Bilkent University, Spring 2023-2024

A Fragmented World: Dynamics of fragmentation in the global economic order

BEST Clan

Can Umur Akman (ECON)
Efe Babuşcu (IR)
Buket Çatalkaya (POLS)
Selin Çilkoparan (ECON)
Talia Türkan Çıdam (IR)
İlke Kaygısız (IR)
GE 400-3

Final Report

Submitted in Partial Fulfillment of the Requirements for GE 400
Transdisciplinary Senior Project Course
19 May 2024

Abstract

With the 2008 Global Financial Crisis, a long-lasting period of globalization and economic integration emerging since the post-World War II era driven mainly by neoliberal institutions and values was interrupted, and fragmentation emerged as a new threat to the global economic order. This transdisciplinary research investigates the dynamics of geopolitical and geoeconomic fragmentation in the 21st century, exploring the causality between these two types of fragmentation and their impacts on the international system. Geopolitical fragmentation is defined as the division of the global order into multiple blocs or poles with varying political, economic, financial, and strategic autonomy. On the other hand, geoeconomic fragmentation is the dissolution of the global trade and financial system into regional blocs due to various factors, such as Regional Trade Agreements, trade restrictions, and barriers. This research combines a comprehensive literature review and empirical analysis using data spanning 20 years and 194 countries. The study utilizes a unique and innovative Geopolitical Affinity Proxy Model based on similarities in countries' UN General Assembly voting patterns and the OLS Regression model to assess the interdependence and interactions of geopolitical and geoeconomic fragmentation. The study concludes that there is a strong causality that geoeconomic fragmentation influences geopolitical dynamics, but it finds that the reverse relationship is less apparent. The results and discussion around them highlight the importance of multilateral cooperation on the global stage and advocate for strategic policy-making to navigate the challenges of a fragmented global landscape. This study is significant for stakeholders such as international organizations, international corporations, and policy-makers. It seeks to inform such stakeholders about and implores them to recognize the interconnectedness of global political and economic spheres.

Keywords: geopolitical fragmentation, geoeconomic fragmentation, UNGA, regional trade agreements, bilateral trade, global trade, globalization, economic integration, global governance, securitization.

TABLE OF CONTENTS

1. Introduction

In the aftermath of the Second World War, decades of global integration with the instrumentalization of neoliberalism by liberal institutions showed the rise of globalization and balance within the world economic order. However, since 2008, fragmentation appears to be a new rising risk. The seemingly unstoppable force of globalization was interrupted by the global financial crisis of 2008, and the recovery of the world economy was attempted to be functionalized by unbalanced monetary policies, which made the world economic order even more sensitive than before. Fragmentation is multifaceted and can be caused by a variation of factors. Hence, there can be different types of fragmentation.

Geopolitical fragmentation, which can be formed due to macroeconomic insecurities and changes in the dynamics of foreign policy decisions, refers to the division of the international order into varying blocs, which all have some degree of political, economic, financial, and strategic autonomy. Geoeconomic fragmentation, which can be described as the dissolution of global trade into trading blocs of geopolitically aligned countries and regions, occurs due to the disintegration of the multilateral economic order by forming regional trade agreements, trade restrictions, export restrictions, and trade barriers.

This transdisciplinary research aims to analyze the dynamics of geopolitical fragmentation and geoeconomic fragmentation in the 21st century and find the answer to whether or not the two individual fragmentation types, geopolitical and geoeconomic fragmentation, impact each other. This transdisciplinary research claims that there should be a causality between geopolitical fragmentation and geoeconomic fragmentation, meaning that these fragmentations affect and mutually influence each other.

2. Literature Review

This literature review synthesizes the findings and contributions of varying fundamental research. It provides a detailed and comprehensive understanding of geopolitical and geoeconomic fragmentation's definition, causes, effects, illuminative theories, and various studies' findings and methodologies.

a. Geopolitical Fragmentation

i. Definition and Conceptualization

Kaufman (1997) provides a theoretical framework and defines geopolitical fragmentation as the international system splintering into multipolarity without any dominant or 'hegemonic' pole of power. This argument is similarly repeated in Campos et al.'s research (2023), which utilizes the concept through a study of trade costs and political alliances, underlining the segmentation of international trade along geopolitical lines.

Parallel to these studies, scholars such as Biermann et al. (2010), Kim (2020), and Acharya (2016) expand the definition of geopolitical fragmentation to include the diversification of global governance architectures and explain the rapid proliferation of international institutions, bodies and frameworks which often overlap and sometimes cause conflicting governance. In conclusion, geopolitical fragmentation entails dividing the international

system into multiple power centers without a dominant hegemon. This leads to diversifying global governance structures and the proliferation of overlapping institutions and conflicting frameworks across various domains.

ii. Causes and Effects of Geopolitical Fragmentation

In the literature, the causes of geopolitical fragmentation, including shifts in global power dynamics, uncertainty in global macroeconomics, preferential trade agreements, and economic nationalism, underscore a complex interplay of factors driving the divergence and segmentation of the international order.

To begin with, drawing from Immanuel Kant's vision of a "zone of peace" among republics, the Democratic Peace Theory underscores the significance of democratic governance in mitigating interstate conflicts (Kant, 1795). The analysis aligns with liberal perspectives in international relations, emphasizing the role of democratic norms, economic interdependence, and institutional frameworks in fostering peace and stability (Doyle, 1986).

Conversely, offensive realism, as defined by John J. Mearsheimer (2001), asserts that nations worldwide are compelled by the anarchic nature of the international system to prioritize their security and economic gains to survive. As a result, states create fictitious alliances and carry out calculated moves to keep one party from gaining control, creating a geopolitical environment characterized by fragmentation, ongoing rivalry, and warfare. In addition, scholars such as Peter Toft (2005), within the realist framework, argue that geopolitics plays a role in the dynamics and formation of structural alliances.

Subsequently, Brækhus and Øverland (2007) state that shifts in global power dynamics are significant causes, for instance, as China and Russia are drifting into each other as a strategic convergence to balance and challenge the U.S. hegemony. Economic considerations and concern of countries as a cause of geopolitical fragmentation are further emphasized in the study by Bolhuis et al. (2023), which analyzes the negative impacts of trade restrictions and barriers and the trend of moving towards geoeconomic fragmentation in an age of strategic competition, such as the competition between the U.S. and China.

According to the study, these economic and financial strategies are to be considered responses to perceived security threats and the desire for trade protectionism and economic sovereignty in line with rising nationalist populism, which once again stresses the underlying shift of getting away from global economic integration. This phenomenon was experienced by Shampa Biswas (2002) as internationalization of economic activity limits state autonomy and control over domestic national economies, undermining the ability of the state to regulate economic activity and meet the social and economic needs of its population. This decline in state efficiency is particularly evident in the weakening of the welfare state, as economic liberalization and globalization challenge the state's ability to deliver on welfare and development, which drifts nation-states to pursue protectionist economic and trade policies. This shift from global economic integration contributes to geoeconomic fragmentation.

In seeking to understand the roots of such fragmentation, scholars like Balzacq (2011) introduce a nuanced understanding of securitization theory, emphasizing the importance of audience perception, the interplay of agency and context, and the role of practices in shaping security issues (2011).

Furthermore, drawing on international relations theories and discourse analysis, the author critiques traditional approaches and advocates for a sociological perspective. In this analysis, applying Max Weber's methodology by examining 23 documents and presenting an "ideal type" of securitization, he simplifies the study of securitization by understanding how security is an outcome of social structures and actions. This contribution to research offers profound insights into understanding and addressing modern security challenges and formulating effective policy responses to contemporary threats beyond the customary knowledge of security (Balzacq, 2015). This sociological perspective also redefines securitization and desecuritization concepts, highlighting their impact on global governance and decision-making while cautioning against framing issues as security threats due to the risk of exacerbating fragmentation (Wæver, 1995).

Similarly, Buzan and Wæver (2009) advocate for a nuanced understanding of security dynamics and introduce the concept of macro securitizations to understand global security dynamics at a system level. Moreover, macro securitization theory provides a framework for understanding global security dynamics by identifying how issues are framed and addressed beyond conventional practices, highlighting the interconnectedness of international crises and governance challenges. (Buzan & Wæver, 2009, pp. 253-286).

b. Geoeconomic Fragmentation

i. Definition and Conceptualization

As described above, following the rapid globalization after the Second World War, trade as a share of global GDP rose from 20% in the early-post-war period to nearly 60% just before the Global Financial Crisis, signaling a rollback for this process of global integration. This reversal, as thoroughly described in Pierce and Yu (2023), in one way, occurred via geoeconomic fragmentation, which is referred to as the dissolution of global trade into trading blocs of geopolitically aligned countries and regions.

Moreover, trade integration has faltered since the Global Financial Crisis (IRC Task Force, 2016), marked by a resurgence of trade policy restrictions, notably between major economies such as the US and China, alongside measures in response to the COVID-19 crisis and the Russian invasion of Ukraine, reigniting scholarly interest in evaluating their effects (Campos et al., 2023).

The disruption in global trade post-Russian invasion of Ukraine reflects a broader trend where trade restrictions, particularly in critical sectors like commodities and semiconductors, have prioritized national security over economic integration. Examples include the UK's exit from the EU, bilateral trade barriers between the US and China, and export restrictions during the COVID-19 pandemic, indicating a reversal from the historical decline in trade barriers and suggesting a potential shift towards geoeconomic fragmentation characterized by

policy-driven integration reversal (Bolhuis, 2023). Therefore, geoeconomic fragmentation refers to the dissolution of global trade into regional economic blocs, resulting in the disintegration of integration processes at the global level.

Also, incorporating insights from Sachs and Bruno (1979) and Sachs and Cohen (1982), this research contributes significantly to understanding the global economy's structural dynamics. It underscores the importance of policy responses in navigating its complexities. Including macroeconomic indicators outlined in Sachs et al. (1982) enhances the robustness of the paper's model, capturing additional economic and political factors beyond trade agreements and financial flows.

ii. Causes and Effects of Geopolitical Fragmentation

The phenomenon of geoeconomic fragmentation in the global order is driven by various factors, including uncertainty in global macroeconomics, the proliferation of preferential trade agreements (PTAs) and regional trade agreements (RTAs), and the deepening of trade agreements, which collectively shape the evolving landscape of international trade and integration, impacting both intra-bloc and extra-bloc trade dynamics, as well as the future trajectory of multilateralism.

To begin with, a stemming reason for geoeconomic fragmentation in the global order is given as uncertainty in global macroeconomics by Mumtaz and Musso (2018) as their study explains how global and country/region-specific uncertainty for the future has created a trend toward more fragmented global trade and order when wide-range of variables for 22 different OECD members in a time spanning from 1960 to the present are studied.

Similarly, Mansfield and Pevehouse (2000) explore how preferential trade agreements (PTAs) create economic blocs, Bown (2016) explains the fracture of international trade with the creation of regional trade agreements (RTAs) and their limitation of WTO's effectiveness, and Nguyen (2019) explains how RTA's foster trade blocs, while increasing intra-bloc trade may result in an increase in fragmentation in international trade and integration by sometimes having detrimental effects on extra-bloc trade, explained as "trade diversion."

Moreover, in IMF's report titled "Geoeconomic Fragmentation and the Future of Multilateralism" (Aiyar et al.,2023), it is asserted that deepening trade agreements, as evidenced by studies like Mattoo et al. (2022) and Lee et al. (2022), have not only facilitated trade growth among member countries but also positively influenced trade with non-member nations. This is attributed to the distinctive nature of regulations in areas such as domestic regulation, competition, or subsidies, prevalent in deep RTAs, which differ significantly from tariffs and often exhibit a non-discriminatory nature, suggesting a public good aspect alongside the discriminatory nature of tariffs. Mayer et al. (2019) find that the European Common Market has significantly deepened trade integration, leading to substantial increases in goods trade (109%), tradable services (58%), and welfare (4.4%), significantly benefiting smaller open economies like those in Eastern Europe. Stehrer et al. (2016) also note increased bilateral export intensity within the EU, concentrating exports in specific member states.

Nguyen's (2019) analysis reveals that within Regional Trade Agreements (RTAs), certain blocs, like CIS and CACM, demonstrate significant negative impacts on intra-bloc trade, while others, such as ASEAN, SAFTA, and EAC, exhibit insignificant negative impacts, possibly due to insufficient intra-bloc trade promotion efforts, as evidenced by the case of the EAC. Notably, CIS displays heightened trade creation effects due to strong former Soviet Union member ties. At the same time, in the Asia-Pacific region, SAFTA and ASEAN show active trade orientations towards the rest of the world. In contrast, PAFTAA demonstrates export diversion, likely influenced by the petroleum export policies of OPEC member countries within the agreement.

However, despite the insights provided by these analyses, this study has its limitations. The model's explanatory power may be constrained by omitting certain variables or the inability to capture all relevant factors influencing geoeconomic and geopolitical fragmentation. Moreover, the macroeconomic indicators outlined in Jeffrey Sachs' paper may not fully capture the dynamic nature of global economic and political trends.

3. Methodology and Data Collection

a. Data Sources

Within the quantitative analysis framework, the dataset comprises 26 variables spanning 20 years, encompassing data from 194 countries. In the project's scope, it was necessary to identify the key metrics for geoeconomic and geopolitical fragmentation before delving into the paper's analysis. In alignment with the literature review, prior research has extensively associated geoeconomics fragmentation with the prevalence of regional trade agreements (RTAs) (Nguyen, 2019). Accordingly, the cumulative RTA data for each country spanning 2000 to 2020 from WTO's Regional Trade Agreements Database was extracted to construct the RTA variable. RTAs serve as a significant marker of geoeconomics fragmentation due to their potential to obstruct trade beyond the boundaries of the agreement. Therefore, assessing the factors influencing RTA formation would form the basis for understanding the underlying dynamics affecting geoeconomic fragmentation.

In relation to this measure, to further assess the impact of regional trade agreements, the research specified the economic integration agreements: One-Way Preferential Trade (OPT), Two-Way Preferential Trade (TPT), Free Trade (FT), Customs Unions (CU) and Economic Unions (EU). The data was extracted from the University of Notre Dame's Kellogg Institute for International Studies. Initially, the data was presented in binary and bilateral form; it represented each country's economic integration agreement with the other countries in the dataset annually from 2000 to 2017. The research converted the dataset into a non-binary and non-bilateral form. This involved aggregating the number of each type of economic integration agreement for a country in a given year and standardizing it by the total number of countries in the dataset. In other words, they represent the density of a particular type of agreement for a country relative to all other types. Hence, the basis of the paper's model's intuition stems from Nyguen's (2019) analysis, which considers how different RTAs affect the trade flow between countries. This data was utilized in the regression analysis of Model 3.

A non-bilateral UNGA metric as a proxy by extracting data from UNView: United Nations General Assembly Voting Patterns Database was developed to establish a robust geopolitical fragmentation metric. This dataset provided voting pattern similarity scores for countries in the assembly relative to one specific country in a given year. Further details regarding the methodology of the Geopolitical Affinity Proxy model can be found in section 3.b. of the study. A comprehensive measure of geopolitical fragmentation was constructed by assigning each country a geopolitical position at five-year intervals.

b. The UNGA Affinity Proxy Model

The existing literature has used various methods to measure and display geopolitical alignment. The most prominent ones include identifying geopolitical blocs according to Member States' votes on the 2022 UNGA Resolution to suspend Russia's membership in the Human Rights Council or utilizing machine learning to conduct archetypical categorization of countries according to their characteristic behavior in the geopolitical arena. However, a significant gap in the literature arises from the absence of a work that utilizes UNGA voting pattern similarities of countries to measure geopolitical alignment.

A unique model named the Geopolitical Affinity Proxy has been created for this research. The Model considers 194 countries' voting similarities to two geopolitical poles identified by authors in 4 different 5-year intervals from 2000 to 2020. These two are the Western and Eastern Poles. A country's affinity to the Western pole is calculated by taking the mean of a country's voting similarity with the United Kingdom and France, and vice versa, calculating Eastern affinity by taking the mean of similarities to China and Russia. The Model concludes by subtracting a country's 'eastern affinity' from its 'western affinity' to allocate a value point ranging from -1 (most eastern) to 1 (most western), indicating its geopolitical affinity towards one pole or the other.

$$\textit{Western Affinity} = (\textit{Similarity to the UK} + \textit{France}) / 2$$
$$\textit{Eastern Affinity} = (\textit{Similarity to China} + \textit{Russia}) / 2$$
$$\textit{Geopolitical Affinity} = \textit{Western Affinity} - \textit{Eastern Affinity}$$

Figure 1: Geopolitical Affinity Proxy Model equations.

To optimize the Model, a decision has been made to treat abstentions as no's. Another critical point is that the Model excludes resolutions related to the Palestinian-Israeli conflict since it has been noticed that most countries depart from their regular voting behavior on such resolutions. Further optimization has been made by deciding to exclude the United States while calculating countries' 'Western affinities'; this decision has simplified the Model substantively since it was once again noted that the United States often emerged as an outlier to other conventionally 'Western' countries and did not coincide with their voting patterns on certain issues. It has to be acknowledged that excluding the U.S. from Western considerations has taken this Model's range out of a transatlantic scope. That is why the authors believe it would be beneficial to redo this exercise with the U.S. included or even by taking the U.S. as the sole anchor point for the western pole.

The output of the model was used as a variable (UNGA and UNGA Absolute) in the regression model. Various values have been visualized in maps to explain and draw

conclusions on the geopolitical landscape and dynamics, which are explained and included at length in further sections.

c. The OLS Regression Model and Robustness Check

GEOECONOMIC FRAGMENTATION-RELATED VARIABLES	GEOPOLITICAL FRAGMENTATION-RELATED VARIABLES	OTHER VARIABLES
Financial: • FDI • Portfolio Flows	**Directly Political:** • United Nations General Assembly (UNGA) Position • Military Spending/GDP • Political Stability & Absence of Violence Index	**Other:** • Migrant population as a share of the total population of a country (measured in 5-year time intervals) • Health Expenditure/GDP
Trade: • OPT (The fraction of One-Way Preferential Trade Agreement) • TPT (The fraction of Two-Way Preferential Trade Agreements) • FT (The fraction of Free Trade Agreements) • CU (The fraction of Customs Unions) • EU (The fraction of Economic Unions) • Applied Tariff Rate • RTA (number of cumulative RTA agreements)	**Political via Trade Policies:** • WTO Membership • MATR or Measure of Aggregate Trade Restrictions ◦ (An unweighted sum of numerous binary variables that are related to trade restrictions but, due to their nonmonetary nature, very difficult to measure within a continuous interval)	**Additional Macro Indicators:** [Sachs et al. (1982)] • GDP • GDP Growth • Population Growth • Real Interest Rate • Deposit Rate • Exchange Rate • Inflation **To Capture Possible Structural Breaks of the Crises via Time Dummies:** • Time Dummy for the years 2008 to 2010 • Time Dummy for the years 2010 to 2015 • Time Dummy for the years 2019 to 2020

Figure 2: List of 26 variables used in the OLS Regression Model subcategorized according to fragmentation types they intend to measure.

Specific indicators like trade agreements and financial flows alone cannot entirely explain the fluctuations in the dependent variables. That is, additional economic and political factors contribute to their variability. The research included macroeconomic indicators (GDP, GDP growth, population growth, exchange rate, inflation, real interest rate, and the deposit rate) outlined in Jeffrey Sachs' paper (Sachs et al., 1982) to enhance the model's robustness and increase its explanatory power (measured by R^2 value) without losing significance (measured by p-values). For IR theories' explanatory power in the model, certain variables were added: Military spending (percentage of GDP), migration population (as a portion of the total population), political stability, and absence of violence index. In total, this paper has 26 independent variables, as shown in Figure 2.

After checking for multicollinearity through computing correlations for every two of the independent variables and Variance Inflation Factor (VIF) for every independent variable, it was decided to fit an Ordinary Least Squares (OLS) model to estimate Beta coefficients, as it is the best linear unbiased estimator (BLUE). To make sure that Gauss-Markov (G-M) assumptions hold, multicollinearity through the correlation matrix is observed, and Variance Inflation Factor, residual autocorrelation through the Durbin-Watson (DW) test, and test for residual heteroskedasticity through the Breusch-Pagan (BP) test. The results justify the G-M assumptions.

The research regressed RTA, UNGA, UNGA (in absolute terms), Trade Flow, and Military Spending on numerous independent variables selected purely per theory and previous empirical findings. For each dependent variable, three different configurations/models exist. It was critical to see whether the research suffered from the omitted variable bias when

several independent variables were excluded from the regression. In addition, a part of the fundamental data is only available for 2000-2017, whereas a more extended period of 2000-2017 was analyzed. Intending to lose the least amount of information possible to feed into the OLS algorithm, models were regressed with and without the mentioned data (Model 2 and Model 1, respectively) for 2000-2020 and then regressed another model, including it for 2000-2017. The models are as follows, from Figure 3 to Figure 6.[1]

The research has three different model specifications for each dependent variable that differ in the independent variables they include on the right-hand side (RHS). The reason for this is to observe what would happen in the perspective of inferential statistics (R^2, p-values to infer the amount of significance of an independent variable, robustness tests, etc.) if certain variables are excluded, run the regression and then include those variables and rerun it.

$$RTA = \beta_0 + \beta_1 UNGA + \beta_2 FDI + \beta_3 PortfolioFlows + \beta_4 Tariff + \beta_5 TradeFlow + \beta_6 WTO + \beta_7 MATR + \beta_8 OPT + \beta_9 TPT + \beta_{10} FT + \beta_{11} CU + \beta_{12} EU + \beta_{13} MilitarySpending + \beta_{14} MigrantPopulation + \beta_{15} HealthExpenditure + \beta_{16} GDP + \beta_{17} GDPGrowth + \beta_{18} PopulationGrowth + \beta_{19} RealInterestRate + \beta_{20} DepositRate + \beta_{21} ExchangeRate + \beta_{22} Inflation + \beta_{23} PoliticalStability + \beta_{24}(Time\ Dummy\ 2008\text{-}2010) + \beta_{25}(Time\ Dummy\ 2010\text{-}2015) + \beta_{26}(Time\ Dummy\ 2019\text{-}2020) + \varepsilon$$

Figure 3: OLS Regression Model Equations with the dependent variable, RTAs.

$$UNGA = \beta_0 + \beta_1 TradeFlow + \beta_2 FDI + \beta_3 PortfolioFlows + \beta_4 Tariff + \beta_5 RTA + \beta_6 WTO + \beta_7 MATR + \beta_8 OPT + \beta_9 TPT + \beta_{10} FT + \beta_{11} CU + \beta_{12} EU + \beta_{13} MilitarySpending + \beta_{14} MigrantPopulation + \beta_{15} HealthExpenditure + \beta_{16} GDP + \beta_{17} GDPGrowth + \beta_{18} PopulationGrowth + \beta_{19} RealInterestRate + \beta_{20} DepositRate + \beta_{21} ExchangeRate + \beta_{22} Inflation + \beta_{23} PoliticalStability + \beta_{24}(Time\ Dummy\ 2008\text{-}2010) + \beta_{25}(Time\ Dummy\ 2010\text{-}2015) + \beta_{26}(Time\ Dummy\ 2019\text{-}2020) + \varepsilon$$

Figure 4: OLS Regression Model Equations with the dependent variable, UNGA.

[1]

In model 1, essential independent variables were included: Trade flow, UNGA, FDI, portfolio flows, applied tariff Rate, RTAs (cumulative), WTO membership, MATR, annual GDP, annual GDP growth, annual population growth, annual real interest rate, annual deposit rate, annual exchange rate, annual inflation, annual political stability index, time dummy for 2008-2010, time dummy for 2010-2015, time dummy for 2019-2020.

In model 2, the values added to model 1 were the following variables to test out our theories: Military spending, health expenditure, and migrant population.

In model 3, all 26 of the variables to closely examine the impact of economic integration agreements (OTP, TPT, FT, EU, and CU) beside the RTA were included.

$$TradeFlow = \beta_0 + \beta_1 UNGA + \beta_2 FDI + \beta_3 PortfolioFlows + \beta_4 Tariff + \beta_5 RTA + \beta_6 WTO + \beta_7 MATR + \beta_8 OPT + \beta_9 TPT + \beta_{10} FT + \beta_{11} CU + \beta_{12} EU + \beta_{13} MilitarySpending + \beta_{14} MigrantPopulation + \beta_{15} HealthExpenditure + \beta_{16} GDP + \beta_{17} GDPGrowth + \beta_{18} PopulationGrowth + \beta_{19} RealInterestRate + \beta_{20} DepositRate + \beta_{21} ExchangeRate + \beta_{22} Inflation + \beta_{23} PoliticalStability + \beta_{24} (Time\ Dummy\ 2008\text{-}2010) + \beta_{25} (Time\ Dummy\ 2010\text{-}2015) + \beta_{26} (Time\ Dummy\ 2019\text{-}2020) + \varepsilon$$

Figure 5: OLS Regression Model Equations with the dependent variable, Trade Flow.

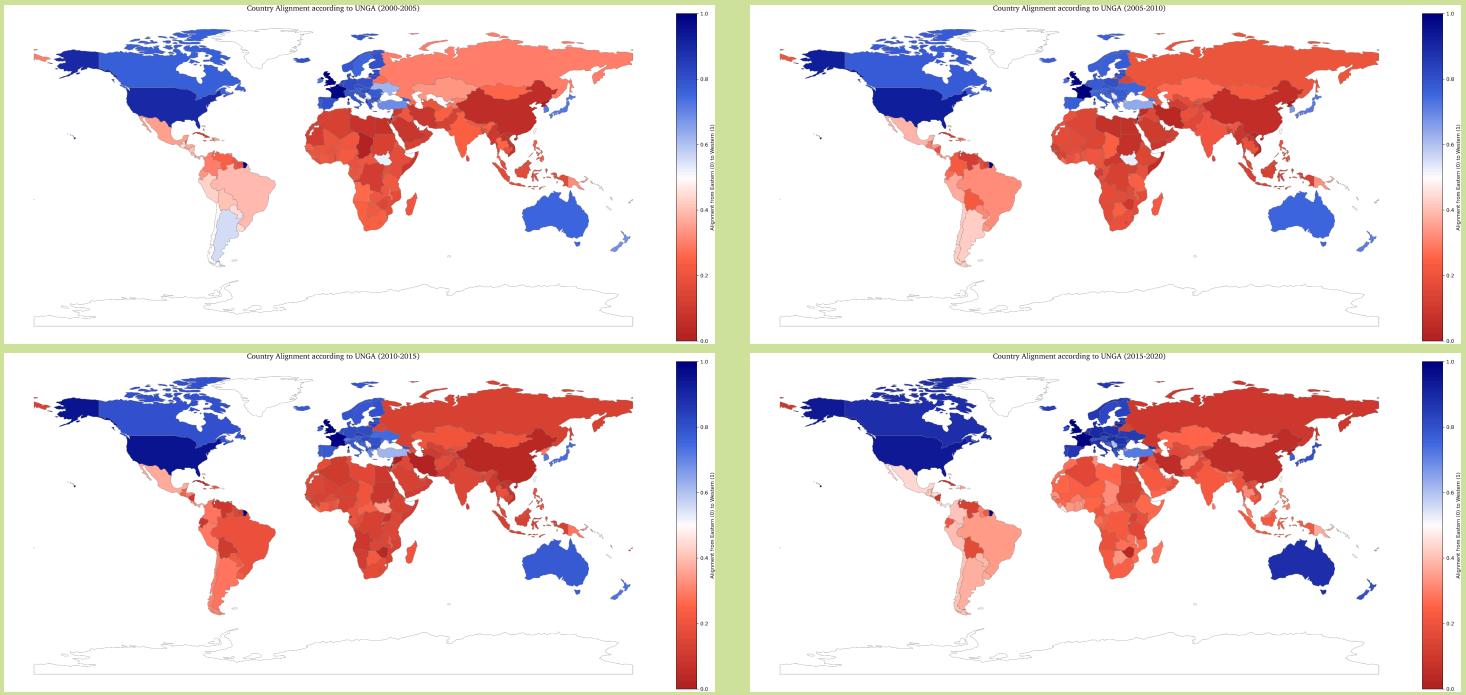
$$MilitarySpending = \beta_0 + \beta_1 UNGA + \beta_2 FDI + \beta_3 PortfolioFlows + \beta_4 Tariff + \beta_5 RTA + \beta_6 WTO + \beta_7 MATR + \beta_8 OPT + \beta_9 TPT + \beta_{10} FT + \beta_{11} CU + \beta_{12} EU + \beta_{13} TradeFlow + \beta_{14} MigrantPopulation + \beta_{15} HealthExpenditure + \beta_{16} GDP + \beta_{17} GDPGrowth + \beta_{18} PopulationGrowth + \beta_{19} RealInterestRate + \beta_{20} DepositRate + \beta_{21} ExchangeRate + \beta_{22} Inflation + \beta_{23} PoliticalStability + \beta_{24} (Time\ Dummy\ 2008\text{-}2010) + \beta_{25} (Time\ Dummy\ 2010\text{-}2015) + \beta_{26} (Time\ Dummy\ 2019\text{-}2020) + \varepsilon$$

Figure 6: OLS Regression Model Equations with the dependent variable, Military Spending.

4. Findings

a. UNGA Affinity Proxy Model Results and Maps

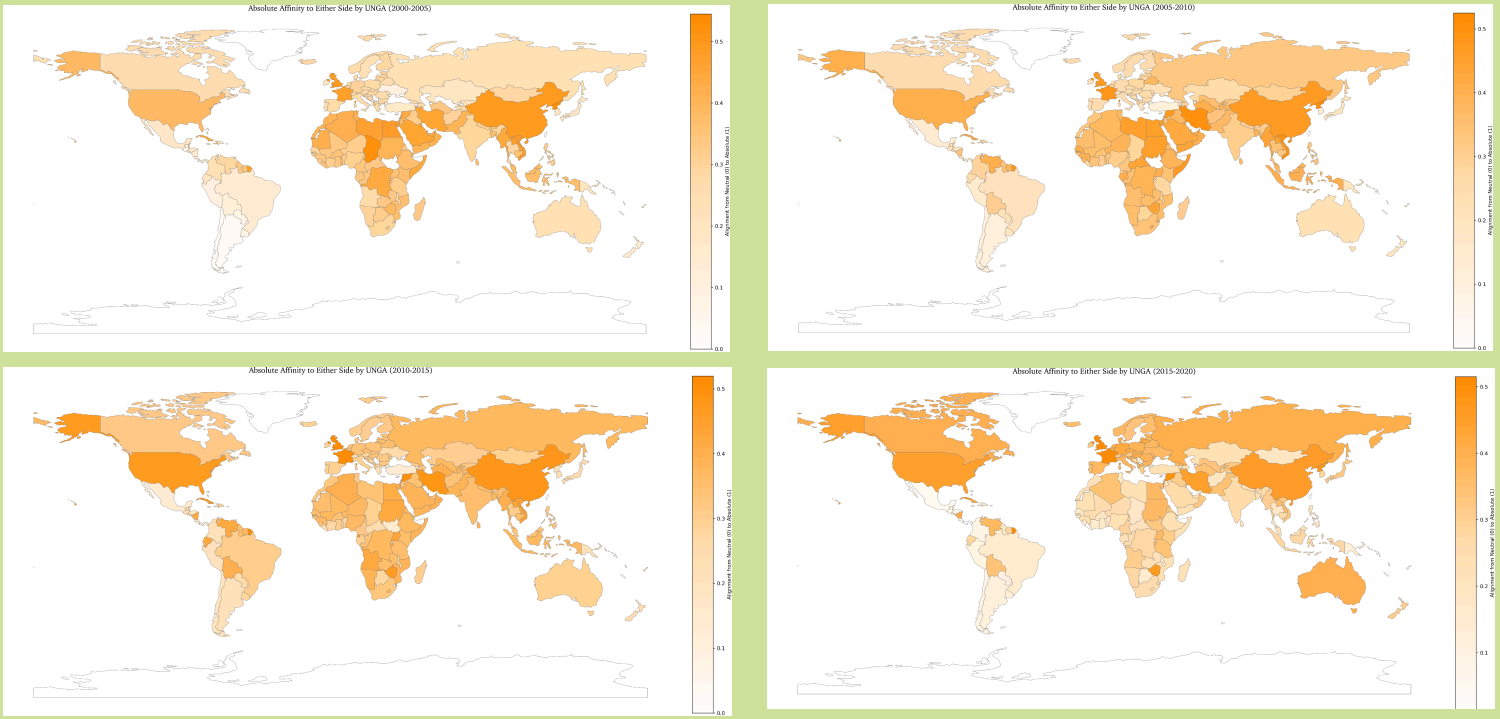
Box 1. Snapshot Maps of Geopolitical Affinity in Four 5-year Intervals.



Source: Authors' calculations using the aforementioned Geopolitical Affinity Proxy Model.
Note: Shades of blue represent geopolitical alignment towards the 'Western Bloc' (the United Kingdom and France), while shades of red represent geopolitical alignment towards the 'Eastern Bloc' (China and Russia) according to each country's voting similarity in the UNGA between given years.

The Geopolitical Affinity Proxy Model has provided all Member States' voting alignment in four different 5-year intervals. The first set of maps in Box 1. visualizes the geopolitical alignment towards two geopolitical poles the research has identified, the Western and the Eastern poles. It is readily apparent that darker shades of blue and red can be observed more frequently as the maps progress from 2000 to 2020, suggesting a more polarized geopolitical discourse in the UNGA in 2015-2020 compared to 2000-2005. A notable shift happened in 2010-2015 compared to the starting point of the Model in Latin America as the average affinity of 20 Latin American countries has increased towards the pole from -0.16 to -0.27.

Box 2. Snapshot Maps of Absolute Geopolitical Affinity in Four 5-year Intervals.



Source: Authors' calculations using the aforementioned Geopolitical Affinity Proxy Model.
Note: Softer and darker shades visualize the absolute polarization of a country, not towards one specific pole but towards any opposing poles.

The model was utilized for a second time to display the output, but this time, it took the absolute values of each country's affinity values. This has enabled the creation of four maps in Box 2. that visualize the absolute fragmentation in the geopolitical arena. Darker shades suggested a country's total polarization towards any of the previously identified poles. Again, the increased frequency of darker shades as the displayed years passed suggested strongly polarized geopolitical dynamics in the international forum. This time, the most notable change happened in the Northern Hemisphere as core countries of the international economic system have been closely assembling around the anchor countries that the authors have suggested as poles, as the Transatlantic Community and Russia and Central Asian countries drifting towards a geopolitical rift.

Drawing from the existing literature, the research has analyzed and concluded that the proliferation of Regional Trade Agreements (RTAs) has indeed impacted fragmentation dynamics, as previously argued. The creation of RTAs causes a phenomenon called trade diversion, which furthers fragmentation in both the geopolitical and geoeconomic senses. Thus, another map has been generated to display the proliferation of RTAs worldwide; see Figure 7.

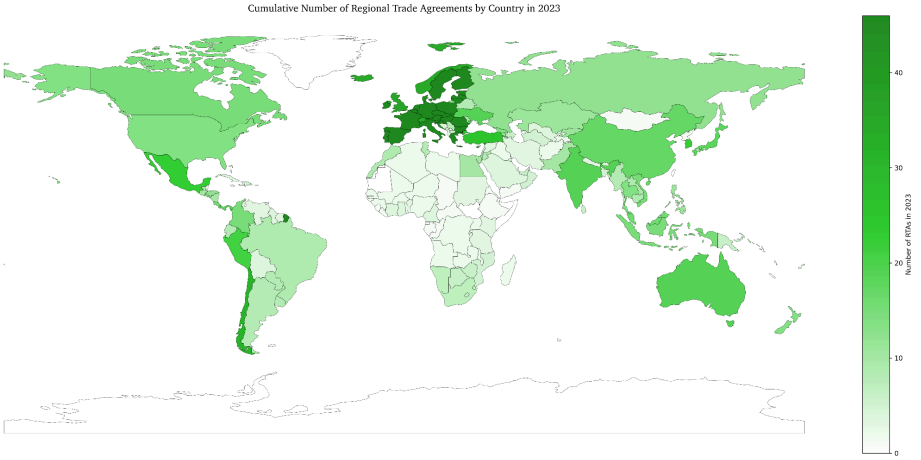


Figure 7: Cumulative Number of Regional Trade Agreements by Country in 2023.
Source: WTO's Regional Trade Agreements Database.

The map, Figure 7, has made it apparent that in almost all regions of the world, RTAs have been entered into force, with a considerable amount of them cumulating in Continental Europe, East and South East Asia, and Latin America.

b. The OLS Regression Results

To delve into the geopolitical and geoeconomic changes amid 2000-2020 highlighted in section 4.1, regression findings have been organized into five tables (e.g., "see Appendix B") for a more systematic analysis.

i. Table 1: RTAs

Among the three models examined, Model 3 emerges as the most robust, needing closer inspection. Regarding causality, the analysis reveals a bidirectional relationship between RTA formation and trade flows. As trade flow increases, RTA formation increases by 0.03 percentage points. Furthermore, RTA formation increases by 1.69 with foreign investment (FDI), 4.02 with portfolio flows, and decreases by -0.65 with tariffs. Increases in migrant population impact RTA formation positively, with a coefficient of 0.12 percentage points, indicating that demographic factors contribute to geoeconomic fragmentation, pushing countries to secure regional trade agreements.

Interestingly, all economic integration agreements (OTP, TPT, FT, EU, and CU) yield insignificant coefficients with positive values. This suggests that more minor economic agreements may positively contribute to RTA formation but do not significantly impact it. In contrast, UNGA exhibits no significant impact on RTA, with a positive coefficient indicating that countries with stronger Western affiliations tend to have higher RTA formation.

ii. Tables 2 and 3: UNGA (Absolute) and UNGA

A two-step table analysis was conducted to measure geopolitical fragmentation. UNGA positions initially ranging from -1 (western affiliation) to 1 (eastern affiliation) have been employed. These values were transformed into absolute values ranging from 0 to 1, where proximity to 0 indicates countries with no clear political bloc affiliation, signaling less geopolitical fragmentation. Conversely, values closer to 1 suggest strong alignment with a particular bloc, indicating higher geopolitical fragmentation.

In Table 3, RTA has a significant coefficient of 0.0007 percentage points, indicating that geoeconomic fragmentation has a minor impact on geopolitical fragmentation. While some smaller economic agreements such as OTP, TPT, and free trade contribute to geopolitical fragmentation, with coefficients of 0.54, 0.68, and 0.26 percentage points, respectively, others, such as customs union and economic union, mitigate it, with coefficients of -1.76 and -2.59. This relationship underscores the complex interplay between economic integration efforts and geopolitical dynamics, highlighting the need for further investigation.

In Table 4, the second stage of geopolitical fragmentation has been refined, specifically towards which bloc countries leaned. UNGA positions range from -1 (western affiliation) to 1 (eastern affiliation). As RTA formation (geopolitical fragmentation) increases, countries tend to affiliate more with the Western bloc by 0.0048 percentage points. Thus, this paper establishes a one-way causality between geoeconomic (RTA) and geopolitical (UNGA) fragmentation: RTA significantly impacts UNGA's position, while the reverse cannot be stated.

iii. Table 4: Trade Flow

Trade flow stands as a pivotal metric for measuring global geoeconomic activity. Firstly, FDI and portfolio flows significantly positively influence trade flow, with an increase of 3.97 and 4.85 percentage points, respectively. Highlighting the reciprocal relationship between financial markets and international trade.

Despite expectations of lower trade flow due to constraining boundaries of an RTA, an increase in RTA formation correlates with higher trade flow by 2.2 percentage points. In contrast, the lack of significant impact of the UNGA position on trade flows has a negative coefficient, implying that countries affiliating more with the Western bloc may experience decreased trade flow.

iv. Table 5: Military Spending

Increased portfolio flows are associated with a significant -5.4 percentage point decrease in military spending, highlighting a divergence in resource allocation. Furthermore, a marginal decrease of -0.0001 percentage points in military spending via RTA formation, meaning economic dependence, corresponds to a decrease in military spending. Although statistically insignificant, the alignment with the Western bloc, as indicated by UNGA affiliation, correlates with a 0.0033 increase in military spending, contrasting with the downward trend

of -2.7 coefficient associated with World Trade Organization (WTO) membership due to its trade regulations.

v. General Table Results

In all the tables, a country's key macroeconomic variables (GDP, GDP growth, population growth, inflation, real interest rate, deposit rate, and exchange rate) yielded a significant impact on all the dependent variables, as expected due to their explanatory power outlined in Jeffrey Sachs' framework.

In all the regression table results, MATR emerged as significant and positive. Contrary to the expectations, a negative coefficient was anticipated due to its nature of measuring restrictions. However, the data, being the aggregate of binary restrictions values of certain measures and unable to measure tariff sensitivity, did not yield the expected result.

Time dummy variables were incorporated into each regression to measure any structural changes during periods of global crisis and their impact on geoeconomic and geopolitical fragmentation. These periods included the global financial crisis in 2008-2009, mass human displacement in 2010-2015, and the pandemic in 2019-2020. All these coefficients yielded insignificant values, suggesting that cyclical crises do not cause structural changes in geoeconomic and geopolitical fragmentation.

5. Discussion

This section delves into the nuances of the theoretical framework of the relationship between geoeconomic and geopolitical fragmentation. It explores the mechanisms through which changes in trade flows and economic alliances impact geopolitical alignments, regional power dynamics, and international cooperation.

a. International Political-Economic Understanding of Fragmentation within a Liberal Framework

The Liberal International Relations Theory has brought an alternative to the dynamics of the global order and provided an international system in which countries could actively avoid international conflict and co-exist in a system with the dynamics of a positive sum game (Doyle, 1986). Liberal IR Theory claims that if countries exist in a system substantiated with economic interdependence, the economic interests that countries hold in other countries will lead to the foreign policy decisions and dynamics of these countries being peace-oriented. Establishing a system of international peace and security and facilitating economic interdependence can be successfully achieved if international trade becomes the foundation of the global international order (Simmons, 2003).

A precedence-setter for the system of economic interdependence set by international trade standards takes the form of the World Trade Organization (WTO). The General Agreement on Tariffs and Trade (GATT) and WTO could be deemed as the roof that promotes international trade at the highest level in international law. The founding agreement of the WTO sets a structure for the global economic order in which facilitating international trade is

the biggest priority and the most beneficial way for countries to prosper in the neoliberal economic order. This agreement emphasizes the importance of facilitating international trade and mitigating bilateral trade and, hence, regional trade agreements by the "Most Favored Nation Clause" (WTO, 1995), in which members are required to accord the most favorable tariff and regulatory treatment given to one country, to all the member states of the organization.

b. Interactions between Geopolitical and Geoeconomic Fragmentation

One of the most significant consequences of geoeconomic fragmentation is the reconfiguration of geopolitical alliances and power dynamics. As countries prioritize economic integration within their regions through initiatives like trade blocs and economic partnerships, traditional geopolitical alliances may undergo shifts. Economic power increasingly becomes a determinant of geopolitical influence as countries leverage trade relationships, investment flows, and market access to advance their strategic interests on the global stage.

Geoeconomic fragmentation impacts geopolitical fragmentation by restructuring trade relationships and forming regional trade agreements (RTA). Bilateral blocs foster intra-bloc trade and influence member states' foreign policy decisions and strategic alliances. The research findings reflect this idea successfully and show that an increase in regional trade agreements has led to geopolitical fragmentation within the lines of UNGA voting and caused a Western-inclined fragmentation in the global order. The study by Bolhuis et al. (2023) highlights how economic considerations, such as trade restrictions and barriers, can lead to geopolitical realignments as countries seek to protect their economic interests and enhance their strategic autonomy. As countries prioritize their economic interests within regional blocs or economic alliances, multilateral institutions and frameworks may face challenges. This erosion of global governance exacerbates geopolitical tensions and fragmentation as countries pursue unilateral or ad hoc approaches to address shared challenges.

The findings reflect the liberal theoretical understanding of how economic interdependence alleviates countries' security concerns, as seen from the increase in RTAs. This could be interpreted as elevating an economically interdependent system, decreasing total military spending. However, the theoretical framework argues that forming bilateral agreements and RTAs damages international trade despite advancing economic interdependence. The findings only prove this partially since variables such as FDI, Trade Flow, and Portfolio Flows are not impacted negatively by the creation of RTAs.

Jeffrey Frieden provides a historical explanation that could illuminate this finding. Frieden argues that in the 20th century, the rise of neoliberalism led international investors, including more developing countries, to the global economic order, speeding globalization, but this also led to an increase in financial freewheeling and made the countries tied to the global order more susceptible to economic shocks (Frieden, 2006, p. 386). International competition can weaken banking systems (Frieden, 2006), exchange rates, FDI, and interest rates. To prevent

the damaging effects of the financial market, countries and investors turn to regional agreements since they see it as less risky for their economic interests. Historically, the exchange rate policies of the EU and the establishment of NAFTA had protected members of these organizations against the economic shock of the 1980s (Frieden, 2006), and the relation between macroeconomic measurements and RTA could reflect this preventive measure.

The research findings show that geopolitical fragmentation does not impact geoeconomic fragmentation at a substantial level, meaning that the fragmentation caused by the UNGA voting does not affect the dynamics of the RTAs. This could be explained by how, within the international system, countries prioritize economic concerns over political deviations in the system, once again proving that once economic interdependence is established, countries' foreign policy surrounding security concerns takes secondary importance.

6. Conclusion and Future Research

In conclusion, within the shifting mechanisms of the 21st-century global international order, this research has proved a positive causal relationship between geoeconomic and geopolitical fragmentation. While there is no significant connection when it comes to geopolitical fragmentation's effect on geoeconomic fragmentation, geoeconomic fragmentation does affect geopolitical fragmentation, as can be seen from the results of how much RTAs (regional trade agreements) and trade flow affect the political inclinations and foreign policy decisions of countries in the UNGA (United Nations General Assembly).

Understanding the interplay between geoeconomic and geopolitical fragmentation is crucial for stakeholders to navigate the complexities of the global order. Policymakers must recognize that decisions in one domain impact economic and political landscapes, requiring strategic planning considering trade dynamics, regional alliances, and geopolitical rivalries.

Multilateral cooperation and strengthened international institutions are essential to mitigate geopolitical tensions and promote economic integration. Countries can collectively address common challenges and reduce fragmentation risks by fostering multilateralism. Businesses and investors must enhance risk assessment and management strategies, recognizing that political developments influence economic decisions.

Thoroughly assessing geopolitical risks and proactively managing them allows businesses to mitigate disruptions and capitalize on opportunities in fragmented markets. Governments should reassess trade policies with a clear understanding of their geopolitical implications. This involves recalibrating trade agreements, promoting transparency, and exploring cooperation to address shared challenges. By aligning trade policies with geopolitical realities, countries can navigate the global economy's complexities more effectively.

Future research should prioritize interdisciplinary approaches integrating economic, political, and diplomatic perspectives to elucidate the complex interactions between geoeconomic and geopolitical fragmentation. The Kellogg dataset yielded insignificant coefficients, indicating

potential multicollinearity concerns that require additional econometric scrutiny. Furthermore, the analysis of economic integration agreements (OTP, TPT, FT, EU, and CU) yielded mixed findings. While OTP, TPT, and free trade agreements were associated with increased geopolitical fragmentation, customs, and economic union agreements exhibited mitigating effects. This underscores the intricate interplay between economic integration endeavors and geopolitical dynamics.

References

Acharya, A. (2016). The future of global governance: Fragmentation may be inevitable and creative. *Global Governance*, *22*(4), pp. 453-460. https://www.jstor.org/stable/44861194

Aiyar, S., Chen, J., Ebeke, C., Garcia-Saltos, R., Gudmundsson, T., Ilyina, A., Kangur, A., Kunaratskul, T., Rodriguez, S., Ruta, M., Schulze, T., Soderberg, G., & Trevino, J. P. (2023). *Geoeconomic fragmentation and the future of multilateralism* (Issue SDN/2023/001). International Monetary Fund.

Balzacq, T. (Ed.). (2011). *Securitization Theory: How security problems emerge and dissolve*. Taylor & Francis. https://doi.org/10.4324/9780203868508

Balzacq, T. (2015). The 'Essence' of securitization: Theory, ideal type, and a sociological science of security. *International Relations*, *29*(1), pp. 103-113. https://doi.org/10.1177/00471178145266

Biermann, F., Pattberg, P., van Asselt, H., & Zelli, F. (2009). The fragmentation of global governance architectures: A framework for analysis. *Global Environmental Politics*, *9*(4), pp. 14-40. https://doi.org/10.1162/glep.2009.9.4.14

Biswas, S. (2002). W(h)ither the nation-state? National and state identity in the face of fragmentation and globalization. *Global Society*, *16*(2), pp. 175-198. https://doi.org/10.1080/09537320220132910

Bolhuis, M. A., Chen, J., & Kett, B. (2023). The cost of geoeconomic fragmentation. *IMF: Finance & Development*, pp. 34-37.

Bown, C. P. (2016). Mega-regional trade agreements and the future of the WTO. *Global Order and the New Regionalism*, pp. 29-40. https://www.jstor.org/stable/resrep29885.6

Brekhus, K., & 0verland, I. (2007). A match made in heaven? Strategic convergence between China and Russia. *Norwegian Institute of International Affairs*, (717).

Buzan B., Waever O. (2009). Macrosecuritisation and security constellations: Reconsidering scale in secıritisation theory. *Review of International Studies*, *35*(2), pp. 253-276. https://www.jstor.org/stable/20542789

Campos, R., Pienknagura, S., & Timini, J. (2023). *How far has globalization gone? A tale of two regions*. International Monetary Fund WP/23/255.

Campos, R. G., Estefania-Flores, J., Furceri, D., & Timini, J. (2023). Geopolitical fragmentation and trade. *Journal of Comparative Economics*, *51*(4), pp. 1289-1315. https://doi.org/10.1016/j.jce.2023.06.008

Czech National Bank. (2023). *Global economic outlook*.

Doyle, M. W. (1986). Liberalism and world politics. The American Political Science Review, 80(4), pp. 1151-1169. http://www.jstor.org/stable/1960861.

Frieden, J. A. (2006). Crisis and change in global capitalism: Its fall and rise in the twentieth century (pp. 363-391). W.W. Norton.

International Monetary Fund. (2023). Geoeconomic fragmentation and foreign direct investment. *World Economic Outlook: A Rocky Recovery*, pp. 91-114.

International Monetary Fund. (2023). Safeguarding financial stability amid high inflation and geopolitical risks. *Global Stability Report*. https://www.imf.org/en/Publications/GFSR/Issues/2023/04/11/global-financial-stability- report-april-2023

IRC Trade Task Force. (2016). Understanding the weakness in global trade: What is the new normal? *European Central Bank Occasional Paper Series*, (178).

Kant, I. (1795). Perpetual peace.

Kaufman, S. J. (1997). The fragmentation and consolidation of international systems. *International Organization*, *51*(2), pp. 173-208. https://www.jstor.org/stable/2703448

Kim, R. E. (2020). Is global governance fragmented, polycentric, or complex? The state of the art of the network approach. *International Studies Review*, *22*(4), pp. 903-931. https://doi.org/10.1093/isr/viz052

Lee, B., Glennon, B., & Jensen, B. J. (2018). Knowledge transfer abroad: The role of U.S. inventors within global R&D networks. *National Bureau of Economic Research - Working Paper Series*, (24453). http://www.nber.org/papers/w24453

Mansfield, E. D., & Pevehouse, J. C. (2000). Trade blocs, trade flows, and international conflict. *International Organization*, 54(4), pp. 775-808. https://www.jstor.org/stable/2601381

Marrakesh Agreement Establishing the World Trade Organization, January 1, 1995, https://www.wto.org/english/docs_e/legal_e/04-wto.pdf.

Mattoo, A., Mulabdic, A., & Ruta, M. (2022). Trade creation and trade diversion in deep agreements. *Canadian Journal of Economics,* 55(3), pp.1598-1637. https://doi.org/10.1111/caje.12611

Mayer, T., Vicard, V., & Zignago, S. (2019). The cost of non-Europe revisited. *Economic Policy*, *34*(98), pp. 145-199. https://doi.org/10.1093/epolic/eiz002

Mumtaz, H., & Musso, A. (2018). *The evolving impact of global, region-specific, and country-specific uncertainty* (Issue 2147). European Central Bank Working Paper Series.

Nguyen, D. B. (2019). A new examination of the impacts of regional trade agreements on international trade patterns. *Journal of Economic Integration*, *34*(2), pp. 236-279. https://doi.org/10.11130/jei.2019.34.2.236

Pierce, J. R., & Yu, D. (2023). Assessing the extent of trade fragmentation. *The Federal Reserve - FEDS Notes*. https://www.federalreserve.gov/econres/notes/feds-notes/assessing-the-extent-of-trade-fragmentation-20231103.html

Sachs, J., & Bruno, M. (1979). Supply versus demand approaches to the problem of stagflation (NBER Working Paper No. 382). National Bureau of Economic Research.

Sachs, J., & Cohen, D. (1982). LDC borrowing with default risk (NBER Working Paper No. 925). National Bureau of Economic Research.

Stehrer, R., Leitner, S., Marcias, M., Mirza, D., Pindyuk, O., Siedschlag, I., Stöllinger, R., & Studnicka, Z. (2016). *The evolving composition of intra-EU trade* (Issue Research Report 414). The Vienna Institute for International Economic Studies.

Toft, P. (2005). John J. Mearsheimer: an offensive realist between geopolitics and power. Journal of International Relations and Development, (8), pp. 381-408.

Waever, O. (1995). Securitization and desecuritization. In R. D. Lipschutz (Ed.), *On security* (pp. 4686). Columbia University Press.

Appendices

Appendix A - All the Independent Variables' Sources

World Bank Open Database: World Bank Open Data

- Trade Flow/GDP
- Net FDI (net)
- Portfolio (net)
- GDP
- GDP Growth
- Population Growth
- Exchange Rate
- Inflation
- Real Interest Rate
- Deposit Rate
- Political Stability and Absence of Violence
- Health Expenditure

Kellogg Institute Database: NSF-Kellogg Institute Database

- One-Way Preferential Agreement
- Two-Way Preferential Agreement
- Free Trade Agreement
- Customs Union
- Economic Union

Other links:

- WTO Membership: Google Search for each country's WTO membership status
- Applied Tariff Indicator: World Development Indicators
- Military Spending (% of GDP): SIPRI Military Expenditure Database
- Migration Population/Total Population: International migration database
- UNGA: UNView - Visualizing United Nations Voting Patterns
- RTA (Cumulative): Regional Trade Agreements Database
- MATR: IMF AREAER Database

The MATR index is a product of IMF's AREAER database about non-bilateral country-year trade restriction data, where one can decide on the components (binary variables) of this index to make it self-tailored for their research. The components that we included in the MATR index are the following: For exchange measures imposed for security reasons: 1) In accordance with IMF Executive Board Decision No. 144-(52/51), 2) Other security restrictions; For payment arrangements: 3) Bilateral payments arrangements, 4) Regional arrangements, 5) Clearing agreements, 6) Barter agreements and open accounts; 7) Controls on trade in gold (coins and/ or bullion): 8) Controls on exports and imports of banknotes; For nonresident accounts, i.e., imports and import payments, documentation requirements for release of foreign exchange for imports, import licenses and other non- tariff measures, import taxes and/or tariffs: 9) Foreign exchange budget, 10) Financing requirements for imports, 11) Pre-shipment inspection, 12) Letters of credit, 13) Import licenses used as exchange licenses, 14) Positive list, 15) Negative list, 16) Licenses with quotas, 17) Other non-tariff measures, 18) Taxes collected through the exchange system; For

exports and export proceeds: 19) Financing requirements, 20) Export taxes, 21) Trade-related payments, 22) Foreign workers' wages, 23) Credit card use abroad. In total, the MATR index incorporates 23 different components.

Originally, the AREAER database stores these components for a given country and a year in categorical format made of "yes," "no," and "n.r." (not regulated). The value "yes" implies the corresponding measure/restriction significantly exists, "no" implies the IMF found no measure, and "n.r." implies the country itself informed the IMF that no such regulation/measure/restriction exists for that year. We dummy-coded these values as "yes," equivalent to 1 and "no," and "n.r." equivalent to 0 as per their trade-restriction implications. See Estefania-Flores et al. (2022) and Campos et al. (2023) for the previous MATR implementations (both conducted by the IMF staff).

Appendix B - Regression Tables

Table 1

	Dependent Variable: RTA (Cumulative)		
	Model 1	Model 2	Model 3
UNGA	30.1299	31.759	10.8631
Trade Flow	0.0772***	0.09138***	0.0342***
FDI	2.1859***	1.9542***	1.6972***
Portfolio Flows	2.8364***	-4.4871***	4.0224***
Tariff	0.0848**	0.09**	-0.6492**
WTO Membership	-1.8627	-1.6732	8.3626
One-Way Preferential Trade			17.6301
Two-Way Preferential Trade			135.0517
Free Trade Agreement			1.7739
Customs Union			84.2258
Economic Union			1.6769
Military Spending		-957.9505	-236.114
MATR	0.0687***	0.1555***	0.1302***
Migrant Population		0.099***	0.1178***
Health Expenditure		-2.8175	-0.7395*
GDP	7.0835***	1.9029***	5.0791***
GDP Growth	-0.6678*	-0.4456**	-0.0125**
Population Growth	-1.9658	-1.2126	-0.4269
Real Interest Rate	0.04537***	0.2096***	0.041***
Deposit Rate	0.0056***	-0.4097***	0.2039***
Exchange Rate	-0.0012***	0.0063***	0.0038***
Inflation	-0.6592***	-0.4381***	-0.3193***
Political Stability	6.2061	-5.2667	1.5075
2008-2010	2.5727	2.4959	1.6545
2010-2015	5.8217	2.2785	0.5094
2019-2020	7.0003	8.2845	
R-squared	0.66128	0.76982	0.81825

*Note: *p<0.05 ; **p<0.01 ; ***p<0.001*

Table 2

	Dependent Variable: UNGA (absolute)		
	Model 1	Model 2	Model 3
Trade Flow	-0.0001***	6.765***	-0.0002***
FDI	1.0676***	7.3269***	2.3765***
Portfolio Flows	2.9748***	4.5841***	7.3796***
Tariff	0.0095**	0.0083**	0.0115**
RTA (Cumulative)	0.0014***	0.0015***	0.0007***
WTO Membership	-1.0842	3.0578	-5.1434
One-Way Preferential Trade			0.541
Two-Way Preferential Trade			0.6814
Free Trade Agreement			0.267
Customs Union			-1.7641
Economic Union			-2.5946
Military Spending		2.0079	2.4692
MATR	0.0007***	-0.0004***	0.0028***
Migrant Population		-0.0021***	0.0006***
Health Expenditure		0.0147	0.0105*
GDP	2.5866***	1.925***	-2.025***
GDP Growth	0.0016**	0.0022**	0.0011**
Population Growth	-0.0001	0.0073	0.0183
Real Interest Rate	-0.0032***	-0.0042***	-0.0042***
Deposit Rate	-0.0064***	-0.0043***	-0.0037***
Exchange Rate	-3.7693***	-5.6465***	-4.6133***
Inflation	0.0045***	0.0039***	0.0039***
Political Stability	0.0142	0.0107	0.0507
2008-2010	-0.0203	-0.0169	-0.0257
2010-2015	0.0217	0.0297	-0.0084
2019-2020	-0.0163	-0.0235	
R-squared	0.51807	0.55009	0.62585

*Note: *p<0.05 ; **p<0.01 ; ***p<0.001*

Table 3

	Dependent Variable: UNGA		
	Model 1	Model 2	Model 3
Trade Flow	-0.0016***	-0.0015***	-0.0016***
FDI	1.6867***	1.1894***	4.222***
Portfolio Flows	-9.1685***	-2.798***	-1.7164***
Tariff	-0.0205**	-0.0232**	-0.0375**
RTA (Cumulative)	0.0077***	0.0099***	0.0048***
WTO Membership		4.8152	7.1561
One-Way Preferential Trade			-0.9324
Two-Way Preferential Trade			1.3197
Free Trade Agreement			-0.6679
Customs Union			-8.1485
Economic Union			-3.148
Military Spending		12.0576	2.3115
MATR	-0.0068***	-0.0092***	-0.0046***
Migrant Population		-0.0054***	0.0025***
Health Expenditure		0.0494	0.0361*
GDP	4.9717***	2.5766***	-2.3263***
GDP Growth	0.0042**	0.0046**	0.0087**
Population Growth	-0.1004	-0.0759	-0.0425
Real Interest Rate	0.0004***	-0.0029***	0.0008***
Deposit Rate	-0.0084***	-0.0002***	-0.0037***
Exchange Rate	7.7694***	-2.3464***	-1.8355***
Inflation	0.0099***	0.0074***	0.009***
Political Stability	0.1949	0.1849	0.0156
2008-2010	-0.0262	-0.0242	-0.0187
2010-2015	-0.0723	-0.0363	-0.0837
2019-2020	-0.0972	-0.1314	
R-squared	0.8273	0.8556	0.88835

*Note: *p<0.05 ; **p<0.01 ; ***p<0.001*

Table 4

	Dependent Variable: Trade Flow		
	Model 1	Model 2	Model 3
UNGA	-191.085	-118.1656	-160.0354
FDI	-3.6239***	3.97***	2.776***
Portfolio Flows	6.7278***	4.8548***	5.1614***
Tariff	-8.2302**	-2.3889**	-11.3663**
RTA (Cumulative)	2.2103***	2.2064***	1.5276***
WTO Membership	-5.0013	2.2179	-1.8885
One-Way Preferential Trade			-37.2488
Two-Way Preferential Trade			210.0557
Free Trade Agreement			-124.1977
Customs Union			-171.448
Economic Union			-2.3059
Military Spending		3185.9105	2128.6248
MATR	-0.223***	1.1613***	0.9803***
Migrant Population		0.8135***	1.3408***
Health Expenditure		-11.8007	-9.7331*
GDP	-4.2825***	-9.1476***	-1.312***
GDP Growth	3.4882**	-0.0992**	1.6556**
Population Growth	0.6342	0.3681	-9.8994
Real Interest Rate	1.5133***	0.7035***	1.2833***
Deposit Rate	-5.0864***	-2.7452***	-2.4111***
Exchange Rate	0.0257***	0.0007***	0.0233***
Inflation	3.1638***	1.1063***	1.6842***
Political Stability	78.563	65.2089	59.9444
2008-2010	5.3801	-6.5259	-10.5478
2010-2015	-16.7738	-7.64893	-12.3518
2019-2020	-31.8118	-22.7937	
R-squared	0.83306	0.90435	0.884713

*Note: *p<0.05 ; **p<0.01 ; ***p<0.001*

Table 5

	Dependent Variable: Military Spending		
	Model 1	Model 2	Model 3
Trade Flow	7.9021***	3.6064***	2.8212***
FDI	-9.8611***	-2.4694***	2.5599***
Portfolio Flows	-3.1013***	-4.8727***	-5.4849***
Tariff	-0.0003**	0.0002**	0.0006**
RTA (Cumulative)	-0.0003***	-0.0003***	-0.0001***
WTO Membership	1.442	-7.752	-2.782
One-Way Preferential Trade			0.0011
Two-Way Preferential Trade			-0.0115
Free Trade Agreement			0.00286
Customs Union			0.202
Economic Union			-5.4966
UNGA	0.0078	0.0105	0.0033
MATR	-9.9337***	0.0001***	0.0001***
Migrant Population		0.0004***	0.0004***
Health Expenditure		-0.0018	-0.0018*
GDP	-1.5612***	-1.3243***	-6.2447***
GDP Growth	0.0003**	0.0001**	6.5262**
Population Growth	-9.0269	-0.001	-0.0006
Real Interest Rate	0.0001***	0.0002***	0.0002***
Deposit Rate	-0.0003***	-0.0005***	-0.0003***
Exchange Rate	5.9437***	6.1214***	5.772***
Inflation	0.0001***	0.0002***	6.2743***
Political Stability	-0.0037	-0.0042	-0.0032
2008-2010	0.0017	0.0008	0.0002
2010-2015	-0.0013	-0.0016	-0.001
2019-2020	0.0027	0.0034	
R-squared	0.78528	0.86361	0.87424

*Note: *P<0.05 ; **p<0.01 ; ***p<0.001*