As with other illicit drug markets, the production, distribution and sale of synthetic drugs are covered by the Index. Notably, synthetic opioids, such as Tramadol, as well as amphetamine-type stimulants, methamphetamines and fentanyl are included in this criminal market, as well as any other narcotic included in the 1972 Protocol, Amending the Single Convention on Narcotic Drugs, the Convention on Psychotropic Substances of 1971 and the United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988. Consumption of such drugs, while not in itself a form of organized crime, was considered in determining the reach of the illicit drug market. Notably, 'substandard and falsified medical products', as outlined by the World Health Organization, have been excluded from this criminal market. The latter are instead measured under the trade in counterfeit goods.

CYBER-DEPENDENT CRIMES

Cyber-dependent crimes are defined as organized crimes that are solely dependent on the use of a computer, computer network or other forms of information communications technology (ICT). These include the spread of viruses or other malware, hacking, distributed denial of service (DDoS) attacks, ransomware and cryptocurrency fraud. These activities are considered to be conducted for the purpose of obtaining a monetary or material benefit (as opposed to a political or ideological objective).

FINANCIAL CRIMES

Refers to organized crime that results in a financial loss to the state, entity and/or private individuals through one or more of the following activities:

- Financial fraud: this refers to cases where money and/or financial assets are obtained through deception, including, but not limited to, procurement fraud, identity fraud, mass marketing fraud, banking fraud, Ponzi schemes, etc.
- Tax evasion (including activities such as price misinvoicing) and abusive tax avoidance: this refers to the use of illegal means to avoid paying taxes. It occurs when the taxpayer either evades assessment or evades payment. When committing price misinvoicing, the profit-maximizing actor will either over-

or under-invoice and the misdeclaration depends on the relative tax and tariff rates. Tax avoidance is to be distinguished from tax evasion, where, in the case of the latter, someone acts against the law or abuses the letter of the law. By contrast, abusive tax avoidance complies with the letter of the law, but subverts its purpose.

- **Embezzlement:** this involves the fraudulent appropriation of property or funds entrusted to an individual for their management and safekeeping, with the intention of using these assets for personal benefit. It differs from regular fraud because the actor who takes the money or property has trusted and legitimate access to the valuables before they take them for their own use.
- **Misuse of funds:** this refers to the misapplication of funds from state, international or regional bodies for purposes other than those for which they were originally granted.

To be considered financial fraud, the aforementioned activities must be committed by an organized crime group for the purpose of financial gain or professional advantage. Such activities, when attributable to another criminal market under the Index, fall under that respective market indicator. For example, procurement fraud for logging contracts would fall under flora crimes.

The laundering of illicit proceeds and bribery are not included in this category, as they might be captured under other categories.

Criminal actor definitions

MAFIA-STYLE GROUPS

Refers to clearly defined, organized criminal groups. This typology also includes militia and guerrilla groups that are primarily funded by illicit activities. There are four defining features of a mafia-style group: a known name, a defined leadership, territorial control and identifiable membership.

CRIMINAL NETWORKS

Refers to a loose network of criminal associates engaging in criminal activities. This also includes relatively small groups that do not control territory and are not widely known by a name or with a known leader. Criminal networks are involved in illicit trafficking of commodities but do not have territorial control or any of the other defining features of mafia-style groups. In essence, criminal networks and entrepreneurs are defined by their failure to meet the defining characteristics of mafia-style groups.

STATE-EMBEDDED ACTORS

Refers to criminal actors that are embedded in, and act from within, the state's apparatus.

FOREIGN ACTORS

Refers to state or non-state criminal actors operating outside their home country. In addition to foreign nationals, this may also in some instances include individuals forming part of a diaspora group that has established roots in the country.

PRIVATE SECTOR ACTORS

Refers to profit-seeking individuals or entities who own, manage or control a segment of the legal economy free from state ownership or control, that collaborate or cooperate with criminal actors willfully, through coercion or neglect. Activities include, but are not limited to, the laundering of illicit proceeds, acting as informants and legal representation through unethical means.

Resilience indicator definitions

Leadership and governance

POLITICAL LEADERSHIP AND GOVERNANCE

Refers to the role a state's government plays in responding to organized crime and its effectiveness in doing so. Strong political leadership and governance indicate higher state resilience to organized crime.

Governments orient citizens toward a state's stance on organized crime, championing its role in combating the phenomenon by laying the foundation to implement action. The platform in which anti-organized crime rhetoric is made reflects to some degree the level of prioritization of organized crime on the national agenda.

Governance serves as a function of the relationship between the state and its governed populations. Leaders that are seen as legitimate in their intent and actions unify society. People's confidence in those who govern them can be directly linked to conflict in a society. The presence of organized crime can tangibly reduce the capacity for governance and the legitimacy of the government in the eyes of the population. When there is no or little confidence in government, society can become unstable, creating (further) opportunities for organized crime to fill the governance void between the state and its populations.

Defining resilience

The Index defines 'resilience' as the ability to withstand and disrupt organized criminal activities as a whole, rather than individual markets, through political, economic, legal and social measures. Resilience refers to countries' measures taken by both the state and non-state actors.

GOVERNMENT TRANSPARENCY AND ACCOUNTABILITY

Refers to the degree to which states have put oversight mechanisms in place to ensure against state collusion in illicit activities – in other words, whether or not the state creates opportunities for the reduction of state corruption and to obscure the illegitimate control over power or resources, including resources linked to organized crime.

As representatives of their citizens, governments are entrusted with powers to oversee and maintain the rule of law and order of societies. When this contract is abused, it both undermines citizens' trust in state institutions (which may lead to vulnerabilities to organized crime) and can imply state collusion in organized crime. Efforts to increase transparency, such as adequately resourcing anti-corruption measures, work to close opportunities in which organized criminals may exert their influence. Thus, the more transparent governments are, the more resilient a state is to organized crime.

INTERNATIONAL COOPERATION

Refers to the structures and processes of interaction, policymaking and concrete implementation by countries beyond the national level in order to respond to organized crime. Strong international cooperation indicates high state resilience to organized crime.

As organized crime is increasingly a transnational phenomenon, with actors and supply chains able to span national and continental boundaries, it is essential that states work together on a global scale to combat the threat.

The ratification and (timeliness of ratification) of relevant international organized crime treaties implies state willingness to effectuate responses to organized crime, in line with international standards. These treaties are:

- › The UNTOC and its three protocols
- › The UN Convention against Corruption
- › The UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988
- › The Single Convention on Narcotic Drugs, 1961
- › The Convention on Psychotropic Substances, 1971
- › The Arms Trade Treaty
- › CITES

At the international level, for state parties, these instruments constitute sufficient legal grounds to carry out response measures to organized crime. Such responses include cooperation in criminal matters, particularly mutual legal assistance, extradition, the transfer of sentenced prisoners and transborder asset confiscation. The presence of such structures and policies, and evidence of their effective use, implies a higher degree of state resilience to organized crime.

NATIONAL POLICIES AND LAWS

International cooperation is an essential component to combating organized crime because it sets the basis for national responses. Thus, national policies and laws refer to state legal action and structures put in place to respond to organized crime. National organized crime strategies and legislation are adapted to the needs of the state, its legal tradition and social, economic, cultural and geographic conditions. As such, the presence of these reflects higher state resilience to organized crime.

Criminal justice and security

JUDICIAL SYSTEM AND DETENTION

Refers to a state's judiciary's power to effectively try to enforce judgments on organized crime-related cases. The ability of a country's judicial system to do so depends on whether it is adequately resourced and operates independently and effectively at all points along the juridical chain. Although passing judgment on cases is its primary function, the ability to enforce is also an essential component of a judiciary's activities. Things such as evidence that key organized crime leaders are successfully prosecuted and, in particular the degree of organized crime influence from within the prison system, are factors to consider in assessing a state's judicial capacity. Where the prison system has been captured by organized crime, this should significantly impact the score. Thus, while having more resources and independence to pass judgment on organized crime cases implies higher state resilience, high impunity implies lower state resilience.

LAW ENFORCEMENT

Refers to the state's ability to investigate, gather intelligence, protect and enforce adherence to its rules and procedures regarding organized crime. As the front line of a state's criminal justice system, law enforcement and intelligence are often in direct contact with organized criminal activities. In order to bring criminal perpetrators to justice, the capacity of a state's law enforcement to combat organized crime rests on things such as whether it is adequately resourced, and whether the state has invested in law enforcement mechanisms that are specifically organized-crime-focused. It follows therefore that greater law enforcement capacity makes a state more resilient to organized crime

TERRITORIAL INTEGRITY

Refers to the degree to which states are able to control their territory and infrastructure against organized criminal activities, including the capacity to carry out effective border control.

A country's physical location and geography may increase the risk of exploitation by organized criminal groups. For example, lengthy borders are less likely to be regulated effectively, and criminals are therefore more likely to take advantage by smuggling illicit commodities and people unnoticed. Moreover, the level of a state's economic engagement internationally, marked by things such as its port and airport infrastructure, can increase the ease with which goods and people can move (both legitimately and illegally) between countries.

As such, the greater the resources and infrastructure put in place by states to manage their territorial integrity against organized crime, the higher its resilience.

Economic and financial

ANTI-MONEY LAUNDERING

Refers to a state's ability to implement legal, regulatory and operational measures for combating money laundering and other related threats to the integrity of its financial system.

Profits that criminals make from organized crime are often concealed by being funneled through legitimate businesses. Through the development of anti-money-laundering mechanisms, states become more resilient to the threat of money laundering, which potentially underlies all forms of organized crime.

The Financial Action Task Force is a policymaking body that has developed a series of recommendations that are recognized as the international standard for combating money laundering, the financing of terrorism and proliferation of weapons of mass destruction. These form the basis for a coordinated response to these threats to the financial system. States are assessed through mutual country evaluations to determine their level of compliance with these standards. The higher compliance, the more resilient states are to organized crime.

ECONOMIC REGULATORY CAPACITY

Refers to the ability to control and manage the economy, and to regulate financial and economic transactions (both nationally and internationally) so that trade is able to flourish within the confines of the rule of law. In other words, these determine whether an actor has put into place and can effectively oversee the mechanisms that ensure economic transactions and businesses operate in a predictable, fair way, free from distortion, including criminal activities such as extortion and illicit taxation.

When actors are able to formulate and implement sound policies and regulations that permit and promote private sector development, it allows for options and opportunities for legitimate, regulated business to expand. This, in turn, reduces the incentive for informal, illegal business to arise, or for criminal groups to unduly influence economic forces, through alternative regulation, extortion or criminal practice.

States under protracted sanctions by the international community have been shown to develop illicit means by which to circumvent or mitigate the impact of those sanctions.

The larger the number of sound economic regulations that are in place and the lower number of (and duration of) sanctions placed on a state, the higher resilience a country has to organized crime.

Civil society and social protection

VICTIM AND WITNESS SUPPORT

Refers to the existence of assistance provided to victims of various forms of organized crime (for example, human trafficking, drug trafficking, extortion or fraud).

Support mechanisms, treatment programmes for victims, as well as resources allocated to these initiatives create an environment in which citizens are able to recover more quickly from the effects of organized criminal activities.

Moreover, initiatives such as witness protection programmes are essential, and often the only way to successfully prosecute organized criminals. The more effective the support programmes that are put in place, the more resilient states are to organized crime.

PREVENTION

Refers to the existence of strategies, measures, resource allocation, programmes and processes that are aimed to inhibit organized crime. While prevention considers mainly state initiatives, these frameworks often use a holistic approach to preventive measures through community outreach, recognizing that citizens that are engaged in prevention to organized crime help make the state more resilient.

Through prevention, states can build safeguards to protect against organized crime by effecting behavioural change in vulnerable groups and reducing the demand for illicit activities. Thus, the more robust a state's prevention scheme is, the more resilient it is to organized crime.

NON-STATE ACTORS

From a resilience perspective, non-state actors play a role in responding to organized crime by supplementing government initiatives and by ensuring 'checks and balances' are applied to governments to guarantee resilience to organized crime. The non-state actors indicator is also a measure of the degree to which civil society organizations are able and allowed to play a role in responding to organized crime across the spectrum, from victim support to crime prevention.

Civil society organizations are engaged in local communities, where ownership of initiatives against organized crime is formed, leading to more sustainable response measures. Similarly, the media is critical in the role it plays holding governments to account while providing a voice for communities by mobilizing civil society against the threat of organized crime. Thus, the more civil society capacity a state has, the more resilient it is to organized crime.

Notes

- 1 The set of thresholds is available at ocindex.net/downloads.
- 2 As Kosovo is not a UN member state, the country's scores are not included in the 2025 analysis or on the dedicated Index platform (ocindex.net). However, Kosovo has been included in the data collection and scoring phases of the Index development since the first edition, thereby ensuring the accuracy and comparability of its scores across iterations. All of Kosovo's scores are available in the Appendix of the Global Organized Crime Index report.
- 3 The foreign aid freeze was issued at the end of January 2025 and subsequently lifted.
- 4 Clément de Chaisemartin, Xavier d'Haultfoeuille and Gonzalo Vazquez-Bare, Difference-in-difference estimators with continuous treatments and no stayers, *American Economic Association Papers and Proceedings*, 11 (2024), <https://www.aeaweb.org/articles?id=10.1257/pandp.20241049>.
- 5 Andrew Goodman-Bacon, Difference-in-differences with variation in treatment timing, *Journal of Econometrics*, 225, 2 (2021), <https://www.sciencedirect.com/science/article/abs/pii/S0304407621001445>; Liyang Sun and Sarah Abraham, Estimating dynamic treatment effects in event studies with heterogeneous treatment effects, *Journal of Econometrics*, 225, 2 (2021), <https://www.sciencedirect.com/science/article/abs/pii/S030440762030378X>.
- 6 Clément de Chaisemartin and Xavier d'Haultfoeuille, Two-way fixed effects and differences-in-differences estimators with several treatments, Working paper 30564, National Bureau of Economic Research, 2022, https://www.nber.org/system/files/working_papers/w30564/w30564.pdf.
- 7 Clément de Chaisemartin and Xavier d'Haultfoeuille, Treatment-effect estimation in complex designs under a parallel-trends assumption, September 2025, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5440734.
- 8 Population size and per capita GDP variables were obtained through the World Bank Data Portal, <https://data.worldbank.org>.
- 9 Carlos Cinelli and Chad Hazlett, Making sense of sensitivity: Extending omitted variable bias, *Journal of the Royal Statistical Society Series B: Statistical Methodology*, 82, 1 (2020), <https://academic.oup.com/jrssb/article/82/1/39/7056023>.