Geopolitical Risk Index | Case Studies | 2024

HOW MUCH ARE COUNTRIES GLOBALIZED?

Construction of a globalization sub-index

Globalization has shaped our world in profound ways across various domains. Nowadays, as stated by Elizabeth Braw in a speech at Bocconi University, recent events show a different story – a more deglobalized world, divided into spheres of influence is coming.

In our work, we capture four different dimensions of globalization: 1. Trade and investments, 2. Tech, Innovation and People, 3. Multinational Enterprises, and 4. Politics.

The purpose of our work is to understand, formalize, and capture a country's globalization level.

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INDEX COMPONENTS

FINAL INDEX METHODOLOGY

We capture four different dimensions of globalization:

1. Trade and Investments

2. Technology, Innovation and People

3. Multinational Enterprises

4. Politics

To build up the final globalization sub-index we computed a simple average of the four subindexes that are part of the final index.

ACHIEVEMENT

We were able to expand our final globalization sub-index both geographically and temporally. Indeed, the final index spans **from 2009 to 2022** and includes **216 Countries.** Overall, compared to last year's index which included data until 2020 for 216 countries, **the explanatory power of our index increased.**

SUB-SUB INDEX COMPONENTS

Exports and Imports

→ These variables are the first we have to consider to evaluate the relative importance of the global market for the economy of each country

Foreign Direct Investments

→ With FDI we can capture medium-long term partnerships – as interaction among economies goes beyond simple trade - and the importance of one country for the global economy.

Portfolio Investments

→ Portfolio Investments capture the short-term interaction between economies (investment in <10% shares of a company). As with FDI, we considered the net flows.

SOURCE AND METHODOLOGY

- **Data come from the World Bank Dataset**

- **We gathered data for the highest possible number of countries. Then we normalized the absolute values by considering them as % of GDP, to have a clear understanding of the four aforementioned dimensions in the economy.**

SUB-SUB INDEX COMPONENTS

Internet Users

The diffusion of the internet and its accessibility gives a country a global perspective, helping to connect with other areas of the world, with a positive impact on business, education, and leisure. Therefore, measuring digital readiness is crucial for a globalization index.

International Tourism

The movement of people is another aspect of globalization that we have to take into account. Being able to attract people from all around the world is fundamental to develop the economy of a country, and it has a crucial impact on globalization. We use the number of arrivals in a country.

International Students

This index bridges between international mobility and flows of cultural stock. It captures a very dynamic type of cultural exchange, the interactions among international students, which are quite impactful as they happen in a phase where young adults are very open to new inputs and ideas.
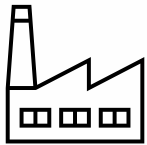
SOURCE AND METHODOLOGY

- **The source of Data are: World Bank for Internet Users, UNWTO for International Tourism, and UNESCO Institute for Statistics for International Students.**
- **In the case of Internet Users for each country we considered the share of internet users as a percentage of total population**

SUB-SUB INDEX COMPONENTS

KOF Cultural Globalisation ➡️ This index considers the trade in cultural goods and in personal services, the number of international trademarks and the number of McDonald's restaurants and IKEA stores.

SOURCE AND METHODOLOGY

- **The source is the KOF index developed by ETH Zurich**

- **The time horizon has been expanded two years to include 2021 (latest year available) and it contains data for 201 countries.**

SUB-SUB INDEX COMPONENTS

Harmful policies ➡️ Politics play a central role in the globalization process of a country. By introducing for example tariffs or other protectionist policies, governments can slow down the process of globalization.

Liberal policies ➡️ On the other hand, a policy can speed up the process of economic and human integration in the global economy by lowering entry barriers to the economy.

SOURCE AND METHODOLOGY

- **Data collected from the Global Trade Alert (GTA) by the St. Gallen Endowment for Prosperity through Trade (SGEPT).**

- **We considered the absolute number of liberal and harmful policies. Moreover, for each country we considered both the policies implemented and the policies it was subject to. The Politics Exposure and Contribution variables are computed, respectively, as the difference between the exposure to liberal policies and the exposure to harmful ones, and the difference between the contribution to liberal policies and the contribution to harmful ones.**

THE EVOLUTION IN EUROPE
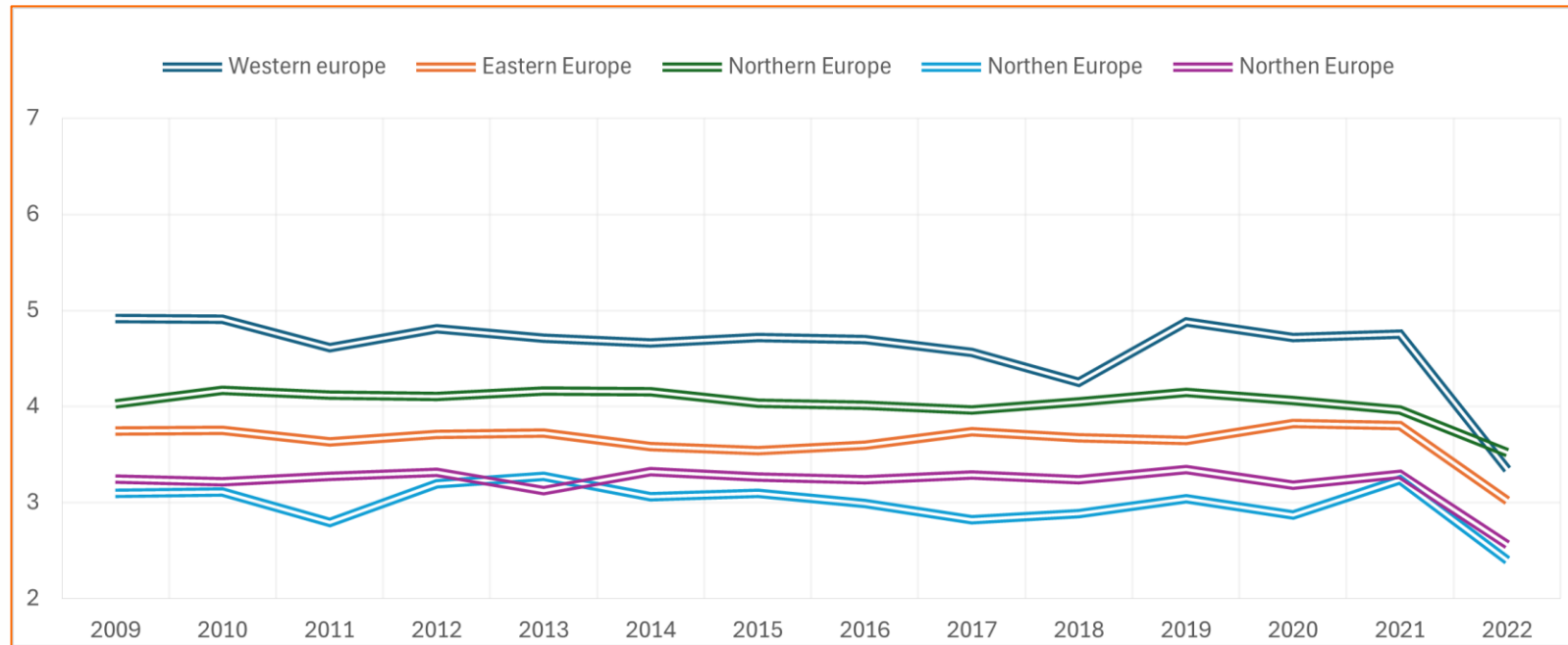
In Europe, we see quite a stable situation in the past 12 years, with western Europe leading in terms of globalization, compared to other macro-areas like Eastern and Southern Europe and the Baltics. In 2021, the war hit hard all the European regions, that saw a remarkable drop in the levels of globalization.

Globalization sub-index | Geopolitical Risk Index - 2024
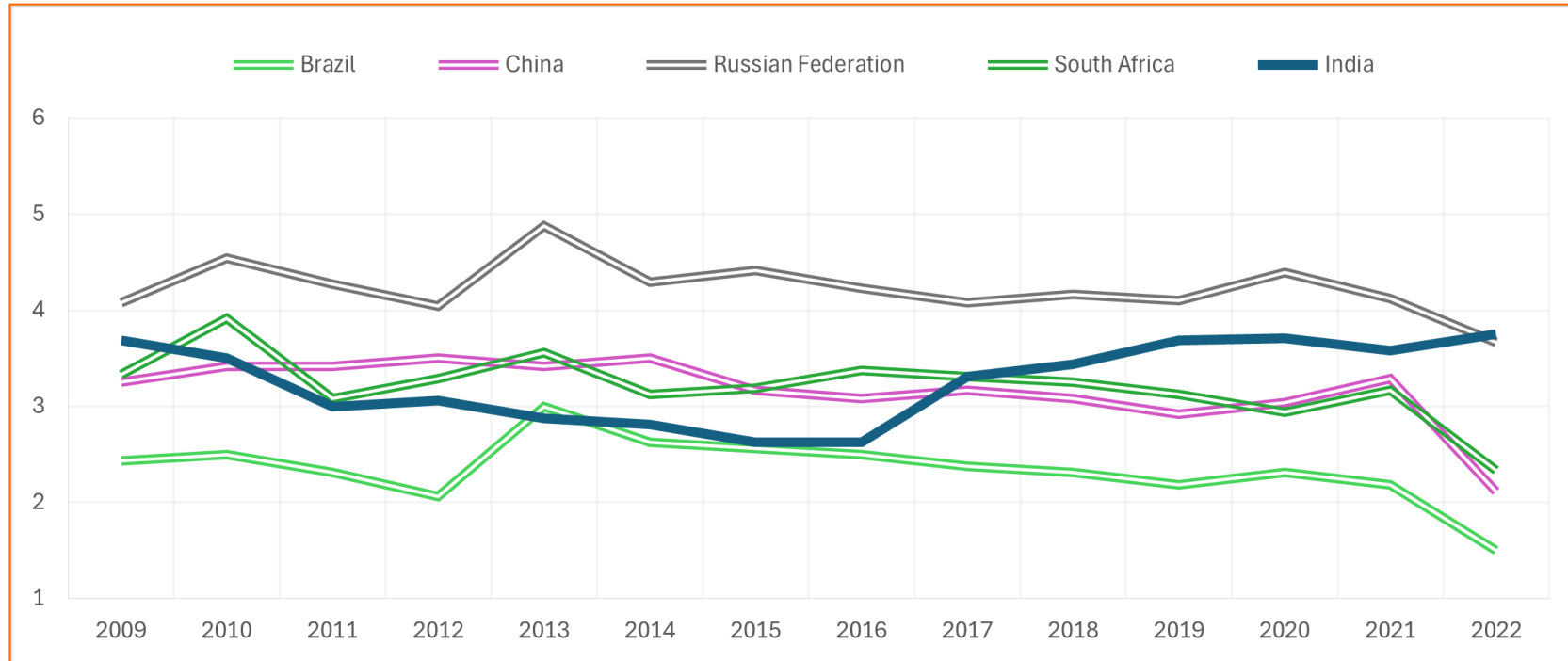
BRICS

Among the (original) BRICS countries, Russia was the most globalized one at the end of 2021 (before the full-scale invasion of Ukraine). It is important to note the process of globalization that took place in India from 2016 to 2022 and helped the country overcome China in this measure and reach Russia. China suffered from the trade war with the United States.

Globalization sub-index | Geopolitical Risk Index - 2024

THE DARK SIDE OF GOVERNMENT INTERFERENCE

Construction of a government interference sub-index

As stated by Luttwak (1990), the end of the Cold War marks the conclusion of military confrontation but in a realistic perspective, States aim at securing national power and operate inside their borders to strengthen the domestic power through tax revenues, regulation, subsidies and supporting innovation. The levels of government intervention vary considerably amongst different countries and areas of the World, and mainly depend on the political regime and ideology. The purpose of our work is to understand and formalize a country's government interference level exploitable in the future by business and non-business stakeholders.

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GOVERNMENT INTERFERENCE INDEX

INDEX COMPONENTS

FINAL INDEX METHODOLOGY

We capture six different dimensions of globalization:

1. Perceived Corruption

2. Government Spending

3. Freedom to Trade

4. Property rights

5. Regulation

6. Taxation

To build up the final globalization sub-index we computed a simple average of the six subindexes that are part of the final index.

💡 ACHIEVEMENT

We were able to expand our final government interference sub-index both geographically and temporally. Indeed, the final index spans **from 2000 to 2022** and includes **165 Countries.** Overall, compared to last year's index which included only 2020 and 2021 data for 37 countries, **the explanatory power of the index increased significantly.**

SUB-SUB INDEX COMPONENTS
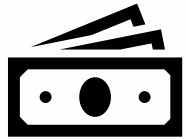
Perceived Corruption ➡️ Corruption is overwhelmingly perpetrated by businesses to "facilitate" processes with public administrators and officials, making it a rent extracted by government officials from the private sector.
Thus, it can, in our opinion, be considered an "interference" of governments in private business practices, as public officials that ask for bribes to get things done cause a distortion in the free market competitive environment.
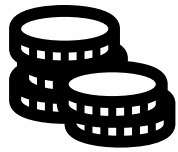
SOURCE AND METHODOLOGY 🔍

- **As a source, we moved away from the World Bank Enterprise Survey, and we decide to use data collected by "Transparency International". The CPI ranks countries around the globe by their perceived levels of public sector corruption, scoring on a scale of 0 (highly corrupt) to 100 (very clean).**

- **To obtain the final index, we did a series of analyses using also Python to collect data in a unique and uniform database.**

SUB-SUB INDEX COMPONENTS

Government Spending ➡️

This index takes into account government spending as a percentage of GDP. It allows us to capture the magnitude of a government's effort in influencing market dynamics

SOURCE AND METHODOLOGY 🔍

- **The source for this index is the International Monetary Fund.**

- **The computation method of the Index has been modified in order to be coherent with the other indexes, and it is now calculated using percentiles.**

SUBSIDIES

FREEDOM TO TRADE

Freedom to Trade

This subindex is comprised of two inputs: the trade-weighted average tariff rate and a qualitative evaluation of nontariff barriers ("NTBs").

Overall, it constitutes a more comprehensive description of the government interference in the countries' trades compared to the use of the MFN tariffs alone, as done in the previous year. This subindex now includes 186 countries spanning from 2000 to 2023.

SOURCE AND METHODOLOGY

- **We found a new data source from the Heritage Foundation, which is the Index of Economic Freedom, and in particular, the Trade Freedom Subindex.**

- **The weighted average tariff uses weights for each tariff based on the share of imports for each good.**

- **The NTBs, the types included in the subindex are quantity regulatory and customs restrictions, direct government intervention and the number of nontariff measures in force as calculated by the WTO.**

SUB-SUB INDEX COMPONENTS

Property Rights

➡️ It can represent instances in which excessive government intervention may result in restriction of property rights, leading investors to be discouraged and not incentivized to invest in the country.

SOURCE AND METHODOLOGY 🔍

- **We found a new data source from the Heritage think tank.**

- **The score is calculated as the average of three other sub-indexes: Risk of expropriation, Respect for intellectual property rights, and quality of contract enforcement, property rights, and law enforcement. Each sub-index is then converted on a 0-100 scale.**

SUB-SUB INDEX COMPONENTS

Regulations

The regulation environment is important to assess government interference, because the regulatory environment can directly influence the degree of control and intervention exerted by the government in various aspcets of public and private life.

SOURCE AND METHODOLOGY

- **The Regulation index come from the Fraser Institute dataset.**

- **IT is composed of the following sub-indexes: credit market regulations, labour market regulations, and business regulations. Each sub-index is composed of different indices, which gives us the possibility to obtain an index covering a broader definition of the regulation environment of a country than in the index used in the previous years.**

SUB-SUB INDEX COMPONENTS

Taxation

The level of taxation imposed by the government can reflect its intervention in the economy. Higher tax rates, especially on income, corporate profits, and consumption, often indicate greater government involvement.

SOURCE AND METHODOLOGY

- **Data from the Economic Freedom of the World Index released by the Fraser Institute. The Sub-Index from the Fraser Institute is based on Top marginal income tax rate and Top marginal income and payroll tax rates. In this index, countries with higher marginal income and payroll (wage) tax rates that take effect at lower income thresholds received lower ratings.**

- **Since data is up to 2021, we decided to estimate a score for 2022 by assigning weights of 50%, 30% and 20% to the three previous years (2021, 2020, and 2019) respectively, as we expect changes in taxation and regulation to be slow and these rules to remain unchanged for long periods of time.**
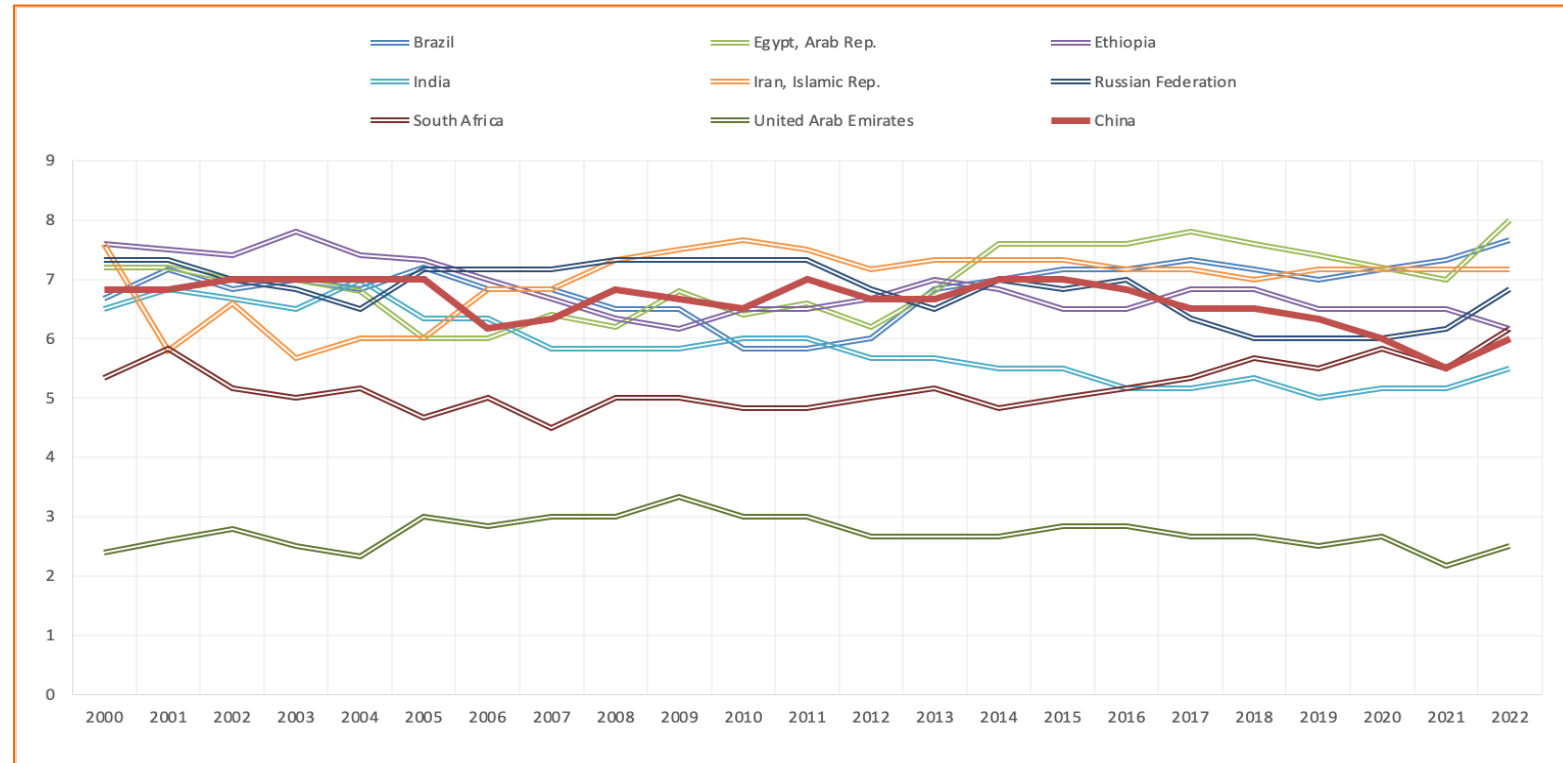
CHINA, RUSSIA, AND UNITED STATES
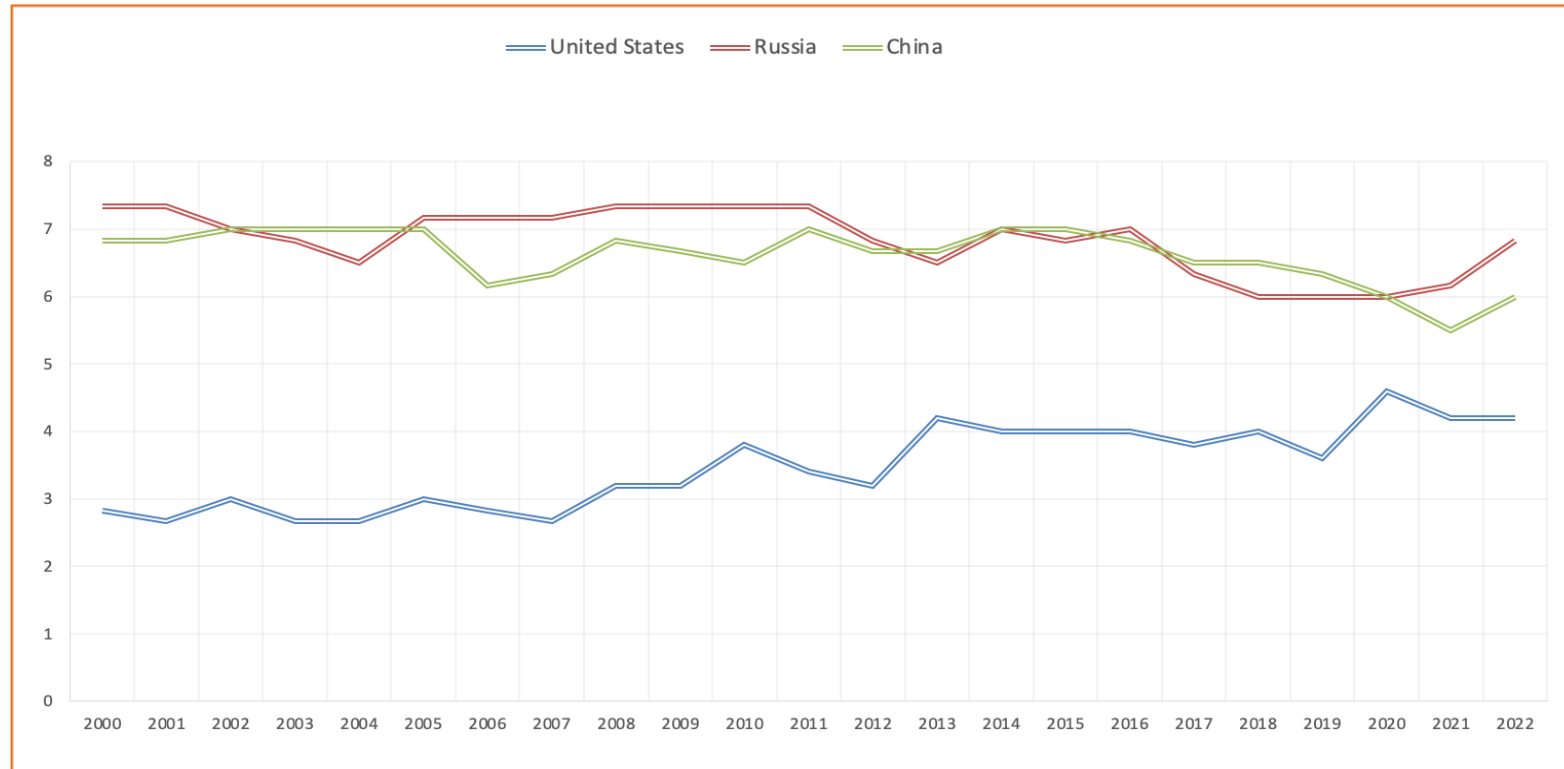
The charts represents the degree of interference of the government in the economy. Russia and China, as expected, have a higher degree of government interference. In the US, instead, we see an increasing trend, probably due to stronger fiscal stimulus as a consequence of the Great Financial Crisis and the pandemic.
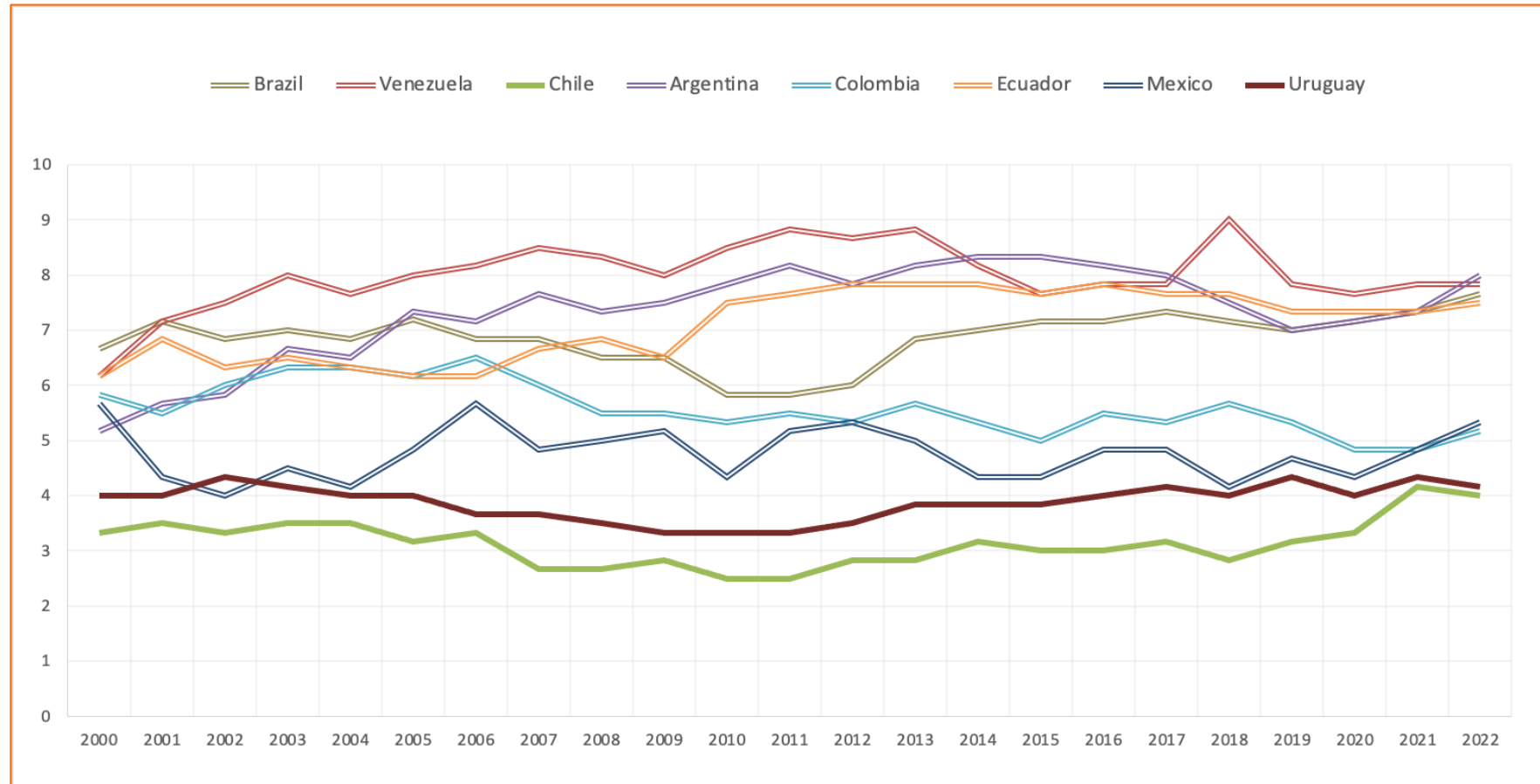
Government interference sub-index | Geopolitical Risk Index - 2024

BRICS

Government interference sub-index | Geopolitical Risk Index - 2024

BRICS countries, except for the United Arab Emirates, show a high degree of government interference. This is probably due to the increasing spending and subsidies programs backed by governments. The United Arab Emirates stand out with respect to the rest of the countries, among which the only one showing a decreasing trend is India.

LATIN AMERICA

Government interference sub-index | Geopolitical Risk Index - 2024

From the Government Interference index, it is possible to notice the long-term effects of liberalization policies in Latin America, mainly in Chile and Uruguay.

GEOPOLITICAL RISK – FINAL INDEX

INDEX COMPONENTS

We capture six different dimensions of geopolitical risk:

1. Political risk

2. Government interference

3. Globalization

4. Conflict and unrest

5. Geographical risk

6. Geoeconomic dependency

METHODOLOGY

To consolidate the six subindexes and create the final geopolitical index we had to (i) standardize the names of the countries, (ii) create a list of countries that were present in every subindex, (iii) use the Excel index match formula to fetch the data from the subindexes and (iv) weight the subindexes according to the percentages below.

We assigned the following weights to the six subindexes: 25% to political risk (-5% vs last year), 15% to government interference (+5% vs last year), 10% to globalization, 30% to conflict and unrest, 10% to geographical risk and 15% to geoeconomic dependency.

ACHIEVEMENT

We were able to expand our final geopolitical risk index both geographically and temporally. Indeed, the final index spans **from 2011 to 2022** and includes **147 Countries.** Overall, compared to last year's index which included only 2020 and 2021 data for 33 countries, **the explanatory power of the index has increased significantly.**

GEOPOLITICAL RISK - RESULTS

MAIN FINDINGS

We highlight the results for the top 5 countries (with the lowest geopolitical risk) and the worst 5 (with the highest geopolitical risk).

Only the countries for which all the 6 sub-Indexes were available compose the final set of countries, which includes 147 states from 4 different continents (Europe, America, Asia, and Africa). We have ranked the countries from the lowest to the highest Final Geopolitical Risk Index value. The scale goes from 0 to 10, the lowest score being the safest country and the highest score being the riskiest country.

Ireland emerges as the safest country of our set, over the last 3 years, with a score slightly above 2. Yemen instead is the riskiest, with a score of 7.74, followed by Syria and Central African Republic. Those countries are torn by wars, especially in Yemen there is a civil war that started more than 10 years ago.

Country	Final Geopolitical Risk Index 2022	2020	2021	2022
Top 5				
Ireland	2.35	1	1	1
Singapore	2.83	2	2	2
New Zealand	3.01	6	4	3
South Korea	3.13	14	17	4
Finland	3.14	3	5	5
Worst 5				
Mali	7.01	141	140	143
Mauritania	7.02	140	136	144
Central African Republic	7.34	145	145	145
Syrian Arab Republic	7.50	146	147	146
Yemen	7.74	147	146	147

REFERENCES FOR GLOBALIZATION SUB-INDEX

Trade and Investments sub-index

https://data.worldbank.org/indicator/NE.IMP.GNFS.ZS (import of G&S)

https://data.worldbank.org/indicator/NE.EXP.GNFS.ZS (export of G&S)

https://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD (foreign direct investments)

https://data.worldbank.org/indicator/BN.KLT.PTXL.CD (portfolio investments)

Tech, Innovation and People sub-index

https://data.worldbank.org/indicator/ST.INT.ARVL (Int. Tourism (%tot))

https://data.worldbank.org/indicator/IT.NET.USER.ZS?year_high_desc=true (Internet users (%))

https://uis.unesco.org/en/glossary-term/inbound-mobility-rate (Inbound Mobility Rate)

REFERENCES FOR GLOBALIZATION SUB-INDEX

Multinational Enterprises sub-index

https://kof.ethz.ch/en/news-and-events/media/press-releases/2023/12/globalisation-index.html

Politics sub-index

https://www.globaltradealert.org/global_dynamics

REFERENCES FOR GOVERNMENT INTERFERENCE SUB-INDEX

Corruption Perception sub-index

2000 - CPI - Transparency.org

Property Right sub-index

https://www.heritage.org/index/pages/all-country-scores

Regulation sub-index

https://www.fraserinstitute.org/economic-freedom/dataset?geozone=world&page=dataset&min-year=2&max-year=0&filter=0

REFERENCES FOR GOVERNMENT INTERFERENCE SUB-INDEX

Government Spendings sub-index

https://www.imf.org/external/datamapper/exp@FPP/USA/FRA/JPN/GBR/SWE/ESP/ITA/ZAF/IND

https://www.nottingham.ac.uk/credit/documents/papers/00-14.pdf

Trade Freedom sub-index

https://www.heritage.org/index/pages/all-country-scores

Taxation sub-index

https://www.fraserinstitute.org/economic-freedom/dataset?geozone=world&page=dataset&min-year=2&max-year=0&filter=0

THANK YOU FOR YOUR ATTENTION!