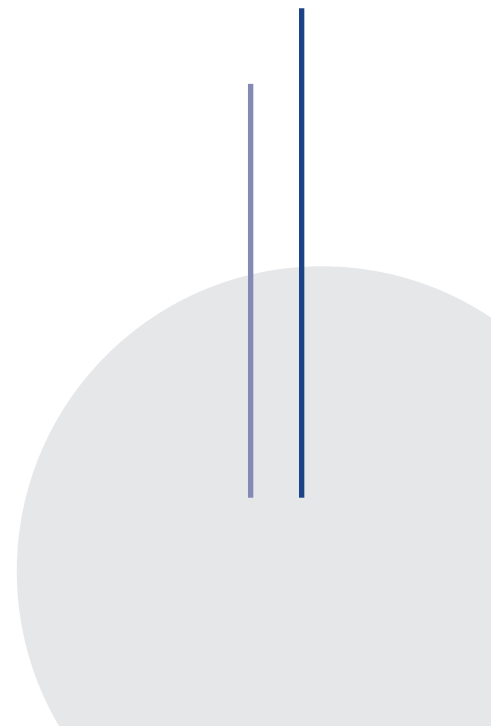




# **CURRENT GLOBAL GEO-ECONOMIC FRAGMENTATION** AND ITS RELATIONSHIP TO TRADE OPENNESS IN LATIN AMERICA AND THE CARIBBEAN.

María Paula Suárez

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## **Abstract**

*This study examines the relationship between geoeconomic fragmentation—measured by aggregate trade restrictions and the geopolitical alignment of countries in the region—and trade openness in Latin America and the Caribbean. Trade openness is proxied by the number of export destinations, the number of import sources, and export concentration (HHI). The analysis is based on panel data for 29 countries over the period 1996–2023, using a panel estimator robust to cross-sectional dependence and heteroskedasticity. The results show that an increase in aggregate trade restrictions consistently reduces trade openness across all measures considered. Regarding geopolitical alignment, the findings indicate that greater alignment with specific geopolitical blocs is associated with lower diversification of trading partners, suggesting that bloc-based integration may limit broader trade linkages. The study concludes that the region could benefit from leveraging its relatively neutral geopolitical position and strengthening productive development policies aimed at increasing diversification and resilience in external trade.*

*Keywords: Geoeconomic fragmentation; trade openness; geopolitical alignment; trade restrictions; export diversification; export concentration; Latin America and the Caribbean.*

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## 1. Introduction

For several decades, international trade has been crucial in narrowing the income gap among countries, reducing global poverty, and improving well-being. Since the mid-20th century, international trade has enabled less developed countries to integrate into the global economy and achieve higher levels of development, contributing to sustained increases in productivity (Aiyar et al., 2023). On the other hand, in recent years, the rise of global value chains has promoted the spread of technology and brought several countries closer to the technological frontier (Aiyar et al., 2023).

However, current trends have divided global trade and value chains into geopolitically aligned blocs, leading to a gradual reconfiguration of international trade patterns (Giraldo et al., 2025). In this context, various events in recent years have begun to undermine global economic integration and its benefits. Among the most significant are the Russian invasion of Ukraine; trade restrictions in strategic sectors such as raw materials and semiconductors; the COVID-19 pandemic, during which many countries limited their exports; and the growing bilateral trade barriers between the United States and China. Taken together, these developments can be interpreted as a shift from deepening integration toward a more fragmented and strategically driven global trade system (Bolhuis et al., 2023).

This paper examines how this process of geoeconomic fragmentation—captured through trade restrictions and geopolitical alignment—affects trade openness in Latin America and the Caribbean (LAC), focusing on its impact on the diversification of trade partners and export concentration. The analysis uses data for 29 countries in the region for the period 1996–2023. The structure of the paper is organized as follows: Section 2 reviews the literature; Section 3 presents the context; Section 4 describes the data and methodology; Section 5 presents the results; and Section 6 concludes.

## 2. Literature Review

Geoeconomic fragmentation (GEF) is defined as the reversal of global economic and trade integration, driven and guided by state policies and strategies (Aiyar et al., 2023). Economies turn to this process for security reasons, to increase their self-sufficiency—by reducing their reliance on foreign sources—and to promote domestic production (Abdullahi et al., 2025; Aiyar et al., 2023). Furthermore, GEF can be exacerbated by strategic economic rivalry between countries or blocs, as well as by the deliberate exploitation of economic interdependence through sanctions, financial instruments, export controls, and policies designed to protect supply chains (Abdullahi et al., 2025; Aiyar et al., 2023).

There is no single, standardized measure of GEF in the literature; therefore, different indicators are used to characterize this phenomenon depending on the analytical approach and the availability of data. For example, Okuda & Tsuruga (2024) propose four hypothetical scenarios with varying degrees of fragmentation, based on bilateral geopolitical distance, measured through voting divergence in the United Nations General Assembly during the 2012–2021 period. Meanwhile, Bolhuis et al. (2024) use trade fragmentation, which is represented as an increase in policy-driven non-tariff barriers.

Although GEF may offer strategic advantages to certain countries in specific contexts, it is highly likely to generate negative externalities. These manifest themselves through various destabilizing factors, including trade restrictions, technological barriers, and limitations on labor mobility (Aiyar et al., 2023). This phenomenon generates significant economic costs at the aggregate level, reflected in higher import prices, reduced efficiency in global value chains, weakened economies of scale, and greater volatility in commodity prices (Quimba & Barral, 2025). Additionally, it can lead to market segmentation, reduce access to technology and labor, and ultimately result in lower productivity, which could lead to a decline in living standards, particularly in low-income economies (Aiyar et al., 2023; Quimba & Barral, 2025).

In this regard, a study published by Attinasi et al. (2023) uses voting patterns in the UN as a proxy for fragmentation to group countries into hypothetical blocs. The authors find that the economic losses resulting from trade along geopolitical lines, particularly in strategic sectors, vary across countries. Large economies such as the United States and China face smaller losses, given that the size of their domestic markets allows them to more easily substitute imported inputs following a shock. Similarly, major economies with large domestic markets and diversified production structures demonstrate greater capacity to adjust in the face of global fragmentation. (Bolhuis et al., 2023; García-Silva, 2024). In contrast, small economies that are more dependent on international trade—such as several in Latin America—are more exposed to these risks and are more vulnerable to disruptions in global flows of goods.

In the case of LAC, it has already faced more than 800 interventions imposed by other countries in recent years, but it has also contributed to an increase in the number of interventions imposed on other countries (Machado Parente & Moreau, 2024). This global fragmentation could affect LAC through various channels, as it could impact both trade and financial ties (Machado Parente & Moreau, 2024).

In this context, one challenge faced by the LAC region is its economic structure, which remains heavily dependent on primary and low-tech exports, thereby limiting opportunities

for improvement and productivity growth (OCDE et al., 2025). Furthermore, the region has not managed to integrate into global value chains, as it faces significant constraints in terms of logistics capacity and trade openness (Giraldo et al., 2025; Machado Parente & Moreau, 2024). In addition, the region's poor performance on indicators such as the Logistics Performance Index reflects the need to overcome challenges in customs, infrastructure, organizational quality, and operational capacity in order to strengthen its global competitiveness (Giraldo et al., 2025; OCDE et al., 2025)

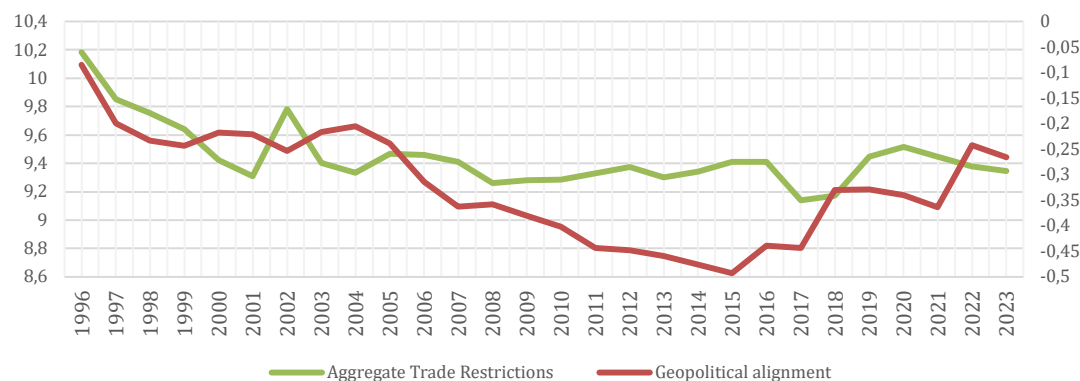
However, there may be opportunities for the region in a context of fragmentation. Given the region's abundance of natural resources, there is an opportunity to take the lead in global green value chains (OCDE et al., 2025). On the other hand, there is a concept known as connector countries, Aiyara & Ohnsorged (2024) formalize the concept of connectivity as the ability to conduct transactions with international partners across the ideological spectrum. The authors construct an index and find that emerging market economies are more connected from a geoeconomic perspective than advanced economies, and this connection is significantly greater in trade-related transactions. For LAC, this suggests that a relatively neutral geopolitical position could facilitate its role as a connector between competing blocs, allowing the region to benefit from trade realignment (Giraldo et al., 2025).

Finally, the research by Machado Parente & Moreau (2024) which focuses specifically on LAC, finds that in a scenario of moderate fragmentation, the region would be in a better position than advanced economies or other emerging economies. However, in more extreme fragmentation scenarios, LAC could face permanent output losses ranging from 2% to 4% on average, although still below the estimated costs that other economies would face.

### 3. Context

In line with the literature review, aggregate trade restrictions and countries' geopolitical alignment are variables that can represent GEF. Figure 1 shows how LAC's aggregate trade restrictions and the ideal-point index—which represents geopolitical alignment—have fluctuated over the period analyzed. It can be observed that there are turning points, one of which occurred in 2018, when the trade war began; this is consistent with Attinasi et al. (2024), who note that trade tensions between the United States and China marked a turning point for the global trading system. At the same time, the index fluctuates in negative values throughout most of the period, reflecting shifts in political orientation within the region rather than a stable alignment with a single bloc (López Monsiváis, 2022; Moreira, 2017). Figure 1 also suggests an inverse relationship between the two variables; however, this pattern may reflect common global shocks rather than a direct relationship.

Figure 1. Trade restrictions and geopolitical alignment over time

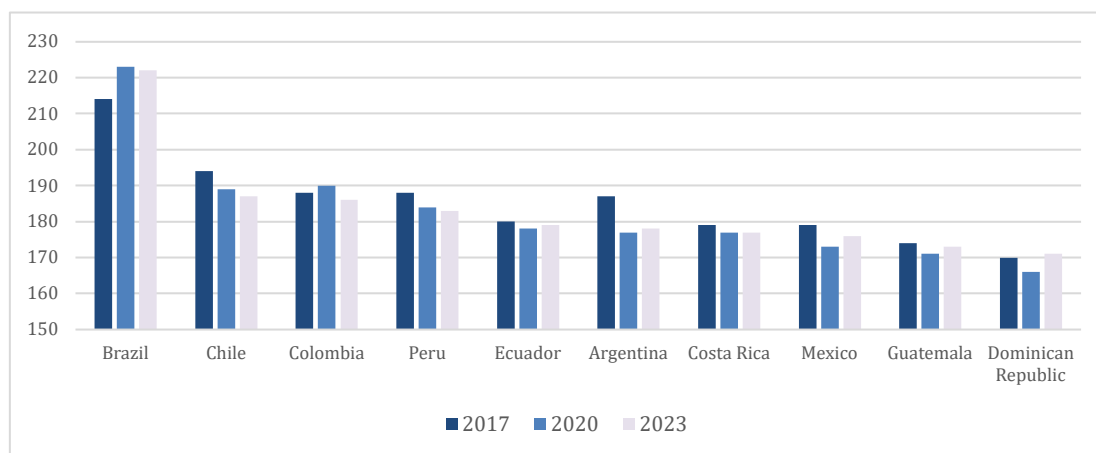


Source: Author's own creation based on data from Bailey et al. and Estefania-Flores et al.

Note: (To account for trade restrictions and geopolitical alignment, an average was calculated of the trade restrictions imposed and the ideal point score for the 29 countries in the sample for each year.)

Regarding the number of export destinations, data from BACI for the 10 countries with the highest number of destinations in 2023 show that, except for Brazil and the Dominican Republic, the number of export destinations is lower than in 2017 (Figure 2). Comparing 2020 and 2023, the evidence is mixed: some countries (e.g., Ecuador and Argentina) show increases, while others (e.g., Chile and Colombia) show declines. This indicates heterogeneous effects across countries rather than a uniform regional trend.

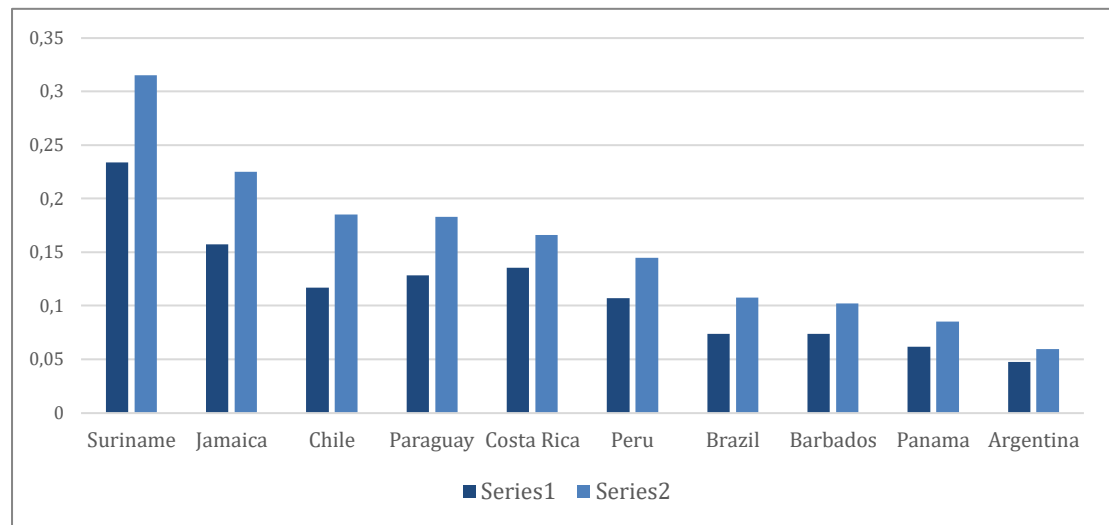
Figure 2. Number of export destinations



Source: Own elaboration based on BACI data from CEPII

Regarding export concentration, BACI data for the 10 countries with the largest changes between 2017 and 2023 show an increase in the HHI for all of them (Figure 4), indicating a general rise in export concentration and reduced diversification in recent years.

Figure 3. Export concentration (HHI)



Source: Own elaboration based on BACI data from CEPII

## 4. Data and methodology

### 4.1. Data

The data for this study consists of a panel dataset with annual observations from 1996 to 2023. Data are used from 29 countries in the LAC region: Argentina, Antigua and Barbuda, Belize, Bolivia, Brazil, Barbados, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, Grenada, Guatemala, Guyana, Honduras, Haiti, Jamaica, Saint Lucia, Mexico, Nicaragua, Panama, Peru, Paraguay, El Salvador, Suriname, Trinidad and Tobago, Uruguay, Saint Vincent and the Grenadines, and Venezuela, yielding a total of 812 observations ( $T=28$ ,  $N=29$ ). The data comes from various sources. For the three dependent variables that capture different dimensions of trade openness (number of import sources; number of export destinations; export concentration (HHI)), data was obtained from the CEPII's BACI database. The main explanatory variables are geopolitical alignment—derived from ideal-point estimates based on UN General Assembly voting patterns (Bailey et al., 2017)—and aggregate trade restrictions, which capture the degree of policy-imposed restrictions on international trade flows, based on the IMF's Annual Report on Exchange Arrangements and Restrictions, developed by Estefania-Flores et al. (2024).

Regarding control variables, the model includes log GDP per capita, foreign direct investment (% of GDP), log population, inflation, government spending (% of GDP), and financial development, all obtained from the World Bank's World Development Indicators (WDI). The simple average of the MFN tariff for manufactured goods was obtained from UNCTAD, while terms of trade were obtained from FLAR's SIE; higher-frequency data were averaged to obtain annual values, and for countries with missing information, UNCTAD data were used. These variables are standard controls in the literature on trade openness and export diversification (Balavac & Pugh, 2015; Calzada Olvera & Spinola, 2025; Lee & Zhang, 2019; Mau, 2014; Unger, 2023). Additionally, dummy variables are included for the 2008–09 financial crisis, the 2018 trade war, and the 2020–21 COVID-19 pandemic.

## 4.2. Methodology

Given the available data, the panel structure is such that the number of time periods (T) is smaller than the number of individuals (N). Consequently, we must correct for bias arising from the simultaneous presence of heteroscedasticity, autocorrelation, and cross-sectional correlation among panels, as well as any cross-country dependence that may arise in the panel estimates. Taking this into account, the estimator proposed by Driscoll & Kraay (1998) was selected as the main estimator. This method is particularly suitable when  $N > T$ , as it provides consistent standard errors in the presence of simultaneous autocorrelation, heteroscedasticity, and, crucially, cross-sectional correlation among the panels (Reed & Ye, 2011).

Trade openness is determined using the following three equations:

$$\begin{aligned} baci\_imp\_n\_sources_{it} &= \beta_0 + \beta_1 idealpoint_{it} + \beta_2 matr_{it} + \beta_3 idealpoint_{it} * gfc_{it} + \beta_4 tot_{it} \\ &+ \beta_5 \ln gdppc_{it} + \beta_6 fdi\_gdp\_w_{it} + \beta_7 \ln pop_{it} + \beta_8 inflation\_w_{it} \\ &+ \beta_9 gov\_exp_{it} + \beta_{10} tariff\_mfn_{it} + \beta_{11} fin\_dev_{it} + \delta_1 gfc_{it} \\ &+ \delta_2 tw_{it} + \delta_3 covid_{it} + \mu_{it} \end{aligned} \quad (1)$$

$$\begin{aligned} baci\_exp\_n\_destinations_{it} &= \beta_0 + \beta_1 idealpoint_{it} + \beta_2 matr_{it} + \beta_3 idealpoint_{it} * tw_{it} + \beta_4 tot_{it} \\ &+ \beta_5 \ln gdppc_{it} + \beta_6 fdi\_gdp\_w_{it} + \beta_7 \ln pop_{it} + \beta_8 inflation\_w_{it} \\ &+ \beta_9 gov\_exp_{it} + \beta_{10} tariff\_mfn_{it} + \beta_{11} fin\_dev_{it} + \delta_1 gfc_{it} \\ &+ \delta_2 tw_{it} + \delta_3 covid_{it} + \mu_{it} \end{aligned} \quad (2)$$

$$\begin{aligned} baci\_exp\_hhi\_destinations_{it} &= \beta_0 + \beta_1 matr_{it} + \beta_2 idealpoint_{it} + \beta_3 tot_{it} + \beta_4 \ln gdppc_{it} \\ &+ \beta_5 fdi\_gdp\_w_{it} + \beta_6 \ln pop_{it} + \beta_7 inflation\_w_{it} + \beta_8 gov\_exp_{it} \\ &+ \beta_9 tariff\_mfn_{it} + \beta_{10} fin\_dev_{it} + \delta_1 gfc_{it} + \delta_2 tw_{it} + \delta_3 covid_{it} \\ &+ \mu_{it} \end{aligned} \quad (3)$$

Where, in equation (1), the number of import sources ( $baci\_imp\_n\_sources_{it}$ ) for country  $i$  in year  $t$ , is determined by geopolitical alignment ( $idealpoint_{it}$ ), aggregate trade restrictions ( $matr_{it}$ ), the interaction between geopolitical alignment and the binary variable for the 2008–09 financial crisis ( $idealpoint_{it} * gfc_{it}$ ), terms of trade ( $tot_{it}$ ), the logarithm of GDP per capita ( $\ln gdppc_{it}$ ), foreign direct investment as a percentage of GDP ( $fdi\_gdp\_w_{it}$ ), the logarithm of population ( $\ln pop_{it}$ ), inflation ( $inflation\_w_{it}$ ), government spending as a percentage of GDP ( $gov\_exp_{it}$ ), the simple average of the MFN tariff for manufactured goods ( $tariff\_mfn_{it}$ ), financial development ( $fin\_dev_{it}$ ), a binary variable taking the value 1 for the 2008–09 financial crisis period ( $gfc_{it}$ ), a binary variable taking the value 1 for the 2018 trade war period and subsequent years in the panel ( $tw_{it}$ ), a binary variable taking the value 1 for the 2020–21 COVID-19 pandemic period ( $covid_{it}$ ), and the error term ( $\mu_{it}$ ).

For equation (2), the number of export destinations ( $baci\_exp\_n\_destinations_{it}$ ) for country  $i$  in year  $t$  is determined by the same explanatory variables as in equation (1), except for the interaction term, which for this equation is between geopolitical alignment and the binary variable for the trade war  $idealpoint_{it} * gfc_{it}$ . Likewise, for equation (3), the export concentration ( $baci\_exp\_hhi\_destinations_{it}$ ) for country  $i$  in year  $t$  is determined by the same explanatory variables mentioned in equation (1), except for the interaction term, which was not included in this equation.

## 5. Results

The main objective of this study is to analyze whether there is a relationship between geo-economic fragmentation and trade openness. The results are presented in Tables 1–3. For equation (1), Table 1 shows a negative and statistically significant relationship between geopolitical alignment and the number of import sources, indicating that higher alignment with a geopolitical bloc is associated with lower import diversification. This is consistent with Airaudó et al. (2025), who show that more aligned countries tend to trade more within blocs and less with others, while non-aligned countries maintain more diversified trade relations. Similarly, aggregate trade restrictions exhibit a negative and statistically significant effect, confirming that higher restrictions reduce import diversification. Regarding control variables, GDP per capita and population show positive and significant relationships, suggesting that larger economies tend to diversify their import sources. In contrast, MFN tariffs are negatively associated with diversification, reinforcing the effect of trade restrictions on trade openness.

Table 1.

| Variable                     | M1                   | M2                   | M3                   | M4                   | M5                   | M6                   |
|------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Constant                     | +<br>164.8407<br>*** | -<br>483.8596<br>*** | -<br>1232.669<br>*** | -<br>784.2539<br>*** | -<br>803.1583<br>*** | -<br>803.4129<br>*** |
| Geopolitical alignment       | -<br>27.954**<br>*   | -<br>17.9228*<br>**  | -<br>16.8366*<br>**  | -<br>14.8694*<br>**  | -<br>14.6484*<br>**  | -<br>14.8454*<br>**  |
| Trade restrictions (MATR)    | -<br>4.1891**<br>*   | -<br>2.3529**<br>*   | -<br>2.0351**<br>*   | -<br>2.1433**<br>*   | -<br>2.1234**<br>*   | -<br>2.1447**<br>*   |
| Idealpoint × GFC             | —                    | —                    | —                    | —                    | —                    | +3.2292              |
| Terms of trade               | +0.1105*<br>*        | -<br>0.0800**<br>*   | -0.0405*<br>*        | -0.0284              | -0.0289              | -0.0365              |
| ln GDP per capita            | —                    | +<br>68.6638*<br>**  | +49.0319<br>***      | +59.4811<br>***      | +60.0852<br>***      | +59.9988<br>***      |
| FDI / GDP                    | —                    | —                    | +0.0983              | +0.0985              | +0.0679              | +0.0706              |
| ln Population                | —                    | —                    | +61.4330<br>***      | +24.5486<br>***      | +25.3824<br>***      | +24.9521<br>***      |
| Inflation                    | —                    | —                    | —                    | +0.1225              | +0.1188              | +0.1196              |
| Government Expenditure / GDP | —                    | —                    | —                    | +0.7846*<br>**       | +0.7715*<br>**       | +0.7785*<br>**       |
| MFN Tariff                   | —                    | —                    | —                    | -<br>1.1168**<br>*   | -<br>1.0613**<br>*   | -<br>1.0581**<br>*   |

|                             |       |       |       |         |               |          |
|-----------------------------|-------|-------|-------|---------|---------------|----------|
| Financial Developm ent      | —     | —     | —     | -0.1318 | -0.1293       | -0.1339  |
| GFC 2008–09 Dummy           | —     | —     | —     | —       | +3.3720*<br>* | +3.3973* |
| Trade War 2018+ Dummy       | —     | —     | —     | —       | -0.7114       | -0.7518  |
| COVID 2020–21 Dummy         | —     | —     | —     | —       | +2.0021       | +1.9719  |
|                             |       |       |       |         |               |          |
| <i>Within R<sup>2</sup></i> | 0.179 | 0.498 | 0.545 | 0.614   | 0.615         | 0.615    |
| <i>Observati ons</i>        | 810   | 784   | 784   | 644     | 644           | 644      |
| <i>N Countries</i>          | 29    | 28    | 28    | 23      | 23            | 23       |

Driscoll–Kraay SE in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$ . Country fixed effects. Yellow rows: fragmentation variables.

For equation (2), Table 2 shows that both aggregate trade restrictions and geopolitical alignment have negative and statistically significant effects on the number of export destinations, indicating that higher fragmentation reduces export diversification. This result is consistent with Lawless (2008), who finds that higher trade costs reduce the number of exporting firms and, consequently, the number of trade partners. GDP per capita and population again show positive and significant effects, while MFN tariffs and the post-2018 trade war dummy are negatively associated with export diversification, suggesting a reconfiguration of trade patterns following recent global shocks (M. G. Attinasi et al., 2024). Additionally, terms of trade show a negative relationship with export destinations, which may reflect reduced incentives to diversify when export prices improve.

Table 2.

| Variable                     | M1                  | M2                   | M3                   | M4                   | M5                   | M6                   |
|------------------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Constant                     | +157.6524<br>***    | -<br>374.1869<br>*** | -<br>1368.203<br>*** | -<br>942.8872<br>*** | -<br>1056.092<br>*** | -<br>1080.541<br>*** |
| Geopolitical alignment       | -<br>22.3393**<br>* | -<br>12.6928*<br>**  | -<br>11.2624*<br>**  | -<br>10.4154*<br>**  | -<br>9.4643**<br>*   | -<br>7.1688**<br>*   |
| Trade restriction            | -<br>2.2652***      | -<br>0.9991**<br>*   | -<br>0.5806**<br>*   | -<br>0.7215**<br>*   | -<br>0.5866**<br>*   | -<br>0.5946**<br>*   |
| ns (MATR)                    |                     |                      |                      |                      |                      |                      |
| Idealpoint × TW              | —                   | —                    | —                    | —                    | —                    | -<br>8.3369**<br>*   |
| Terms of trade               | -0.0056             | -<br>0.1464**<br>*   | -<br>0.0937**<br>*   | -<br>0.0828**<br>*   | -<br>0.0853**<br>*   | -<br>0.0809**<br>*   |
| ln GDP per capita            | —                   | +56.4000<br>***      | +30.2999<br>***      | +32.5521<br>***      | +34.1361<br>***      | +34.7589<br>***      |
| FDI / GDP                    | —                   | —                    | +0.1081              | +0.0127              | -0.1094              | -0.0769              |
| ln Population                | —                   | —                    | +81.5824<br>***      | +51.9002<br>***      | +58.0022<br>***      | +59.1753<br>***      |
| Inflation                    | —                   | —                    | —                    | -0.0894              | -0.0639              | -0.0439              |
| Government Expenditure / GDP | —                   | —                    | —                    | +0.0730              | +0.1601              | +0.1842              |
| MFN Tariff                   | —                   | —                    | —                    | -<br>1.3131**<br>*   | -<br>1.2172**<br>*   | -<br>1.2494**<br>*   |

|                       |       |       |       |         |           |                 |
|-----------------------|-------|-------|-------|---------|-----------|-----------------|
| Financial Development | —     | —     | —     | -0.1075 | -0.0894   | -0.0884         |
| GFC 2008–09 Dummy     | —     | —     | —     | —       | +4.5147** | +4.3815**       |
| Trade War 2018+ Dummy | —     | —     | —     | —       | - 4.0475* | - 6.6987**<br>* |
| COVID 2020–21 Dummy   | —     | —     | —     | —       | + 1.5315  | +1.3915         |
|                       |       |       |       |         |           |                 |
| Within R <sup>2</sup> | 0.130 | 0.485 | 0.622 | 0.661   | 0.671     | 0.674           |
| Observations          | 810   | 784   | 784   | 644     | 644       | 644             |
| N Countries           | 29    | 28    | 28    | 23      | 23        | 23              |

Driscoll–Kraay SE in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$ . Country fixed effects. Yellow rows: fragmentation variables.

For equation (3), Table 3 shows the results, and it can be seen that the relationship between geopolitical alignment in this equation is not statistically significant with respect to the dependent variable; therefore, it cannot be proven that a relationship exists between the two. However, for the trade restrictions variable, a positive and statistically significant relationship is observed, which confirms that the greater the trade fragmentation, the higher the export concentration of countries, which is synonymous with lower trade openness. This result is consistent with Dennis & Shepherd (2009) who mention in their research that higher trade costs are associated with greater export concentration. Regarding the control variables, the most relevant findings are that there is a statistically significant and negative relationship between population and the dependent variable, indicating that the larger a country's population, the less concentrated its export basket will be. On the other hand, there is a positive and statistically significant relationship between financial development and the dependent variable, indicating that the more financially developed an economy is, the more concentrated its export basket will be—which may be due to the fact that greater financial development leads to greater trade specialization in countries. Likewise, there is a positive and statistically significant relationship between terms of trade and the dependent variable, meaning that as export prices rise, countries tend to specialize, leading to greater export concentration.

Table 3.

| Variable                         | M1                | M2                | M3                | M4                | M5                |
|----------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Constant                         | +0.0785***        | +0.9911***        | +2.8944***        | +4.1083***        | +3.9383***        |
| <b>Geopolitical alignment</b>    | <b>+0.0353***</b> | <b>+0.0017</b>    | <b>+0.0008</b>    | <b>-0.0102</b>    | <b>-0.0091</b>    |
| <b>Trade restrictions (MATR)</b> | <b>+0.0100***</b> | <b>+0.0099***</b> | <b>+0.0092***</b> | <b>+0.0091***</b> | <b>+0.0094***</b> |
| Terms of trade                   | +0.0005***        | +0.0010***        | +0.0009***        | +0.0006***        | +0.0006***        |
| ln GDP per capita                | —                 | -0.1016***        | -0.0511***        | -0.0321           | -0.0316           |
| FDI / GDP                        | —                 | —                 | +0.0002           | -0.0004           | -0.0007           |
| ln Population                    | —                 | —                 | -0.1567***        | -0.2422***        | -0.2321***        |
| Inflation                        | —                 | —                 | —                 | -0.0001           | -0.0001           |
| Government Expenditure / GDP     | —                 | —                 | —                 | -0.0023***        | -0.0022**         |
| MFN Tariff                       | —                 | —                 | —                 | +0.0021           | +0.0023           |
| Financial Development            | —                 | —                 | —                 | +0.0013***        | +0.0014***        |
| GFC 2008–09 Dummy                | —                 | —                 | —                 | —                 | +0.0193**         |
| Trade War 2018+ Dummy            | —                 | —                 | —                 | —                 | -0.0033           |
| COVID 2020–21 Dummy              | —                 | —                 | —                 | —                 | -0.0028           |
|                                  |                   |                   |                   |                   |                   |
| Within R <sup>2</sup>            | 0.050             | 0.114             | 0.135             | 0.217             | 0.211             |
| Observations                     | 810               | 784               | 784               | 644               | 644               |
| N Countries                      | 29                | 28                | 28                | 23                | 23                |

Driscoll–Kraay SE in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.10$ . Country fixed effects. Yellow rows: fragmentation variables.

## 6. Conclusions and Recommendations

This study finds a systematic relationship between geoeconomic fragmentation—measured by geopolitical alignment and aggregate trade restrictions—and trade openness in LAC countries, captured through diversification of trading partners and export concentration. Using a Driscoll–Kraay model, the results show that higher trade restrictions are associated with lower trade openness (Lawless, 2008), while greater geopolitical alignment is linked to fewer import and export partners. In addition, higher trade restrictions are associated with greater export concentration (Dennis & Shepherd, 2009), whereas geopolitical alignment does not show a statistically significant effect on this dimension.

Based on the literature and empirical results, recent processes of trade and economic reconfiguration driven by geopolitical factors have had measurable effects on LAC's trade structure (Machado Parente & Moreau, 2024). The region faces both challenges and opportunities due to its economic structure, resource endowment, infrastructure constraints, and geopolitical positioning (Giraldo et al., 2025; OCDE et al., 2025). While its natural resource base creates potential for integration into global markets, structural limitations continue to hinder deeper participation in global value chains. Rather than reflecting a fixed alignment with a specific bloc, the region's geopolitical positioning suggests potential for acting as a connector across fragmented trade networks, creating opportunities for diversification and trade reorientation (Airaudo et al., 2025).

With this in mind, one of the main recommendations is that LAC countries leverage this relatively neutral positioning to strengthen trade linkages across blocs, allowing the region to benefit from ongoing trade reconfiguration (Giraldo et al., 2025). At the same time, given the negative association between trade restrictions and openness, policies aimed at reducing unnecessary barriers should be considered, provided they do not undermine external stability. In addition, the region should prioritize productive development policies to enhance diversification and technological upgrading (OCDE et al., 2025). For these policies to be effective, they must place greater emphasis on implementation and coordination with the private sector, particularly in

## 7. References

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