

Who Benefits from Free Trade? An Empirical Analysis of Economic Gains Across Countries

Examining whether the benefits of trade liberalisation are distributed evenly between advanced and developing economies.

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Autumn 2025



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Abstract

This paper examines whether free trade primarily promotes the interests of powerful economies. Drawing on competing perspectives from international political economy, it evaluates three potential mechanisms through which asymmetries may emerge: the distribution of trade flows, unequal domestic capacity to benefit from liberalisation, and institutional advantages embedded within the global trading system. Using a harmonised exporter–importer panel covering 1995–2020, the analysis combines structural gravity models, an event-study framework, and tariff-based specifications to assess the relationship between economic power and the gains from trade liberalisation.

The results provide only partial support for the proposition that free trade disproportionately benefits powerful economies. The baseline gravity model finds that preferential trade agreements (PTAs) are associated with approximately 8% higher bilateral trade flows. However, once dyad and year fixed effects are introduced through a structural gravity model estimated using Poisson Pseudo-Maximum Likelihood (PPML), neither PTAs nor their interaction with economic size are statistically significant. Similarly, tariff reductions do not appear to generate larger trade-flow gains for economically powerful states.

The strongest evidence of asymmetry emerges through the domestic gains channel. While the average effects of liberalisation on domestic value added (DVA) and terms of trade are largely insignificant, interaction effects between liberalisation and GDP are consistently positive and statistically significant. These findings suggest that larger economies are considerably more successful at converting trade liberalisation into domestic economic gains, reflecting differences in productive capacity, industrial diversification, and integration into higher-value segments of global supply chains.

The paper concludes that free trade does not inherently privilege powerful economies through greater access to trade itself. Rather, inequalities arise from differences in countries’ ability to capture and retain the benefits generated by openness. Consequently, policies aimed at making trade more inclusive should focus less on restricting liberalisation and more on strengthening the productive and institutional capacities of smaller and developing economies.

Introduction

The concept of free trade is often presented as a simple extension of David Ricardo’s theory of comparative advantage. In practice, however, it has evolved into a far more complex system shaped by institutions, rules, and negotiated procedures. Intergovernmental organisations such as the IMF, the UN, and most prominently the WTO sit at the centre of this system, acting as mediators, facilitators, and referees. Although these institutions are formally neutral, scholars of International Political Economy, including critics such as Martin Khor and Dani Rodrik, have long questioned whether free trade genuinely benefits all nations or whether it functions as a tool that disproportionately advances the interests of global powers.

This paper argues that free trade does not inherently promote the interests of the most powerful economies. On paper, free trade does not favour any particular category of states. Yet in practice, powerful economies often appear to gain more. This raises a central question: why do stronger economies seem to benefit disproportionately if the rules of free trade are, in principle, universal? Several explanations emerge from different strands of IPE theory. One liberal perspective, rooted in commercial peace theory, suggests that all economies share common interests, most fundamentally the avoidance of conflict, and that free trade promotes these shared interests rather than privileging the powerful. By contrast, historical and structural perspectives emphasise how colonial legacies, unequal capacity for diversification, and gendered labour markets leave many weaker economies unable to take full advantage of liberalisation, even when access to markets is formally equal.

Before examining these claims empirically, it is necessary to clarify key terms. In this study, free trade refers to cross-border exchange that is not impeded by protectionist measures, consistent with the original principles of GATT (1947). Questions of “fair trade”, while normatively important, fall outside the technical definition used in IPE. The term “powerful economies” is understood pragmatically as referring to the G20 countries, which together account for approximately 85% of global GDP and 75% of world trade. Finally, interests are interpreted broadly. Although economic interests are central, political and strategic interests are also relevant, particularly in the negotiation and design of trade agreements.

To assess whether free trade disproportionately favours powerful economies, the remainder of the paper integrates these conceptual debates with quantitative evidence. The next section reviews how theories of commercial peace, structural inequality, and institutional bargaining map onto testable economic mechanisms. The Data and Methodology section then introduces a harmonised panel dataset (1995–2020) and sets out three empirical models: a structural gravity analysis of the distribution of trade flows (Models 1A–1B), an event-study examining domestic value added following liberalisation (Model 2), and a tariff-based PPML model assessing institutional asymmetries in trade policy (Model 3). The Findings section presents results for each mechanism, followed by a discussion of their theoretical implications and a conclusion summarising the contribution of the paper.

Literature Review

This section explores three distinct strands of international political economy and international trade theory. Each one aims to highlight a particular mechanism through which free trade may, or may not, primarily promote the interest of powerful economies. These three mechanisms form the conceptual foundations for what the models aim to answer.

I Common Interests vs. Distributional Asymmetries

Debates about the political consequences of free trade often begin with the liberal tradition, particularly the idea of commercial peace. Commercial peace, sometimes referred to as capitalist peace, parallels the democratic peace theory in international relations. While democratic peace theory suggests that democratic states are less likely to engage in war because of shared norms and aligned interests (Doyle, drawing on Kant’s Perpetual Peace), commercial peace extends this logic to economic interdependence. According to Norman Angell and later Thomas Friedman, expanding cross-border trade ties reduces the likelihood of interstate conflict because the economic costs of war grow prohibitively high. Friedman’s famous claim that “no two countries with McDonald’s have fought a war against each other” embodies this intuition: free trade promotes a set of common interests shared across states. Viewed through this liberal lens, free trade promotes the interests of all economies, powerful and weaker alike, by lowering the risk of conflict and increasing economic welfare. States, regardless of their status, share the fundamental interest of survival, and avoiding economic crisis or military confrontation is part of that shared interest. However, this emphasis on common interests overlooks a crucial question: how are the gains from free trade distributed? From a realist or structural political economy perspective, even if free trade creates aggregate welfare gains, these gains may be skewed toward powerful economies with greater productive capacity, market size, and bargaining leverage. The commercial peace argument does not rule out distributional asymmetries; it simply does not address them. If free trade generates unequal gains, then the structure of global trade flows should exhibit heterogeneous effects by economic power. More powerful economies should be disproportionately embedded in global trade networks and benefit more strongly from integration measures such as PTAs.

II Historical Legacies and Unequal Capacity to Benefit

The second mechanism concerns not trade flows themselves but the capacity of states to capture domestic gains from trade. Free trade does not operate on a level playing field. Contemporary economic hierarchies are deeply shaped by colonial legacies, which continue to affect the productive structure, bargaining power, and institutional capacity of many developing economies. As Karl Polanyi argued, markets are embedded within society, meaning economic exchange cannot be separated from the legal, social, and political structures that shape it. Colonial rule fundamentally altered these structures in many LEDCs, entrenching patterns of extraction and underdevelopment. Nathan Nunn’s influential research demonstrates the long-lasting economic harm associated with the Trans-Atlantic Slave Trade, showing that historical extraction has persistent negative effects on income, institutional quality, and diversification even centuries later. These historical forces have shaped contemporary trade patterns in several ways:

1. **Limited diversification:** Many formerly colonised states continue to depend heavily on primary exports and face barriers to upgrading into higher-value-added sectors,
2. **Economic and political instability:** Colonial borders and institutions often produced fragile political orders, corruption, or civil conflict, further constraining economic development.

3. Dependence on advanced economies: LEDCs and NICs often lack the bargaining leverage or industrial base needed to fully benefit from FTAs.

A related but distinct channel concerns gender inequality, which interacts with historical legacies to further reduce productive capacity. Labour participation rates remain dramatically skewed in many African, Asian, and Latin American economies; 4:1 in parts of Africa, 3:1 in Asia, and 2:1 in South America (Verick, 2014). Colonial-era norms frequently entrenched gendered divisions of labour (King & Hill, 1993), limiting education and formal employment opportunities for women. These labour constraints reduce diversification and slow structural transformation, which in turn limit the capacity of these economies to benefit from trade liberalisation. In contrast, countries whose postcolonial trajectories enabled industrial upgrading, such as India, illustrate that historical disadvantage does not mechanically determine outcomes but significantly shapes the range of feasible gains. If historical legacies reduce states' ability to convert liberalisation into domestic gains, then after PTAs or tariff reductions, we should observe unequal improvements in domestic value-added (DVA%) and terms of trade, with powerful economies showing much larger post-liberalisation gains.

III Institutions, Rule-Making, and Bargaining Asymmetries

A third perspective focuses on the institutional architecture of the international trading system, particularly the role of the WTO/GATT in shaping liberalisation outcomes. Trade governance is formally rules-based, yet the influence of powerful economies is evident in agenda-setting, dispute settlement, and negotiation outcomes. Developing countries have often found themselves at a disadvantage within these processes. While WTO membership is nearly universal, the ability to shape rules varies dramatically. Scholars such as Narlikar (2003) show that developing countries have made institutional gains only when forming coalitions, such as the G20 (trade group), the African Group, or the Cairns Group, allowing them to collectively bargain against larger economies. Without such coalitions, liberalisation rules often reflect the preferences of the most powerful members. This institutional asymmetry matters because tariff reductions and trade rules are not neutral: they may be designed or sequenced in ways that benefit powerful economies disproportionately. Even when free trade is formally reciprocal, countries with larger markets, deeper capital bases, or stronger negotiating positions may extract more favourable terms or adjust more quickly to openness. If trade institutions amplify asymmetries in bargaining power, then identical reductions in MFN tariffs should generate stronger export responses for powerful economies.

Data and Methodology

I Datasets

To assess whether free trade disproportionately promotes the interests of powerful economies, this study constructs a harmonised exporter–importer–year panel spanning 1995–2020. The dataset combines bilateral trade information, structural gravity variables, preferential trade agreement indicators, domestic value-added measures, macroeconomic aggregates, and trade policy data. This integration enables the analysis of not only cross-country variation in trade flows but also the domestic gains and institutional implications of trade liberalisation.

The core bilateral trade data are sourced from CEPII's BACI database, which provides harmonised merchandise export flows at the exporter–importer–year level. These flows are merged with structural gravity variables from the CEPII Gravity dataset, including weighted distance (*Distw*), contiguity (*Contig*), and common official language (*Comlang_off*). Although these variables are absorbed by dyad fixed effects in the preferred PPML specification, they remain essential for validating the structural gravity framework and constructing the baseline log-linear benchmark. Preferential trade agreements are recorded using the dyadic (*RTA*) indicator from CEPII's RTA dataset.

To examine domestic gains from liberalisation, exporter-year indicators of domestic value added in gross exports (DVA%) are imported from the OECD TiVA database. Broader macroeconomic variables, including GDP (used as a proxy for economic size and structural power) and terms-of-trade indices, are obtained from the World Development Indicators. Finally, time-varying measures of trade policy restrictiveness are constructed using MFN applied tariff rates from the WTO Integrated Database, merged at the exporter–year level.

The resulting merged panel contains approximately 700,000 observations. Variables that vary only by exporter and year; GDP, tariffs, DVA%, and terms of trade, are merged onto each bilateral dyad through the exporter identifier. This structure supports the estimation of both bilateral gravity models and exporter-level event-study designs within the same consolidated empirical framework.

II Key Variables

(a) Dependent variables

1. Bilateral Exports ($Trade_Value_{ijt}$)

The dependent variable in the gravity model is the value of exports from country o (origin) to country d (destination) in year t . These flows serve to quantify the structure and distribution of global trade.

2. Domestic Value Added ($Dvashare_{it}$)

For the event-study analysis, the principal outcome is the share of domestic value added embodied in an exporter's gross exports. This captures the extent to which export revenues translate into domestic production benefits.

3. Terms of Trade (ToT_{it})

As a secondary event-study outcome, the terms-of-trade index reflects the purchasing power of a country's exports relative to its imports.

(b) Trade Policy and Liberalisation Variables

1. Preferential Trade Agreement (RTA_{ijt})

A binary variable taking value 1 when a bilateral PTA is in force. PTA adoption is used as a discrete trade-liberalisation event in both gravity and event-study models.

2. MFN Tariffs ($Tariff_{it}$)

The exporter's applied MFN tariff rate, varying by exporter-year. This variable is central to Model 3 and is also used to define tariff-based liberalisation episodes.

(c) Economic Size and Structural Controls

1. Gross Domestic Product (GDP_{ijt})

Exporter GDP is used as a continuous measure of economic "power," capturing market size, bargaining strength, and structural capacity to benefit from liberalisation.

2. Gravity Controls

Time-invariant bilateral characteristics: distance, contiguity, and common official language, are taken from CEPII Gravity. These variables are absorbed by dyad fixed effects in PPML specifications.

III Identification of Liberalisation Events

Liberalisation episodes are defined through two complementary mechanisms. The baseline event is the year in which a bilateral preferential trade agreement ($RTA_{ijt} = 1$) first enters into force. This captures institutional liberalisation arising from formal negotiated agreements. As a robustness approach, a tariff-based liberalisation event is defined as the beginning of any three-year period during which an exporter's MFN tariff rate declines by at least the 75th percentile of all observed tariff reductions in the sample. This identifies episodes of unilateral or broad-based liberalisation not

captured by PTA adoption. For each exporter, the first qualifying event defines t_0 , and event-time indicators are constructed over a symmetric ± 5 -year window. These indicators are used to trace dynamic adjustments in DVA% and terms of trade around liberalisation.

IV Models

Model 1A – Baseline Log-Linear Gravity (OLS)

The benchmark gravity equation is first estimated in log-linear form using ordinary least squares, where Year fixed Effects (γ_t) control for global shocks. Standard errors are clustered at the dyad level to account for serial correlation within pairs. Model 1A provides the traditional benchmark elasticities and illustrates the “common interest” pattern predicted by classical gravity theory.

$$\ln \text{trade}_{ijt} = \alpha + \beta_1 \ln \text{GDP}_{it} + \beta_2 \ln \text{Dist}_{ij} + \beta_3 \text{Contig}_{ij} + \beta_4 \text{Comlang}_{ij} + \beta_5 \text{RTA}_{ijt} + \gamma_t + \varepsilon_{ijt}$$

Although widely used, the log-linear OLS specification suffers from two key limitations: zero trade flows and heteroskedasticity. Logging the dependent variable requires dropping all observations with zero trade i.e observations that are economically meaningful and informative about trade barriers. Variance in trade flows increases with their level. Under such conditions, log-linear OLS yields inconsistent estimates because the log transformation distorts the error structure (Santos Silva & Tenreiro, 2006). To address these issues, the preferred specification employs Poisson Pseudo-Maximum Likelihood (PPML), which: models trade flows in levels, naturally handles zero flows, remains consistent under heteroskedasticity, and preserves the multiplicative structure of the gravity model.

Model 1B – Structural Gravity PPML

This model applies the structural gravity framework using Poisson Pseudo-Maximum Likelihood (PPML). The interaction term tests whether PTAs expand trade disproportionately for large economies, directly corresponding to the first mechanism. Dyad fixed effects (μ_{ij}) absorb all time-invariant bilateral trade costs such as distance, contiguity, and shared language, while year fixed effects (γ_t) capture global shocks and common macroeconomic trends. Standard errors are clustered at the dyad ($i-j$) level to account for serial correlation within country pairs.

$$E[\text{trade}_{ijt}] = \exp(\beta_1 \ln \text{GDP}_{it} + \beta_2 \text{RTA}_{ijt} + \beta_3 (\ln \text{GDP}_{it} \times \text{RTA}_{ijt}) + \mu_{ij} + \gamma_t).$$

Model 2 – Event-Study of Domestic Gains

To analyse whether trade liberalisation yields asymmetric domestic benefits, Model 2 estimates the dynamic response of the outcome variable (Y_{it}), either domestic value added (DVA%) or terms of trade, around each exporter’s first liberalisation year (t_{0i}). The specification traces event-time adjustments using a set of indicators that capture relative years before and after liberalisation. Exporter fixed effects (α_i) absorb all time-invariant country characteristics, while year fixed effects (γ_t) control for global shocks. Standard errors are clustered at the exporter level. Positive post-event coefficients indicate domestic gains from liberalisation, and interacting event-time indicators with GDP allows testing for heterogeneous effects by economic power.

$$Y_{it} = \sum_{\tau=-5, \tau \neq -1}^{+5} \delta_{\tau} I(t - t_{0i} = \tau) + \alpha_i + \gamma_t + \varepsilon_{it},$$

Model 3 – Tariff Liberalisation and Institutional Asymmetry

Model 3 assesses whether reductions in MFN tariffs disproportionately expand trade for powerful economies. The specification estimates the semi-elasticity of bilateral exports with respect to exporter–year MFN tariff rates ($Tariff_{it}$), and includes an interaction term with exporter GDP to test whether larger economies convert tariff cuts into greater trade gains. Dyad fixed effects (μ_{ij}) absorb all time-invariant bilateral characteristics, while year fixed effects (γ_t) capture global shocks. Standard errors are clustered at the dyad level. A positive coefficient on the interaction term would indicate that tariff reductions benefit large economies more strongly, consistent with institutional–power asymmetry mechanisms.

$$E[trade_{ijt}] = \exp(\beta_1 Tariff_{it} + \beta_2 \ln GDP_{it} + \beta_3 (Tariff_{it} \times \ln GDP_{it}) + \mu_{ij} + \gamma_t)$$

Findings

Table 1: Descriptive Statistics

Variable	Observations	Mean	Std. Dev.	Min	Max
Trade value	708,341	1,318.95	51,967.73	0.001	17,000,000
GDP	681,517	322 billion	1.07 trillion	11.9 million	27.7 trillion
Distance	653,520	7,504.85	4,541.40	23	19,778
RTA	653,671	0.143	0.350	0	1
Tariff	412,976	9.82	5.65	0	47.24
Domestic value added	334,295	125,400.30	228,437.10	8.06	2,781,581
Terms of trade	633,840	101.63	23.40	19.5	955.5

Notes: RTA refers to preferential trade agreement status. Domestic value added refers to domestic value added embodied in gross exports. Terms of trade are index values. GDP and trade value are reported in current values from the underlying dataset.

Table 1 presents summary statistics for the main variables used in the empirical analysis. The final dataset combines bilateral trade flows, macroeconomic indicators, trade policy variables and domestic value-added measures. The sample contains more than 700,000 bilateral trade observations, although coverage varies across variables due to differences in data availability. Preferential trade agreements are present in approximately 14% of observed dyad-year pairs, while the average applied tariff rate is just under 10%. The wide dispersion in trade values, GDP and domestic value added reflects the substantial heterogeneity between countries in the sample, making it appropriate to examine whether economic size affects the ability to benefit from trade liberalisation.

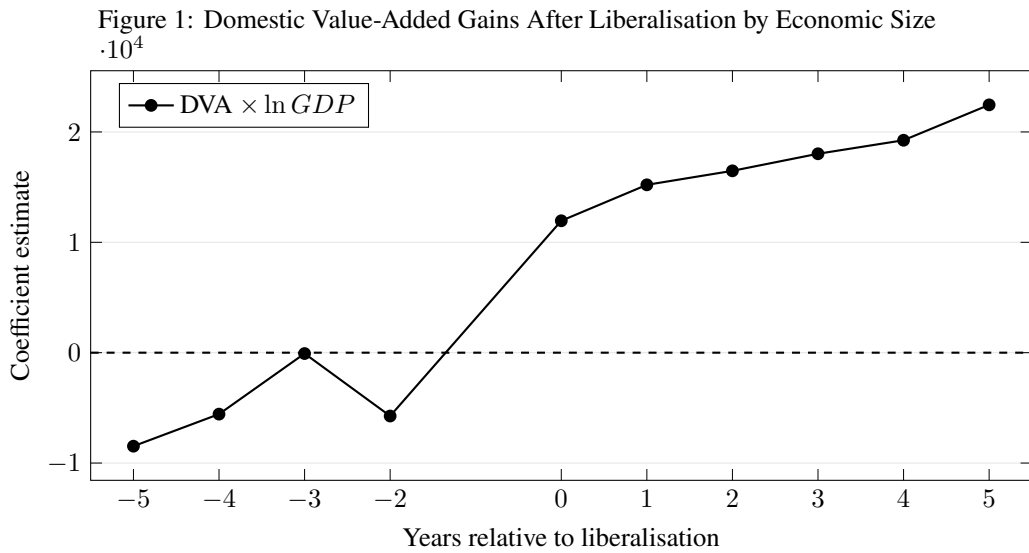
Table 2: Gravity Model Results

Model	$\ln GDP$	$\ln Distance$	Border	Language	PTA	$PTA \times \ln GDP$	Year FE	Dyad FE
OLS Gravity (1a)	0.205*** (0.004)	-0.222*** (0.013)	0.363*** (0.071)	-0.293*** (0.027)	0.080*** (0.027)	– –	Yes	No
PPML Gravity (1b)	0.404*** (0.102)	– –	– –	– –	-0.632 (1.879)	0.010 (0.076)	Yes	Yes

Notes: Robust standard errors clustered at the dyad level are reported in parentheses. Model 1A estimates a log-linear OLS gravity model. Model 1B estimates a structural gravity model using PPML with dyad and year fixed effects. Border refers to shared border; language refers to common official language; PTA refers to preferential trade agreement. *** p<0.01, ** p<0.05, * p<0.10.

Table 2 presents the gravity model results. In Model 1A, the baseline OLS specification produces results consistent with the conventional gravity literature. Economic size is positively and significantly associated with bilateral trade, while distance exerts a negative effect on trade flows. The coefficient on preferential trade agreements is also positive and statistically significant, suggesting that PTAs are associated with an approximate 8% increase in trade within the log-linear specification. Taken in isolation, these findings would appear to support the view that trade liberalisation promotes greater economic integration between countries. Model 1A is estimated on 623,658 observations.

Model 1B, however, produces a more cautious interpretation once the preferred PPML specification is employed. GDP remains positive and statistically significant, confirming that larger economies trade more overall. However, the PTA coefficient becomes statistically insignificant, and the interaction between PTAs and GDP remains close to zero. This suggests that the positive PTA effect observed in the baseline OLS model may partly reflect unobserved characteristics of country pairs rather than a causal effect of trade agreements themselves. More importantly, there is no evidence that trade agreements systematically generate larger trade-flow gains for economically powerful states. Model 1B is estimated on 628,557 observations.



Notes: The figure plots event-study interaction coefficients between liberalisation timing and $\ln GDP$, using year -1 as the omitted baseline. Positive coefficients indicate stronger domestic value-added gains for larger economies following liberalisation.

Figure 1 presents the event-study interaction coefficients between liberalisation and economic size. Unlike the average event-study effects, which are not statistically significant, the GDP interaction terms become positive and statistically significant from the year of liberalisation onwards. The coefficient rises from 11,951 in year 0 to 22,454 by year +5, suggesting that larger economies are increasingly better able to convert trade liberalisation into domestic value-added gains over time.

This represents the strongest evidence of asymmetry in the paper. The results suggest that free trade does not necessarily favour powerful economies by expanding their trade flows more directly. Instead, the advantage appears to arise through domestic value capture: larger economies are better positioned to retain and transform the opportunities created by liberalisation into domestic production gains.

Importantly, these results emerge despite the absence of significant average effects in the event-study analysis. Liberalisation does not appear to generate uniformly positive outcomes across all countries. Instead, the gains become increasingly concentrated among larger economies over time. This divergence suggests that economic size influences not whether countries participate in trade, but how effectively they are able to exploit the opportunities that liberalisation creates.

Table 3: Tariff Barriers and Economic Size

Model	Tariff Rate	$\ln GDP$	$Tariff \times \ln GDP$	Year FE	Dyad FE	Obs.
PPML Tariff (Model 3)	0.247 (0.176)	0.611*** (0.194)	-0.009 (0.007)	Yes	Yes	409,469

Notes: PPML gravity specification with dyad and year fixed effects. Robust standard errors clustered at the dyad level are reported in parentheses. The interaction term tests whether tariff barriers affect economies differently according to economic size. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table 3 examines whether tariff barriers affect countries differently depending on their economic size. Consistent with the previous gravity specifications, GDP remains positively associated with trade and is statistically significant. However, neither the tariff coefficient nor the interaction between tariffs and economic size is statistically significant.

The results therefore provide little evidence that tariff barriers systematically disadvantage smaller economies relative to larger ones. While tariffs may influence trade flows in individual cases, their effects do not appear sufficiently strong or consistent across the sample to generate a measurable asymmetry. This contrasts with the domestic value-added analysis, where economic size was found to play a significant role following trade liberalisation.

Taken together, the findings suggest that the primary source of unequal outcomes under free trade is not differential exposure to tariff barriers, but rather differences in countries' ability to capture and retain value once trade opportunities are created.

Discussion

The empirical results provide only partial support for the argument that free trade primarily promotes the interests of powerful economies. The gravity-model evidence suggests that larger economies trade more overall, but there is little indication that trade agreements themselves disproportionately increase trade flows for economically powerful states. While the baseline OLS specification identifies a positive association between PTAs and trade, this relationship disappears once the preferred PPML model controls for unobserved dyad-specific characteristics. The evidence therefore does not support the claim that trade liberalisation inherently advantages larger economies through greater market access alone.

This finding partially supports liberal theories of trade, which argue that trade liberalisation can create broadly shared gains. If free trade agreements directly favoured powerful economies through trade flows, we would expect the RTA-GDP interaction to be positive and significant. Instead, the coefficient is only 0.010 with a p-value of 0.897, which provides no support for that mechanism.

However, the event-study results support a more structural interpretation. The average country does not seem to experience major improvements in domestic value added or terms of trade after liberalisation. Yet larger economies do experience significantly stronger domestic value-added gains after liberalisation. The GDP interaction effects are positive and significant from year 0 through year +5, increasing from around 11,951 in the year of liberalisation to 22,454 five years later. This suggests that the asymmetry is not mainly about access to trade, but about the capacity to capture value from trade.

This finding aligns closely with the paper's theoretical argument regarding historical legacies and unequal productive capacity. Countries with larger domestic markets, more diversified industrial structures, stronger institutions, and deeper integration into global value chains are better positioned to exploit the opportunities created by market opening. Smaller or less developed economies may gain access to international markets, but often remain concentrated in lower-value stages of production, limiting their ability to translate liberalisation into sustained domestic gains.

The results therefore suggest that free trade is not inherently biased in its formal structure, but it operates within an unequal global economy. This means that formally equal rules can still produce unequal outcomes. Powerful economies do not necessarily benefit more because the rules explicitly favour them, but because they possess the structural capacity to make better use of those rules.

Conclusions

This paper examined whether free trade primarily promotes the interests of powerful economies. The findings provide partial support for this claim. The evidence does not show that trade agreements or tariff reductions directly produce larger trade-flow gains for powerful economies. In both the preferred PPML gravity model and the tariff model, the interaction terms with GDP are statistically insignificant.

The strongest evidence of asymmetry appears in Model 2. Larger economies experience significantly greater domestic value-added gains after liberalisation, with positive and significant GDP interaction effects from the year of liberalisation through four years afterwards. This suggests that powerful economies are better able to transform liberalisation into domestic economic benefits.

The main conclusion is therefore that free trade does not automatically favour powerful economies at the level of trade flows, but it does tend to favour them at the level of domestic value capture. The issue is not simply whether countries can trade, but whether they have the productive capacity to benefit from trade.

From a policy perspective, this means that making trade fairer requires more than reducing tariffs or signing new agreements. Developing and smaller economies need support to build productive capacity, diversify exports, improve infrastructure, and move into higher-value sectors. Trade agreements should therefore be accompanied by capacity-building measures, technology transfer, industrial upgrading support, and targeted development finance.

Ultimately, the findings suggest that free trade is neither purely exploitative nor automatically beneficial. Its effects depend on the structural conditions of the countries involved. Liberalisation may create opportunities for all states, but powerful economies remain better placed to convert those opportunities into lasting domestic gains.