

Conflict and Unrest Sub-Index

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Abstract

This report explains the construction of the sub-index “Conflict and Unrest”. We selected seven sub-sub-indices that gather different indicators of possible conflict emerging between countries and/or riots and unrest internal to a specific country, eliminating one of the previous sub-sub-indices (Protest Tracker) which presented problems of data collection. As a replacement, we have added two more data-rich and meaningful sub-sub-indices (Safety and Security, and Militarization). We have added the years from 2008 to 2015, 2022 and 2023 as well as 8 new countries to the data. The country currently exhibiting the highest conflict risk is Afghanistan, whilst Iceland, Ireland, and Canada exhibit the lowest risk.

1. Assessing Geopolitical Risk through Conflict and Stability Metrics

1.1 Why is it relevant to measure conflicts and unrest in order to better understand the geopolitical risk?

Defining conflict is very difficult as the definition has evolved over time especially as conflicts have become more complicated and technologically advanced.

We can consider the differences between “conflicts” and “unrest”:

- conflicts have a high intensity, and usually comport some form of violence and can be within the state or with external actors;
- unrest is usually low intensity and within a country, often linked with local tensions. Unrest can then lead to violent forms of conflict, and it is therefore important to consider unrest as a potential form of geopolitical risk.

There are some key reasons why conflict and unrest are crucial factors in measuring geopolitical risk:

- disruption and instability can significantly affect a country’s economy, infrastructure, legal system, and overall stability;
- there is potential for escalation: minor unrest and conflicts can lead to greater instability, potentially in other regions and countries due to conflict spillovers;
- the safety and security of operating in a region is heavily affected by any potential violence that could be encountered.

In order to construct our sub-index, we have considered both factors that influence the creation of conflicts and unrest (indirect factors) and also measuring the nature and intensity of conflict (direct factors). Finally, we have a composite indicator which gives a level of the risk and uncertainty relating to conflict and unrest, which can be used along with other geopolitical risk indices in order to understand the geopolitical risk that one could face when doing business across the world. Our resulting sub-index is therefore useful both for companies interested in expanding their business or sustaining business abroad, as well as individuals interested in the geopolitical risk of various countries and territories across the world.

1.2 Updates

After consulting various geopolitical risk indices and previous years’ sub-index calculations, we expanded the number of states included in the sub-index to 160 and extended the timespan, adding years from 2008 to 2015, 2022 and 2023. We also made some methodology changes to enhance the accuracy and the meaningfulness of the overall sub-index.

The sub-sub-indices included in this study are: "Ongoing Conflict," "Global Terrorism Index," "Safety and Security," "Militarization," "Security Apparatus," "Fractionalized Elites (Leadership Cohesion)," and "Refugees and Internal Displacement"; an increase from 6 to 7 sub-sub-indices with respect to last year. This expansion came from the removal of the "Protest Tracker" sub-sub-index, which was replaced due to its structural data deficiencies and its limited impact on the sub-Index. It has been replaced by "Safety and Security" and "Militarization". Additionally, an error discovered in previous computations of the "Ongoing Conflict" index has been rectified.

The expanded list now encompasses a broader geographical spectrum, with the addition of: Côte d'Ivoire, Czech Republic, Cyprus, Eswatini, Myanmar, North Macedonia, Republic of Congo, and Gambia. As all countries with significant economic or military influence, power, and might, or relevant conflicts have been included, the decision was made to proceed with these sub-sub-indices

for the computation of our sub-Index. Each of the sub-sub-indices will subsequently be explained in further detail.

1.3 Research sources

We gathered data from two databases: Fund for Peace and Vision of Humanity.

The first, Fund for Peace (FFP) is a respected independent non-profit organisation headquartered in Washington D.C. It is renowned for its comprehensive research and analysis aimed at supporting policymakers and institutions across the world with context-specific data to diagnose countries' risks and vulnerabilities. It creates the Fragile State Index, and comprehensive index that ranks states based on their fragility, measuring several indicators of conflict likelihood, internal upheaval, and economic instability. The data taken from this source was used for the sub-sub-indices "Security Apparatus", "Fractionalized Elites (Leadership Cohesion)" and "Refugees and Internal Displacement". All the data for these sub-sub-indices are derived from three sources: pre-existing quantitative datasets, content analysis, and qualitative expert analysis, and it is triangulated and submitted to critical evaluation to arrive at the final ratings.

The second, Vision of Humanity, is a database founded in 2008 that provides research, statistics, and opinion with a focus on peace, security, and development. It is a non-partisan organization that provides coverage organized around important subjects and issues of global significance. The research, data, and analysis used by Vision of Humanity are provided mainly by the Institute for Economics and Peace, which is an internationally acclaimed think tank based in Sydney. The IEP is the author of a Global Peace Index and a Global Terrorism Index which were both used in the construction of our sub-index measuring the geopolitical risk from conflict and unrest across the world. Specifically, they were used for the sub-sub-indices "Ongoing Conflict", "Terrorism", "Militarization", and "Safety and Security".

2. Analysis of sub-sub-indices

2.1 Global peace index

The Global Peace Index (GPI), produced annually by the Institute for Economics & Peace (IEP), offers a comprehensive, data-driven analysis of the state of global peacefulness. The index ranks 163 countries, covering 99.7% of the world's population, using 23 qualitative and quantitative indicators. These indicators measure three domains of peace: “Societal Safety and Security”, “Ongoing Domestic and International Conflict”, and “Militarization” (Institute for Economics and Peace, *Global Peace Index 2023*).

Through its comprehensive and methodical approach, the GPI not only ranks countries by their relative States of peace but also explores the drivers of peace and identifies potential hotspots for future conflicts. This detailed examination helps to quantify peace and its benefits, promoting a greater understanding of the precise ways that peace contributes to a more prosperous global society.

In our sub-index, we use all three of sub-sub-indices included in the Global Peace Index:

- “Safety and Security” as a measure of the social and citizen-level safety and security.
- “Militarization” to measure the technical military and defence capabilities of a state.
- “Ongoing Conflict” to measure internal and external level of conflict.

2.1.1. Safety and Security

The Societal Safety and Security domain within the Global Peace Index (GPI) provides critical insights into the public's perception of crime and personal safety, as well as the level of political stability, the social impact of terrorism, and the prevalence of violence and homicide within a society. Additionally, it examines the rates of protests and violent demonstrations, which are significant indicators of societal discontent and unrest.

In many regions, an increase in the perception of crime can correlate with higher rates of violence and homicide, which in turn diminish the sense of safety among the population. Political instability often exacerbates these issues, leading to more frequent protests and violent clashes between citizens and security forces. The density of internal security personnel relative to the population is also a crucial metric. Higher densities can indicate a state's attempt to enforce order or control over unrest but can also reflect a response to higher crime rates.

2.1.2. Militarization

The Militarization domain of the Global Peace Index (GPI) examines various aspects of a nation's military characteristics and capabilities. Key components of this sub-sub-index include the level of military spending relative to GDP.

Additionally, the size and composition of a country's armed forces are critical factors. Large and diverse military forces equipped for various types of warfare can indicate a state's readiness or inclination towards conflict. The GPI also assesses the volume and scope of arms trade, including both imports and exports, which not only reflects a country's military capabilities but also its influence in the global arms market.

Contributions to international peacekeeping missions are another significant aspect analyzed in the Militarization sub-sub-index. Countries that actively contribute to peacekeeping efforts are often viewed as proponents of global stability, although the motives and effectiveness of these missions can vary.

Lastly, the availability and management of heavy weaponry and small arms within a country are crucial for understanding the potential for violence and conflict. Poor management and regulation of such weapons can lead to increased violence and instability, both domestically and internationally.

Through these measures, the Militarization sub-sub-index provides a comprehensive view of how militarization affects a country's peace and security.

2.1.3. Ongoing conflict

The "Ongoing Conflict" domain within the Global Peace Index (GPI) offers a detailed assessment of violence levels, analyzing six interconnected factors that reflect both internal and external conflicts. First, the domain evaluates the number and duration of internal conflicts, using data from the Uppsala Conflict Data Program (UCDP). This indicator tracks the frequency and longevity of internal disputes, providing insights into national stability.

This sub-sub-index also measures the number of deaths from external and internal organized conflicts. These metrics, derived from the UCDP Georeferenced Event Dataset, quantify the direct human costs of these conflicts, highlighting the severity of violence the country experiences from both domestic and international disputes.

Further, it assesses a country's role in external conflicts, considering the number of conflicts, their duration, and the country's involvement. All indicators' scores are standardized on a scale of 1-5, with qualitative indicators divided into five groups and quantitative metrics scored from 1 to 5. Since this sub-sub-index was originally scaled from 1 to 5, before using it to calculate the sub-index, we had to bring it to a scale from 0 to 10 in line with the other sub-sub-indices. However, the methodology applied in the previous years to make the rescaling was not correct because it led to data not scaled from 0 to 10 and so not comparable with the other sub-indices. To fix this problem we applied for all the years in the index the following formula:

$$10 * \frac{X - \text{Min Value}}{\text{Max Value} - \text{Min Value}}$$

2.2. Fragile State index

The Fragile States Index (FSI) is developed by the Fund for Peace (FFP) and aims at identifying pressures that may lead to state fragility. This index integrates both qualitative and quantitative data to evaluate a variety of social, economic, and political pressures faced by states. It is useful for understanding the conditions that could lead to instability or conflict (Fund for Peace (2023), *Fragile States Index Annual Report 2023*).

Key to the FSI's analysis are specific indicators like the "Security Apparatus", which assesses the potential threats from military or police forces that might undermine stability. The index also scrutinizes the challenges posed by large movements of "Refugees and Internally Displaced" persons (IDPs), recognizing how they can impact resources and social cohesion. Additionally, the

“Fractionalized Elites” indicator examines the degree of fragmentation among national leaders, highlighting how divisions can lead to political instability.

These indicators are part of a broader set that the FSI uses to provide insights into the vulnerabilities that might lead to State fragility, facilitating early intervention and more informed policy decisions. Through its comprehensive approach, the FSI not only points out current fragilities but also encourages deeper analysis into the factors that underpin national stability and resilience.

2.2.1. Security apparatus

The "Security Apparatus" indicator within the Fragile States Index (FSI) provides a critical assessment of a state's capacity to manage internal threats and maintain public order. This indicator evaluates the oversight and integrity of security and military forces, which are essential for understanding the State's ability to enforce law and order effectively. It also examines the relationship between the security forces and the population, which is pivotal for maintaining public trust and societal stability.

Additionally, the indicator looks at the government's response to internal security crises, assessing how effectively and appropriately state authorities react to maintain or restore peace. This response is a significant measure of a government's capability and readiness to handle unexpected disturbances that could escalate into broader conflicts.

Another crucial aspect of the "Security Apparatus" is the existence and regulation of unofficial forces, such as private militias. The presence of such groups can complicate the security landscape, potentially undermining the official security efforts and contributing to a fragmented security environment. The regulation, or lack thereof, of these forces can significantly impact the overall stability of the state.

Given that this sub-sub-index is quantified on a scale from 0 to 10, it allows for direct utilization in the FSI's analysis without the need for additional transformation, providing a clear and straightforward metric to gauge the effectiveness and integrity of a state's security apparatus.

2.2.2. Refugees and Internal Displacement

The "Refugees and Internal Displacement" sub-sub-index in the Fragile States Index is a critical measure that examines the impact of displacement crises on nations. This indicator assesses the pressures exerted by significant populations forced to abandon their homes due to a variety of causes, such as conflict, environmental disasters, or widespread health emergencies. It considers both those displaced within their own countries (internally displaced persons, IDPs) and those who cross international borders, becoming refugees.

This indicator not only tracks the number of individuals displaced by their nation of origin but also observes the ramifications for the receiving countries, particularly when these influxes tax already strained public services, potentially escalating humanitarian and security concerns.

By adjusting these indicators for the country's population and development trajectory, the index provides a nuanced perspective on the scale of displacement relative to the state's capacity to manage such crises. Furthermore, the year-on-year changes in these numbers are also considered, recognizing that displacement can be a protracted issue, with some individuals remaining displaced for years.

The use of a scale ranging from 0 to 10 for this sub-sub-index allows for a direct and unaltered application within the index, without needing any further transformation.

2.2.3. *Fractionalized Elites (Leadership Cohesion)*

The "Fractionalized Elites (Leadership Cohesion)" indicator, within the Fragile States Index, looks at the divisions and potential discord among a nation's governing elites. It delves into how state institutions and leadership may be fragmented along ethnic, class, or religious lines, potentially leading to conflict and instability.

Furthermore, this indicator examines the usage of nationalistic political language by ruling elites, including expressions of nationalism, xenophobia, or calls for communal solidarity. Such rhetoric can be particularly divisive and may signal an absence of inclusive leadership, one that represents the interests of the entire populace.

Additionally, the "Fractionalized Elites" measure considers the dynamics of power struggles, the competitiveness of the political landscape, and shifts in political authority. It also evaluates the credibility of electoral processes, an essential aspect of democratic governance, in countries where elections take place. This holistic approach to assessing leadership cohesion is crucial for understanding the underlying risks of political instability and conflict within a State.

As this sub-sub-index is already calibrated on a 0 to 10 scale, it can be directly employed in the analysis, providing a clear and immediate assessment of the extent to which a state's elites are unified or divided, and the implications of this for the country's stability and future.

2.3. *The Global Terrorism Index*

The Global Terrorism Index meticulously evaluates the scope and impact of terrorism in each country. It serves as an analytical tool to rank countries based on the extent to which terrorism affects them, utilizing a complex scoring system that encapsulates the multifaceted nature of terrorist activities. There are four weighted sub-indices that consider the total number of terrorist incidents, the number of fatalities and injuries resulting from these incidents, and the count of hostages taken each year. These components are weighted differently to reflect their varying degrees of impact on societies and states, with fatalities being given the largest weight (Institute for Economics and Peace (2023), *Global Terrorism Index 2023, Measuring the impact of terrorism*).

This index's approach recognizes the significance of the psychological aftermath that terrorist attacks impose on individuals and communities, which can persist long beyond the immediate event, by using a five-year weighted average.

The index's methodology is finely tuned to illustrate the unequal distribution of terrorism's reach, wherein certain nations endure exceptionally intense and frequent terrorist activities, while others are hardly touched by such violence. To address this uneven landscape, the index employs a logarithmic banding approach. This method not only allows for the granular differentiation between countries with varying levels of terrorism but also ensures that the index is responsive to both minor fluctuations and significant shifts in terrorism trends. The use of a 0 to 10 scale enables a nuanced representation of terrorism's impact, allowing the Index to function without the need for additional transformations, thus providing a clear and precise comparative framework.

2.4. *The Carnegie Global Protest Tracker – removed sub-sub-index*

The Carnegie Global Protest Tracker is an analytical tool developed to study and compare the triggers, motivations, and dimensions of significant anti-government protests around the world since 2017. Designed to serve researchers, decision-makers, and journalists, this tracker aims to highlight the ways in which protests influence global politics (Carnegie Endowment for International Peace, *Global Protest Tracker 2024*).

We have opted to replace the protest tracker with the "Safety & Security" and "Militarization" sub-sub-indices for several reasons. The protest tracker relies only on English-language sources, which may not adequately reflect the global landscape of protests, potentially excluding significant events not covered by the international media. Furthermore, it does not fully consider the distinct political environments and freedoms in non-democratic countries, where protests are often heavily restricted or prohibited.

Additionally, the Protest Tracker's exclusive focus on anti-government protests means it does not account for other forms of demonstrations that can be equally telling of a nation's sociopolitical climate, such as labor or environmental protests. These omissions are significant, especially in countries with high political stability, where such protests may be the primary form of public expression and contestation.

Therefore, in the interest of capturing a more comprehensive and nuanced view of societal stability and State capacity, the "Safety & Security" and "Militarization" indicators from the Global Peace Index offer a broader perspective. These sub-sub-indices consider not only the incidence and management of internal conflicts and public order but also the role and integrity of military forces and their relationship with society. In doing so, they provide a more rounded view of the conditions conducive to peace or conflict within a state, aligning with our aim to evaluate stability and resilience more effectively.

2.5. *Construction of the Index*

The values for each of the sub-sub-indices were transformed onto the same scale from 0-10 and are represented in 7 tables with a value for each country per year from 2008 to 2023. Our sub-index is then a weighted average of the 7 sub-sub-indices. This gave us a rating for each country from 0-10, with a lower figure indicating a lower geopolitical risk for conflict and unrest. The weights used can be seen in the following table.

Sub-index	Weights
<i>Ongoing Conflict</i>	30%
<i>Global Terrorism Index</i>	13,75%
<i>Safety and Security</i>	7,5%
<i>Militarisation</i>	7,5%
<i>Security Apparatus</i>	13,75%
<i>Fractionalized Elites (leadership cohesion)</i>	13,75%
<i>Refugees and IDPs</i>	13,75%

As noted previously, we removed the sub-sub-index "Protest tracker" and replaced it with "Safety and Security" and "Militarization". To keep the sum of the weights equal to 1, we decided to give a

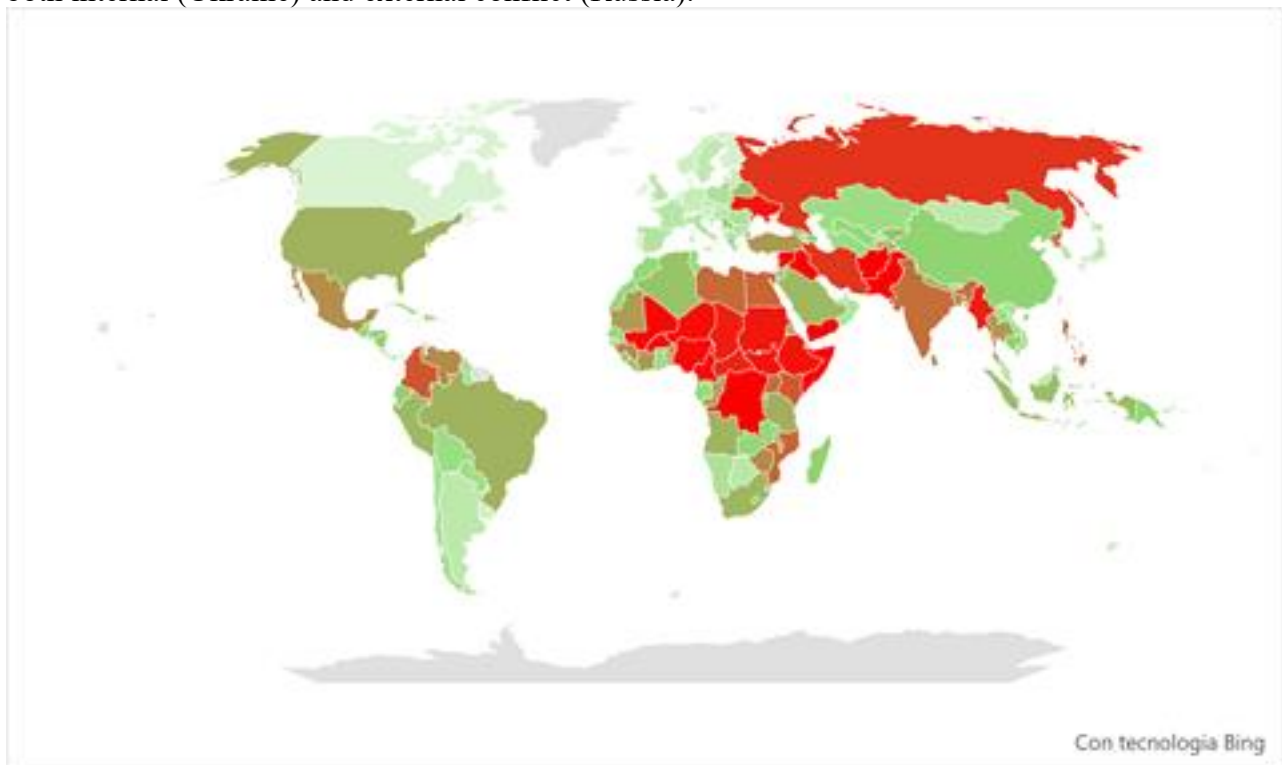
weight of 7.5% to both “Safety and security” and to “Militaryization”, as they represent internal and external threats of conflict and unrest. By considering both factors equally, we obtain a holistic view of the threats from inside and outside the State itself to its stability.

The final output is a table with the countries in alphabetical order such as the following example:

Country	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Afghanistan	7,65	8,00	8,17	8,97	9,13	9,13	8,79	8,59	8,62	8,87	9,03	9,17	9,20	9,09	9,30	8,93
Albania	2,59	2,64	2,72	2,97	4,26	2,93	2,84	2,72	2,64	2,74	2,68	2,63	2,80	2,70	2,69	2,68
Algeria	4,67	4,86	4,99	6,23	6,72	6,02	5,73	5,63	5,26	5,22	5,24	5,24	5,14	4,82	4,93	4,38
Angola	4,05	4,26	3,94	4,75	5,19	4,45	4,45	4,02	3,87	3,86	4,09	4,01	3,79	3,98	3,91	4,66
Argentina	1,60	2,03	2,18	2,58	4,24	2,70	2,40	2,27	2,28	2,52	2,41	2,41	2,34	2,32	2,34	2,31
Armenia	4,18	4,47	4,57	4,62	5,17	4,64	4,57	4,29	4,24	4,50	4,35	4,22	3,76	4,04	3,93	3,82
Australia	0,85	0,93	0,96	1,24	3,00	1,18	1,53	1,49	1,27	1,43	1,45	1,43	1,57	1,45	1,82	1,84

The stronger the red color the more the country exhibits geopolitical risk with respect to the conflict and unrest dimensions. Green on the other hand indicates a country with relatively low geopolitical risk for conflict and unrest.

Below is a world map which represents the sub-index in 2023. It appears immediately consistent with last year's political events. Showing a higher conflict and unrest risk in Africa and Middle East as well as in Russia and Ukraine. These two countries demonstrate that our sub-index is receptive to both internal (Ukraine) and external conflict (Russia).



3. Results and Conclusions

3.1 Results

The results for 2023 capture the changes in the geopolitical situation of the last two years. We notice an increase in the mean and median values, which reflect the increase in geopolitical conflict and instability around the world. Countries from the Americas, Western Europe, and Eastern Asia have low ratings and appear to be safe countries from the perspective of geopolitical risk. However, from 2021 we can see an increase in conflict at the European level as well. This is evidenced not only by the values of Russia (6.80) and Ukraine (7.58), which are involved in conflict, but also by the increase in conflict in neighboring countries such as Moldova and Belarus. Moreover, in Central America there are signs of an increase in conflict and unrest. Countries in Central Asia as well as Africa are more heterogeneous, with countries such as Botswana having a low score (2.46) and others, such as Somalia being much more unsafe (8.52). Overall, the countries with the highest scores are Afghanistan (8.93), which has been under the control of Taliban from August 2021 and Democratic Republic of the Congo (8.90), which is under pressure due to violent clashes between Democratic Republic of Congo (DRC)'s army and Rwandan-backed Tutsi-led rebels in eastern Congo. On the other hand, the countries scoring the lowest are Iceland (0.98), Ireland (1.21), and Canada (1.31).

We also get the following data from the scores of 2023:

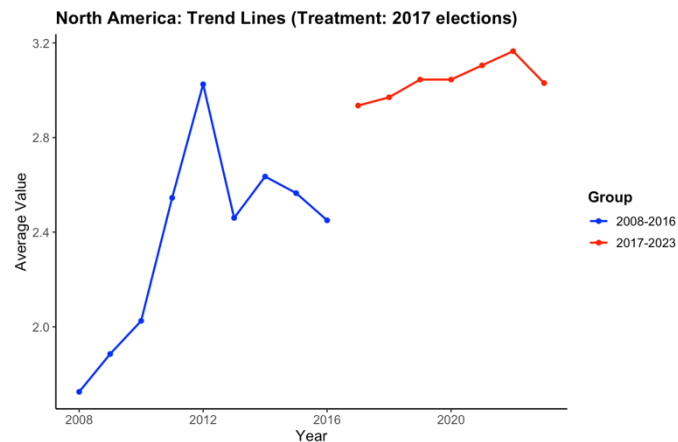
Mean	Min	First quartile	Median	Third quartile	Max
4.23	0.98	2.73	4.02	5.30	8.93

While in 2021 it was possible to say that most of the countries would not be considered as geopolitically risky from the perspective of conflict and unrest, today the scenario seems worsened. For example, only 14 countries had a score superior to 6 in 2021, which became 22 in 2022 and 24 in 2023. Of these countries, 14 are in Africa and 10 in Central Asia or Middle East.

3.2 Analysis of Regional Trend Lines

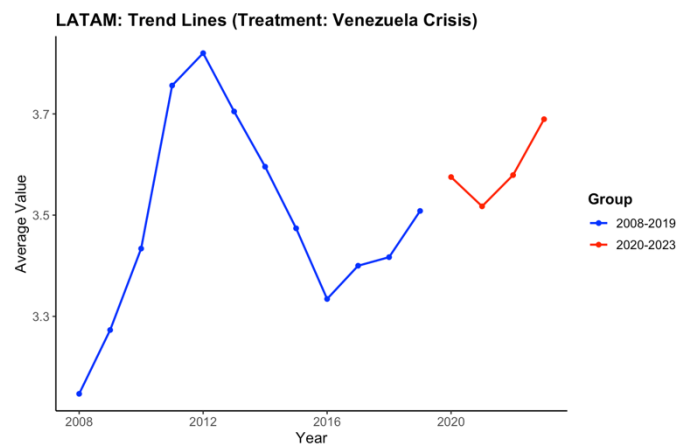
The graphs presented in this paragraph highlight geopolitical trend lines for different regions of the world, specifically North America, Latin America, Asia, Europe, Africa, and the Middle East, from 2008 to 2023. Each of these graphs illustrates the evolution of regional geopolitical situations, providing an overview of tensions, crises, and key developments that have influenced each region. Comparing these periods allows us to observe the recent geopolitical trajectory and how it relates to previous trends.

3.2.1 North America



From 2017 to 2022, the increase in instability in North America was significantly influenced by Donald Trump's election as President of the United States (2016-2020), leading to an increase in more aggressive and divisive politics, both on the domestic and international level. This led to a marked increase in the "Fractionalized Elites" sub-sub-index for the United States. The "Security Apparatus" of the US has been steadily increasing also, showing the United States' increasing capabilities on a military and internal security front. These two sub-sub-indices have driven most of the increase in the conflict and unrest in the US. Canada on the other hand has consistently been one of the countries with the lowest and most stable risk level for conflict and unrest, and therefore the vast majority of the changes have been driven by instability in the US.

3.2.2 LATAM

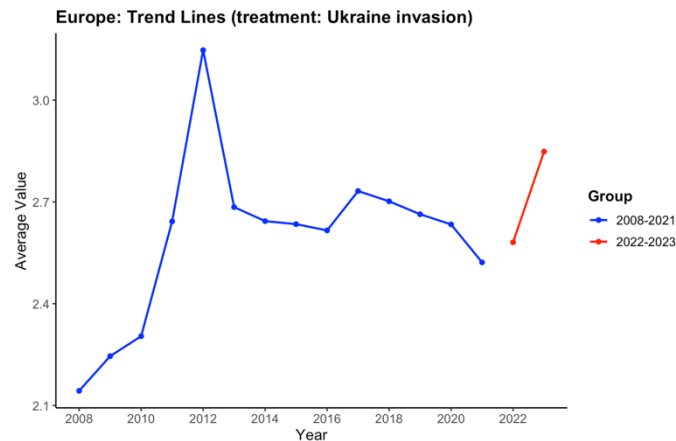


Since 2012, the geopolitical index for Latin America has shown a downward trend, reflecting a reduction in geopolitical challenges. This trend culminated in September of the same year, when the Colombian government signed a peace agreement with the Revolutionary Armed Forces of Colombia (FARC), ending an armed conflict that had lasted more than 50 years. This agreement marked a significant step forward for the stability of Colombia and the entire region.

However, from 2017 onwards, the geopolitical situation in Latin America experienced a reversal. The political and economic crisis in Venezuela played a central role in this shift, leading to growing instability in the region. In January 2019, the situation worsened further when Juan Guaidó, the president of Venezuela's National Assembly, declared himself interim president, challenging Nicolás Maduro's authority. This move triggered a series of events, including a political rivalry and the formation of a parallel government, dividing the international community in recognizing Venezuela's legitimate authority.

At the same time, the economic and social crisis in Venezuela continued to worsen, with hyperinflation, shortages of essential goods, and infrastructure problems further deteriorating living conditions. This situation contributed to a growing migration crisis, with many Venezuelans seeking refuge in neighboring countries such as Colombia and Brazil, creating additional social and geopolitical pressures.

3.2.3 Europe

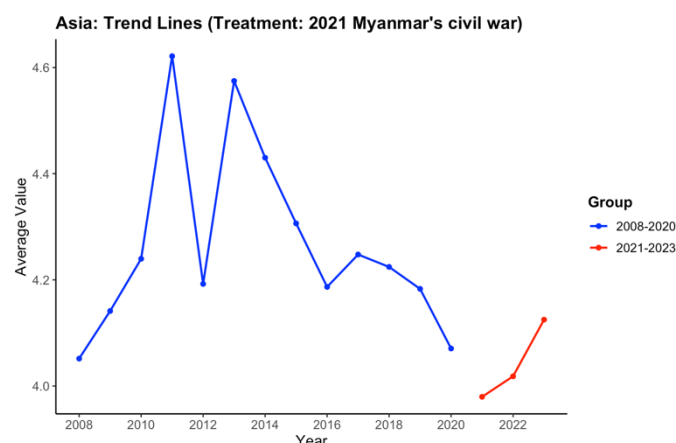


In the initial period, a significant increase is observed until 2011, probably influenced by the Arab Spring, which generated uprisings and conflicts in many North African and Middle Eastern countries. This event also had geopolitical repercussions on Europe, contributing to a climate of instability and uncertainty.

After this period, the index shows a more stable trend, with a slight decline until 2020, likely reflecting geopolitical stabilization efforts and measures to maintain peace within Europe.

However, from 2022 onwards, the index experiences a significant increase, likely due to the Russian invasion of Ukraine. This event triggered geopolitical tensions throughout the region, greatly influencing the index and signaling a period of greater geopolitical risk and instability in Europe.

3.2.4 Asia

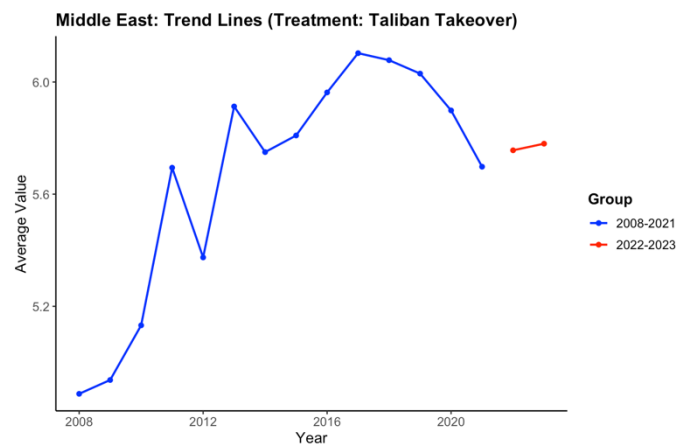


The graph for the Asian region shows a complex geopolitical trend between 2008 and 2023. After an initial increase, the index shows a declining trend from 2013 to 2020, indicating a reduction in geopolitical risk.

However, from 2021 onwards, a significant trend reversal is noted, with a sharp increase in the index. This jump can be attributed to various geopolitical events, including the Myanmar crisis. In February

2021, the military coup in the country caused political and social instability, with consequences spreading regionally and affecting the entire Asian geopolitical landscape.

3.2.5 Middle East

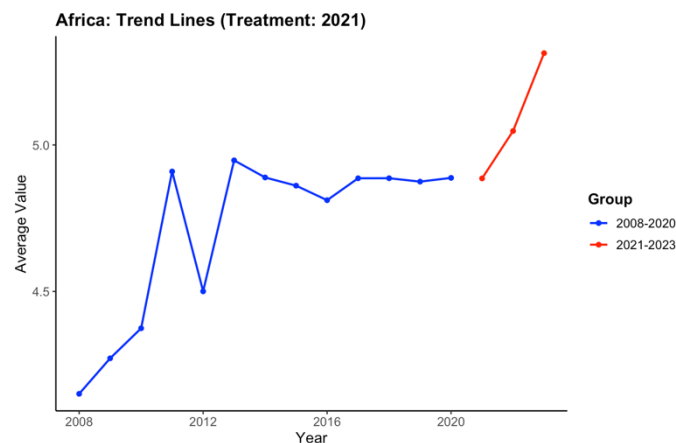


The index shows a positive trend between 2008 and 2016, reflecting the effects of the Arab Spring. This sociopolitical movement, which began in 2010, caused significant turmoil in many countries in the region, including Egypt, Libya, and Syria, leading to changes in government, civil conflicts, and internal instability.

The slight negative trend stabilizes in the following years, but the situation changes again around 2021-2022. Here, the index shows an increase that coincides with the return to power of the Taliban in Afghanistan in 2021, causing significant geopolitical destabilization in the region.

The situation in Afghanistan led to a deterioration in security conditions, fueling internal conflicts and causing mass migration, which contributed to the increase in the geopolitical index for the region.

3.2.6 Africa



The graph shows a positive trend in geopolitical index values in the African region in recent years, reflecting a growing climate of geopolitical uncertainty. This trend can be attributed to several key events.

The civil war in Ethiopia, which began in 2020, continued to affect the stability of the country and the surrounding region, contributing to geopolitical tensions. The situation in Sudan added further instability, with the military coup of 2021 having repercussions in 2022, causing protests and internal political tensions.

In addition, several elections held in 2022 shaped the African political scene. In Kenya, presidential elections resulted in the victory of William Ruto, while in Angola, the People's Movement for the Liberation of Angola (MPLA) retained power. These political events, along with global economic pressures, have contributed to a climate of geopolitical uncertainty in Africa.

4. Limitations

Our index has some limitations, both structural and conceptual limitations. Beginning with the structural limitations, we only have data going back to 2008, and for Global Terrorism Index, for the years 2008-2010 this sub-sub-index has been calculated manually according to the formula:

Dimension	Weight
Total Number of Incidents	1
Total Number of Fatalities	3
Total Number of Injuries	0.5
Sum of Property Damages Measure	Between 0 and 3 depending on severity

This formula is used in the Global Terrorism Index. Missing data were taken from the Global Terrorism Database of the University of Maryland (National Consortium for the Study of Terrorism and Responses to Terrorism 2023, *Global Terrorism Database*).

Then, to add years before 2008 it would be necessary to change almost all the sub-sub-indices, maybe replacing them with fewer sub-sub-indices with data which go further back in time. However, this could be done only by reducing the level of detail and significance we achieved in our sub-index. Another issue found was with South Sudan, which became a country only in 2011. Therefore for 2008-2011, its values are blank.

We have 160 countries including the most major war zones and advanced economies. Moreover, the countries included in the index account for 99% of the world population. We are limited due to some sub-sub-indices not having data available for a higher number of countries. Two important territories that are missing from our sub-index include Taiwan and Kosovo, both territories with significant geopolitical instability, though there is a lack of accurate data for these areas for some sub-sub-indices, and we deemed that it wouldn't be prudent to estimate the data due to particularities of these regions.

Another way to improve the sub-index could be to implement a statistical method to choose the weights of the different sub-sub-indices, as for the index they have been chosen theoretically so far. For example, giving more weight to the sub-sub-indices which have more explanatory power on the final sub-index. This could potentially improve the statistical properties of the sub-index and therefore its analytical properties for use in estimating the overall geopolitical risk.

It is also important to underline that the Sub-Index focuses only on conflict and unrest, and it does not appear sufficient to base an investment decision only on the Sub-Index alone. Therefore, it should be used in accordance with the other sub-indices depending on the specific needs of the business or individual using the index, as in general these are complex needs that won't be covered only through measuring the conflict and unrest in a country.

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