

Uneviling the Economic Impact of OECD Anti-Bribery Convention

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Abstract

This paper investigates the impact of the 1997 OECD Anti-Bribery Convention on Combating Bribery of Foreign Public Officials in International Business Transactions (“OECD ABC” or “the Convention”), a landmark international agreement aimed at combating bribery in international business transactions by criminalizing the supply side of corruption. While ratified by most major investor countries, their enforcement efforts remain highly contested. Challenging prevailing concern that the Convention harm exports to corrupt markets, this paper highlights the critical distinction between ratification and enforcement. It analyzes how active enforcement affects bilateral exports, leveraging a novel dataset and robust empirical methods. As a result, it demonstrates that enforcement of the OECD ABC has complex and context-dependent effects on bilateral exports. The findings reveal that enforcement can negatively influence exports, particularly when excluding the US, the most active enforcer. These results suggest that enforcement introduces compliance costs and risk aversion among exporters, outweighing potential trust-building effects in corrupt markets. This study highlights the critical need to balance enforcement efforts with trade considerations.

Introduction

The 1997 OECD Anti-Bribery Convention (OECD ABC or the Convention) is a landmark international agreement aimed at combating foreign bribery initiated by firms in global business transactions. Ratified by 38 OECD and 8 non-OECD countries, the Convention represents a significant step toward addressing transnational corruption. However, its effectiveness remains a subject of intense debate due to significant disparities in enforcement among signatories and critiques of its institutional design.

The Convention mandates a stringent monitoring process, requiring signatories to undergo evaluations across four main phases conducted by the OECD Working Group. Persistent non-compliance can necessitate repeated evaluations, with findings published in OECD Progress Reports. Despite these mechanisms, enforcement has remained uneven over the past two decades. Only a handful of signatories actively implement the Convention, while many fail to enforce it meaningfully following ratification. This raises critical questions about the Convention’s design and whether its objectives can be achieved without robust enforcement mechanisms.

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Existing literature offers conflicting perspectives on the economic impact of the Convention. Some studies argue that it disadvantages signatory firms by reducing their competitiveness in corrupt markets, thereby lowering exports and foreign direct investment (FDI). These critiques highlight the Convention's inability to address free-riding in the international arena, leaving countries with little enforcement motivation due to high legal costs and potential harm to their investors.

Conversely, other studies suggest that the Convention levels the playing field by enabling firms to reject costly bribe demands and compete more fairly. These counterarguments often rely on persistent enforcement by certain signatories and alternative empirical models that explain export deviations. However, most empirical studies, regardless of perspective, equate ratification with enforcement, failing to account for the substantial variance in enforcement efforts. This oversight weakens assertions that unimplemented regulations drive behavioral change among investors.

Addressing the question of whether the Convention significantly affects the trade outcomes of its signatories, this study distinguishes between ratification and enforcement. Using cross-national export data and a gravity model, it incorporates enforcement levels as a key variable, rather than treating ratification as a proxy for implementation. The analysis demonstrates that enforcement does not deter exports to corrupt markets. Instead, persistent active enforcement is associated with measurable increases in the export levels of signatory countries.

Literature Overview

The distinction between ratification and implementation has been a central topic in international law and governance. Ratification represents a formal political commitment by a state to adhere to the provisions of a treaty, signaling alignment with its principles on the international stage. However, implementation is the process of enacting domestic laws, regulations, and more importantly the enforcement mechanisms which ultimately determines the effectiveness of international agreements. Chayes and Chayes (1993) highlights ratification and compliance distinction in the scope of international law and argues that treaty compliance requires institutional capacity and domestic incentives that align with international norms. This distinction is particularly pronounced in the international anti-corruption regulations where enforceability often hinges on domestic legal systems and political will. International anti-corruption literature highlights the widespread ratification of the Convention, yet also recognizes lack of robust enforcement of its signatories. For instance, Abbott and Snidal (2002) underscores the importance of obligation, precision, and delegation in ensuring the Convention move beyond symbolic commitments to meaningful outcomes.

While nearly all major global investors have ratified the Convention, enforcement efforts remain uneven, with only a subset of countries pursuing active legal actions against bribery. This disparity reflects the difficulties of achieving collective action, as signatories face varying costs and incentives for implementation (Hock (2020) , p20-23). Tarullo (2004) critiques the Convention's design, highlighting that it lacks binding enforcement mechanisms to ensure compliance, thereby enabling free-riding behaviors. Meanwhile, scholars like Brewster (2014) argue that enforceability in international agreements often requires external pressure, such as reputational risks or economic sanctions, to compel adherence. Without such mechanisms, treaties risk perpetuating symbolic compliance, where countries reap the reputational benefits of ratification without

incurring the political or economic costs of enforcement. These debates underscore the critical importance of distinguishing ratification from implementation when evaluating the effectiveness of international legal frameworks, particularly in areas where non-compliance undermines global governance.

Transnational bribery literature has expanded significantly since the enactment of the Foreign Corrupt Practices Act, 1977 (FCPA), which prohibits U.S.-based firms from bribing foreign officials. Critics of the FCPA argued that it constrained U.S. firms while leaving foreign competitors from other jurisdictions unrestricted. Hines (1995) provided empirical evidence showing that the FCPA adversely affected U.S. firms' operations in bribe-prone countries. The OECD ABC sought to address these criticisms by urging collective action through domestic anti-bribery regulations. Yet, these criticisms persisted even after the Convention's adoption by most major investor countries. Tarullo (2004) argues that the Convention's design failed to achieve meaningful collaboration due to its non-binding structure, enabling free-riding behaviors among signatories. This critique finds support in the literature (Brewster and Buell (2017)), highlighting the challenges of uneven enforcement and symbolic compliance.

This distinction between ratification and implementation forms the foundation for assessing the Convention's economic impact. Empirical studies have explored this relationship, yet they offer conflicting findings, largely due to differences in how implementation and enforcement are measured. For instance, Cuervo-Cazurra (2007) finds that investors from signatory countries reduce investments in corrupt markets whose investments declined significantly after the Convention's implementation. Blundell-Wignall and Roulet (2017), focusing on the foreign direct investment flows, highlights the compliance risks posed by host countries with high perceived levels of corruption for investors from jurisdictions where foreign bribery is criminalized. D'Souza (2012) employs a gravity model to analyze positive export flows from 1992–2006, demonstrating that the Convention increases compliance costs for firms in signatory countries, leading to reduced exports to corrupt markets. However, her analysis is constrained by its limited time frame, excluding post-Phase 3 periods. This study addresses these limitations by incorporating extended data (1996–2019) and capturing enforcement effects using OECD Enforcement Reports.

In contrast, Cooray, Jha, and Panda (2023) employs a gravity model to analyze trade data from 193 countries over the period 1996–2014, finding that corruption in destination countries is positively associated with trade from OECD ABC signatories. This supports that firms use the Convention as a credible shield, avoiding bribery while still trading with corrupt markets (Rose-Ackerman (2013)). These findings emphasize the importance of regulatory frameworks in mitigating corruption's adverse effects on trade.

More recent studies, such as Jensen and Malesky (2018) and Firth (2023), specifically examine the impact of Phase 3 of the OECD ABC, which increased the risk of penalties for bribery. However, these studies may face bias risks due to the assumption that all signatories implemented Phase 3 simultaneously in 2010. In reality, countries implemented Phase 3 in staggered timelines, with some completing it as late as 2015. Moreover, countries that completed Phase 3 did not uniformly improve enforcement efforts, as evidenced by cases like Mexico and New Zealand, which successfully passed monitoring phases but failed to impose sanctions. These limitations highlight the need for more nuanced analyses of enforcement dynamics.

By extending the temporal scope and incorporating enforcement-specific metrics, this study not only addresses the limitations of prior research but also contributes to the broader understanding of how enforcement dynamics shape international trade patterns under the OECD Anti-Bribery Convention. This approach

bridges theoretical critiques and empirical evidence, advancing the literature on the intersection of international law, governance, and economics.

Hypotheses

The literature on transnational bribery raises critical questions about the impact of enforcement versus ratification of international agreements like the OECD ABC. While some argue that the Convention creates competitive disadvantages for signatories, others suggest that it helps level the playing field. This study seeks to disentangle these effects by explicitly considering enforcement variance.

D’Souza (2012) analyzes the effects of the OECD ABC on exports to corrupt markets using trade data from 1992–2006. Its findings proposes that ratification of the Convention increased compliance costs for firms in signatory countries, leading to reduced exports to corrupt markets. However, this analysis is limited to early post-ratification periods and does not account for enforcement differences among signatories.

This outcome, however, leads follow-up questions. How come an international agreement having a highly contested enforcement can influence the trade patterns of its signatories? According to Dell and McDevitt (2022), enforcement levels among signatories remain uneven, with only two countries (i.e., Switzerland and the US) classified as active enforcers, representing a mere 11.8% of global exports. Similarly, the enforcement report of the OECD highlights that out of 687 individuals and 264 entities sanctioned since the Convention’s inception, the vast majority of cases are concentrated in a handful of jurisdictions, leaving many signatories with negligible enforcement records (Bribery (2022)). This disparity undermines the collective credibility of the Convention and raises concerns about free-riding behaviors among signatories unwilling to bear the costs of enforcement. Based on this clear enforcement disparity, ratification of the Convention cannot plausibly proxy the compliance. Alternatively, if the Convention has the alleged effect on the trade trends of its signatories, then the signatories putting more enforcement effort (Table1) should be the ones experiencing such adverse effects in the highly corrupt destinations.

Table 1: Highest Enforcement Efforts - Cumulative

| Country Name | Enforcement |
|--------------|-------------|
| USA | 7.05 |
| France | 1.20 |
| UK | 0.77 |
| Switzerland | 0.60 |
| Germany | 0.55 |
| Italy | 0.55 |
| Netherlands | 0.47 |
| South Korea | 0.43 |
| Belgium | 0.33 |
| Canada | 0.18 |

Source: OECD Enforcement Data. #firms sanctioned and acquitted / ratification duration

Therefore, this study extends the foundational work of D’Souza (2012) in three ways. It replicates the analysis using a broader dataset (1996–2019) to capture longer-term trends, including post-Phase 3 enforcement

periods. Secondly, it tests the effects of enforcement by distinguishing between enforcers and non-enforcers among signatories. For this purpose it suggest a practical enforcement measure for the signatories throughout their ratification. Thirdly, it examines enforcement effects relative to non-ratifiers and non-enforcers to understand whether enforcement creates competitive disadvantages or shifts trade patterns. By addressing these gaps, this study seeks to provide a more nuanced understanding of how ratification and enforcement shape international trade outcomes under the OECD ABC.

Measuring enforcement for the purposes of this study is particularly challenging due to the limitations of existing approaches. Most enforcement metrics rely on cumulative case counts, which fail to account for the duration of a country’s participation in the OECD Anti-Bribery Convention. Using such measures would incorrectly assume that current enforcement efforts retroactively influence trade patterns. For instance, France and the UK initiated an active enforcement after they enacted their domestic foreign bribery preventive laws (i.e., Saphin II and 2010 Bribery Act respectively) Alternatively, some scholars use the first enforcement case as a proxy for enforcement (Kaczmarek and Newman (2011)), but this approach overlooks the importance of sustained enforcement over time for the purpose of this paper. Other studies have used the completion of Phase 3 monitoring as an enforcement proxy (Firth (2023) and Jensen and Malesky (2018)). However, this too is inadequate for the scope of this paper, as it cannot differentiate between countries like Turkiye, which completed Phase 3 and even Phase 3 without any fundamental enforcement activity, and countries like the United States, which have consistently enforced the Convention over multiple phases. To address these challenges, this study develops a dynamic enforcement measure that accounts for both the intensity and sustainability of enforcement efforts, ensuring a more accurate representation of cross-country enforcement disparities.

This study develops a tailored enforcement measurement to address the inconsistencies present in existing data sources. Two primary reports inform the enforcement landscape: the OECD Enforcement Reports and Transparency International’s (TI) Exporting Corruption reports. However, both sources suffer from notable discrepancies. TI has ranked signatories by enforcement since 2011, but its methodology has undergone significant changes over time. Initially, TI published annual rankings, then shifted to biennial updates, and now reports enforcement performance every four years. Additionally, inconsistencies exist across reporting periods; for example, some countries report resolving multiple cases in one year, only to see those numbers revised downward in subsequent reports. TI also weights enforcement rankings by GDP, assuming that larger economies should resolve more cases given their greater international business activity. While this approach provides useful context, it risks conflating economic size with enforcement effort. Therefore, TI’s data is selectively utilized to inform this study’s independent measurement framework.

Similarly, the OECD’s Enforcement Reports rely on self-reported data from signatories, which introduces further disparities. For example, Germany’s 2011 Progress Report highlighted several concluded cases that were later contested in its 2012 report due to reporting errors. These discrepancies arise because the data reflects the reporting practices of signatory countries, which vary widely in terms of accuracy and transparency. Furthermore, the OECD distinguishes between criminal and civil cases directly related to foreign bribery and administrative fines for bribery-adjacent offenses, but these classifications are not always consistently applied. To address these issues, this study retrospectively verifies case data and focuses exclusively on criminal and civil cases directly tied to foreign bribery. This approach mitigates potential biases from under-reporting or mis-classification.

The study emphasizes enforcement actions against legal persons (corporations) rather than individuals. This decision is grounded in two primary considerations. First, corporate liability cases require significant enforcement effort. Considering the number of enforcement cases based on individuals can be misleading when evaluating the enforcement levels of jurisdictions. Acorn and Allen (2024) highlights the risk of raw case counts to equate jurisdictions that impose sanctions on numerous individuals with those that consistently focus on corporate liability and foreign bribery prevention and to mislead the enforcement evaluation. Accordingly, for instance, Hungary’s enforcement activity appears significant due to sanctions involving multiple individuals stemming from a single investigation, the Magyar Telekom case, concluded in one year. In contrast, jurisdictions like the UK, which regularly pursue corporate liability cases over time, better align with the Convention’s goal of sustained enforcement and systemic bribery prevention. Measuring enforcement efforts without distinguishing the nature of cases risks overstating the impact of jurisdictions that rely on high-profile, isolated investigations rather than fostering ongoing, comprehensive compliance. Second, cases involving legal persons receive greater media attention, enhancing their deterrent effect on firms engaging in bribery. Additionally, this study weights cases based on their outcomes: cases resulting in sanctions are weighted as 1, while those leading to acquittals or dismissals are weighted as 0.5. This weighting is parallel with the TI weighting strategy and reflects the additional resources and effort required to sanction legal persons while acknowledging the challenges that lead to acquittals or dismissals, such as political or economic pressures.

Finally, to ensure comparability across countries, enforcement intensity is normalized by the years since ratification of the Convention. This normalization accounts for variations in enforcement timelines and avoids overestimating enforcement in countries with limited actions over extended periods. Formally, the enforcement metric E_i for country i is defined as:

$$E_i = \frac{\sum_{t=1}^{T_i} (S_{i,t} + 0.5 \cdot A_{i,t})}{T_i}$$

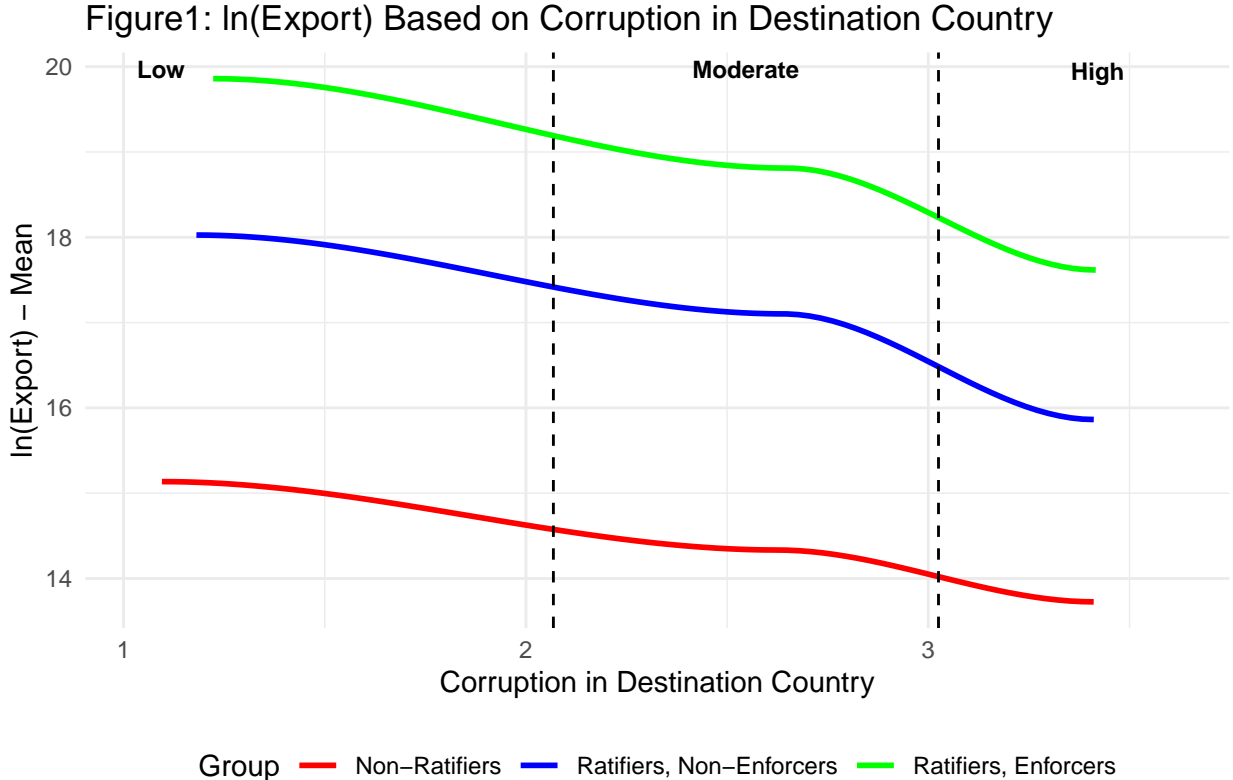
Where $S_{i,t}$ represents the number of sanctioned legal persons in country i at year t , $A_{i,t}$ represents the number of acquitted legal persons in country i at year t , and T_i : represents the total number of years since country i ratified the Convention, ensuring the enforcement intensity reflects both the outcomes of legal actions and the time elapsed since ratification, enabling cross-country comparability.

To explore the differential impacts of ratification and enforcement, this study proposes the following hypotheses:

- **H1:** Ratification of the OECD ABC reduces exports from signatory countries to highly corrupt markets.
- **H2:** Countries with higher enforcement levels experience greater reductions in exports to highly corrupt markets compared to non-enforcing and non-ratifier countries, reflecting the competitive disadvantage of enforcement.
- **H3:** When excluding the US, enforcement of the OECD ABC has a more pronounced negative impact on exports to corrupt markets.
- **H4 - Null:** Increased enforcement does not significantly affect bilateral trade flows.

Figure 1 illustrates the relationship between corruption in the destination country and the average log of

exports for three distinct groups: non-ratifiers, ratifiers without enforcement, and ratifiers with enforcement. As expected, exports decrease as corruption intensifies for all groups, but the extent of this decline varies significantly across groups. Ratifiers, in general, are more sensitive towards corruption in the market in highly corrupt markets as compared to the non-ratifiers. However, interestingly there is not an observable difference in the trade flows of enforcers and non-enforcers suggesting that signatory countries might adhere to the Convention in practice even they lacked a concluded legal case, especially when faced with extreme corruption. This could reflect a cautious approach where, even without enforcement, there is a strong internal or external pressure to avoid highly corrupt markets.



Source: UNCTAD Trade, WGI Corruption Index

This graph, however does not explain well why some signatories persistently enforce the Convention while others reluctant to do that. The divergent institutional capacity, governance structures and/or international commitment levels are the arguable reasons. There are well-developed signatories having a good international commitment scores in general also fail to conclude any single enforcement action in regard to foreign bribery which suggests that there are other reasons to be reluctant to implement the Convention. To resolve such conflicting possibilities and the incomplete picture of the Convention effect, this paper emphasizes the varying enforcement levels which cannot uniformly reduce exports. In other words, it utilizes the enforcement variance to check the robustness of the prevailing arguments in the literature.

Accordingly, if the prevailing literature on the competitive disadvantage holds, then it is likely to observe such a disadvantage significantly more within the group of signatories which put more enforcement efforts. On the other hand, if enforcement has not prevail significant disadvantage on the bilateral trade flows of the signatories, then the alleged transfer of trade from more corrupt countries to less corrupt countries should

be driven from other than the pure ratification of the Convention. In this case, firms from high-enforcement countries arguably developed strategies to mitigate the alleged competitive disadvantages (i.e., compliance driven innovations), or other omitted factors in the destination countries may influence the bilateral trade volumes of the country pairs.

The underlying assumption is that the Convention restricts firms from paying bribes abroad, while non-party firms remain free to engage in bribery, potentially leading the more transparent, regulated firms to exit corrupt markets in favor of their non-regulated competitors.¹

Model and Methodology

International trade literature has long used gravity models to explain bilateral trade flows between country pairs, as established by Tinbergen (1962) and Anderson and Wincoop (2003). Building on this tradition and extending the work of D’Souza (2012), this paper employs a gravity model to evaluate the impact of the OECD Anti-Bribery Convention. Unlike previous studies, it expands the dataset to include additional years, capturing a more comprehensive view of the long-term effects of the Convention on bilateral trade. Furthermore, this study shifts the focus from mere ratification to enforcement, interacting the corruption level of the destination with the enforcement level of the exporting country.

To account for unobserved heterogeneity, all models include country-pair fixed effects, addressing time-invariant bilateral trade factors, while year fixed effects control for global macroeconomic trends. This approach reduces bias from omitted variables and ensures robust estimation of corruption and enforcement effects. Additionally, this study departs from D’Souza (2012)’s assumption of time-invariant corruption by employing a time-varying corruption index (CPI from the World Governance Indicators). This adjustment better captures dynamic changes in destination country corruption, mitigating bias and improving model precision.

The hypothesis tested is that, keeping the corruption level of the destination country constant, increased enforcement by the exporting country does not significantly alter its export flows. The general specification is given by:

$$\ln(\text{export})_{ijt} = \alpha + \beta_1(\text{Enf})_{it} * (\text{Corr})_{jt} + \beta_2(\text{Controls})_{ijt} + \delta_{od} + \delta_t + \epsilon_{ijt}$$

While the dependent variable is the log-transformed export from origin to destination country by year, several control variables are included to enhance model precision. Data for bilateral trade is sourced from UNCTAD, covering 158 countries and 22,560 country pairs between 1996 and 2019. I have used only the zero and positive export values by extracting the negative values. Enforcement data is derived from annual OECD Anti-Bribery Convention (ABC) Enforcement Reports (2009–2019), focusing on cases where legal persons

¹The OECD ABC is the most debated and the known international regulation on the foreign bribery, but definitely not the only one. There are other international agreements attempting to prevent foreign bribery such as: United Nations Convention Against Corruption (UNCAC) (2003), Inter-American Convention Against Corruption (IACAC) (1996), Council of Europe Criminal Law Convention on Corruption (1999), and African Union Convention on Preventing and Combating Corruption (AUCPCC) (2003). Yet the OECD ABC is the most extended in terms of its signatories’ share of global business, and a stringent monitoring mechanism.

were sanctioned or acquitted. Individual sanctions were excluded to minimize bias due to enforcement effort variability and limited media exposure. The weighted measure of legal person sanctions (weighted as 1 for sanctions and 0.5 for acquittals) follows TI's methodology for assessing enforcement levels.

Corruption data, sourced from the World Governance Indicators (Bank (2024)), uses a weighted corruption index scaled to assign higher values to more corrupt destinations. This allows for capturing temporal and spatial variation in corruption levels more effectively than the time-invariant measures used in prior studies (D'Souza (2012)).

Control variables, consistent with gravity model literature, include bilateral distance, common official language, population, GDP per capita, regional trade agreements (RTAs), and GATT/WTO membership, all sourced from CEPII's gravity dataset. A time trend interacted with the log product of GDP per capita of both origin and destination countries was also included in some specifications, although it was removed in others to address multicollinearity concerns. Exchange rate volatility, calculated as the standard deviation of the annual nominal exchange rate logarithms, was log-transformed for inclusion. Table 2 reveals the correlation matrix of the variables.

Table 2: Correlation Matrix with Significance Levels

| | Ln(Exports) | Corruption_Origin | Corruption_Destination | Distance | Origin GDP per Capita | Destination GDP per Capita | Population_Origin | Population_Destination | One in GATT/WTO | Both in GATT/WTO | Ratification_Origin | Common OECD | Common Currency | Time-GDP Interaction | Log Exchange Rate Volatility | Regional Treatment Agreement | Enforcement Level |
|------------------------------|-------------|-------------------|------------------------|-----------------|-----------------------|----------------------------|-------------------|------------------------|-----------------|------------------|---------------------|----------------|-----------------|----------------------|------------------------------|------------------------------|-------------------|
| Ln(Exports) | 1 | -0.25*** | -0.18*** | -0.16*** | 0.01*** | 0.01*** | 0.21*** | 0.15*** | -0.09*** | 0.09*** | 0.33*** | 0.33*** | 0.12*** | -0.09*** | -0.07*** | 0.28*** | 0.21*** |
| Corruption_Origin | -0.25*** | 1 | -0.04*** | -0.03*** | 0* | 0.01*** | 0.03*** | 0.1*** | -0.12*** | -0.56*** | -0.26*** | -0.07*** | 0.1*** | 0.2*** | -0.12*** | -0.13*** | -0.13*** |
| Corruption_Destination | -0.18*** | -0.04*** | 1 | -0.04*** | 0** | -0.01*** | 0.02*** | 0.09*** | -0.15*** | 0.06*** | -0.29*** | -0.09*** | 0.12*** | -0.11*** | -0.16*** | 0 | 0 |
| Distance | -0.16*** | -0.03*** | -0.04*** | 1 | -0.01*** | -0.01*** | 0.08*** | 0.07*** | -0.11*** | 0.14*** | 0.01*** | -0.1*** | -0.19*** | -0.02*** | 0.17*** | -0.37*** | 0.04*** |
| Origin GDP per Capita | 0.01*** | 0* | 0** | -0.01*** | 1 | -0.01*** | -0.01*** | 0 | -0.01*** | 0.01*** | -0.01*** | 0 | 0 | 0.1*** | -0.01*** | -0.01*** | 0.18*** |
| Destination GDP per Capita | 0.01*** | 0.01*** | -0.01*** | -0.01*** | -0.01*** | 0.01*** | 0 | -0.01*** | -0.01*** | 0 | 0.01*** | 0 | 0 | 0.1*** | -0.01*** | -0.01*** | 0 |
| Population_Origin | 0.21*** | 0.12*** | 0.02*** | 0.08*** | -0.01*** | 0 | 1 | -0.02*** | 0.01*** | -0.01*** | -0.05*** | -0.02*** | -0.03*** | 0.04*** | 0.05*** | -0.06*** | 0.73*** |
| Population_Destination | 0.15*** | 0.03*** | 0.09*** | 0.07*** | 0 | -0.01*** | -0.02*** | 1 | -0.01*** | 0.01*** | -0.03*** | -0.02*** | -0.03*** | 0.02*** | 0.03*** | -0.05*** | 0 |
| One in GATT/WTO | -0.09*** | 0.1*** | -0.11*** | -0.11*** | -0.01*** | -0.01*** | -0.01*** | -0.01*** | 1 | -0.56*** | -0.12*** | -0.12*** | -0.06*** | 0.07*** | -0.11*** | -0.11*** | 0.01** |
| Both in GATT/WTO | 0.09*** | -0.12*** | -0.15*** | 0.14*** | 0.01*** | 0.01*** | -0.01*** | -0.06*** | 1 | 0.13*** | 0.13*** | 0.13*** | 0.07*** | -0.1*** | -0.03*** | 0.11*** | -0.01** |
| Ratification_Origin | 0.33*** | -0.26*** | 0.06*** | 0.01*** | -0.01*** | 0 | -0.02*** | -0.03*** | -0.11*** | 0.13*** | 1 | 0.32*** | 0.1*** | -0.04*** | -0.15*** | 0.17*** | NaN |
| Common OECD | 0.33*** | -0.26*** | 0.06*** | -0.1*** | 0 | -0.02*** | -0.02*** | -0.12*** | 0.13*** | 0.32*** | 1 | 0.23*** | 0.1*** | -0.06*** | -0.12*** | 0.35*** | 0.02*** |
| Common Currency | 0.12*** | -0.07*** | -0.09*** | -0.19*** | 0 | -0.03*** | -0.03*** | -0.06*** | 0.07*** | 0.1*** | 0.23*** | 1 | 0.02*** | -0.47*** | 0.29*** | -0.01*** | -0.01*** |
| Time-GDP Interaction | -0.09*** | 0.1*** | 0.12*** | -0.02*** | 0.1*** | 0.04*** | 0.02*** | 0.07*** | -0.11*** | -0.04*** | -0.04*** | 0.02*** | 1 | -0.02*** | 0.01*** | -0.02*** | -0.02*** |
| Log Exchange Rate Volatility | -0.07*** | 0.2*** | -0.11*** | 0.17*** | -0.01*** | 0.05*** | 0.05*** | 0.02*** | -0.03*** | 0.05*** | -0.15*** | -0.12*** | -0.12*** | 1 | -0.47*** | -0.16*** | -0.09*** |
| Regional Treatment Agreement | 0.28*** | -0.12*** | -0.16*** | -0.37*** | -0.01*** | -0.01*** | -0.06*** | -0.05*** | -0.11*** | 0.11*** | 0.17*** | 0.35*** | 0.29*** | 0.01*** | -0.16*** | 1 | -0.06*** |
| Enforcement Level | 0.21*** | -0.13*** | 0 | 0.01*** | 0.18*** | 0 | 0.73*** | 0 | 0.01** | -0.01** | NaN | 0.02*** | -0.01*** | -0.02*** | -0.09*** | 1 | |

* Significance levels: * if p < 0.05; ** if p < 0.01; *** if p < 0.001

Preliminary analysis of the enforcement groups in Figure 2 shows average log exports over time for countries grouped by Low, Moderate, and High Enforcement levels. Countries with Low Enforcement exhibit a steady trend, while those with Moderate Enforcement show slight variability. High Enforcement countries demonstrate a higher export levels, suggesting that stronger enforcement may not necessarily harm trade flows. This observation contrasts with concerns of enforcement causing adverse export outcomes and implies that firms under high enforcement regimes may adapt better or benefit from improved reputational credibility in global markets.

The graph in Figure 3 illustrates the relationship between the corruption level of destination countries ($corr_d$) and average log exports, segmented by enforcement levels—Low, Moderate, and High Enforcement—among ratifying countries. For countries with Low Enforcement (left panel), exports decline sharply as the corruption level increases, suggesting that firms in these jurisdictions are more likely to be negatively impacted when trading with corrupt destinations. In the Moderate Enforcement group (middle panel), a similar downward trend is observed, albeit with slight fluctuations, indicating variability in responses to corruption levels. Notably, in the High Enforcement group (right panel), the decline in exports flattens after an initial drop, implying that stricter enforcement may help mitigate the adverse impact of corruption, possibly due to better compliance or firms' adaptation strategies. This pattern underscores that high enforcement levels may buffer firms from the negative trade effects associated with corrupt markets, while lower enforcement intensifies vulnerability to such environments.

The conventional argument is that strong enforcement of anti-bribery regulations creates a competitive disadvantage for firms from these countries when trading with more corrupt destinations. This is because the firms cannot engage in bribery, making it harder for them to compete in these markets. However, these graphs suggest a more nuanced picture. For highly enforcing countries, the relatively stable export performance might imply that these firms have found alternative ways to remain competitive, possibly through superior quality, reputation, or better compliance mechanisms that give them an edge despite not engaging in bribery.

Figure 2: Export Trends by Enforcement Level Groups Among Ratifiers

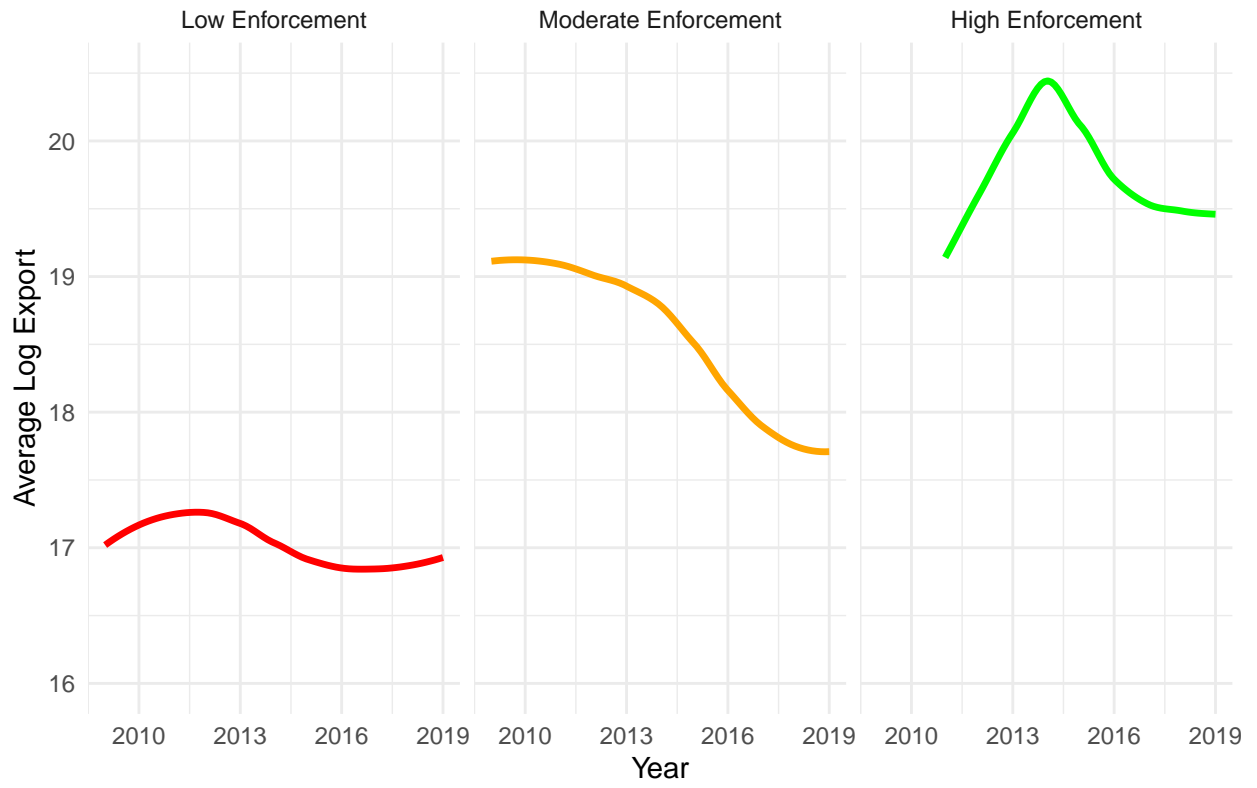
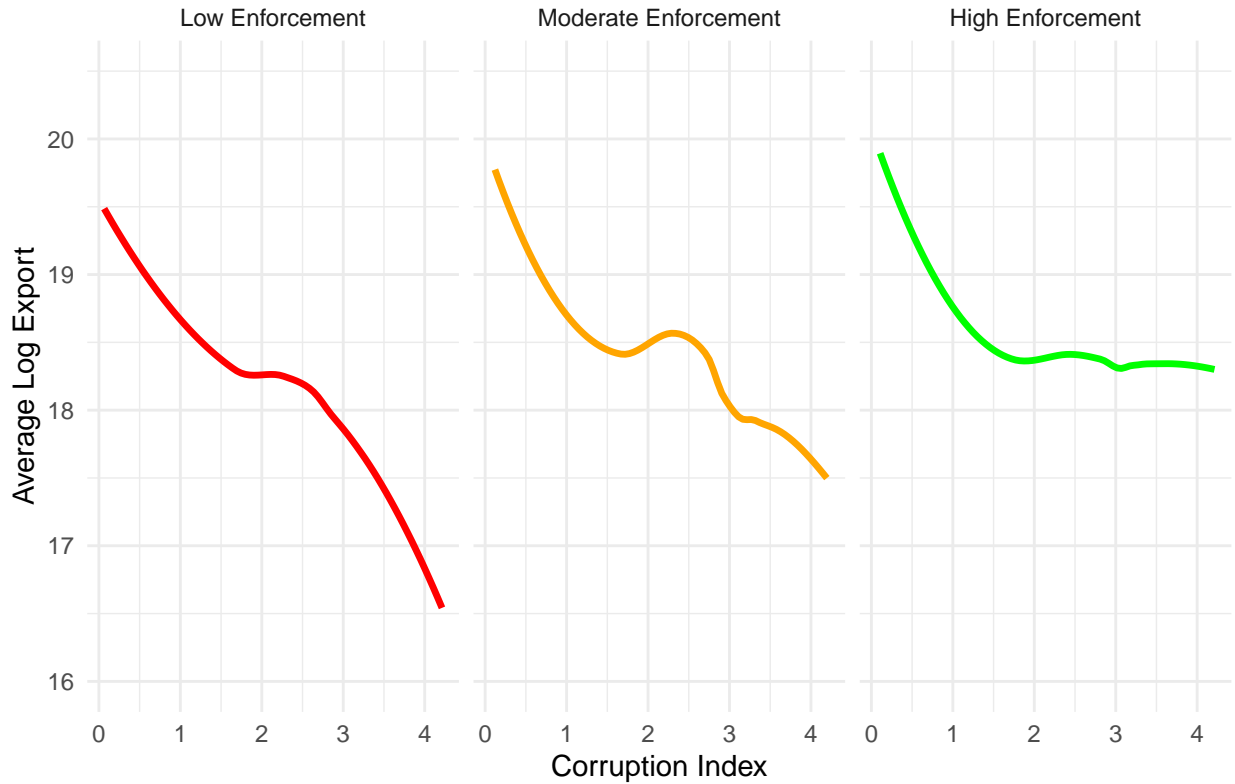


Figure 3: Export Trends by Enforcement Level Groups Among Ratifiers



The first model (1) replicates D’Souza (2012), by interacting ratification of the Convention (*rat_o*) and corruption in destination countries (*corr_d*) but with minor differences in the estimation strategy. While D’Souza (2012)’s analysis uses data from 1992–2006 with a fixed 1998 Control of Corruption measure, this study focuses on the period 1996–2006 and employs a time-varying corruption index from the World Bank’s Worldwide Governance Indicators, capturing annual fluctuations in corruption levels. Exchange rate volatility, which D’Souza (2012) measures using monthly data, is incorporated here as an annual measure due to data constraints. The inclusion of country-pair fixed effects and year fixed effects ensures robust control for unobserved heterogeneity and global trends. Consistent with D’Souza (2012), the results reveal a significant negative interaction term, suggesting that ratification of the Convention reduces exports to more corrupt markets. Accordingly, the ratification of the Convention has a positive and significant effect on exports (0.061), while the interaction term with destination corruption shows a significant negative impact (-0.032). This suggests that ratifying the convention may reduce exports to corrupt destinations, as firms in ratifying countries face greater constraints in such markets. Differences in coefficient magnitudes can be attributed to the updated time span and improved corruption measurement, while overall findings validate the deterrent effect of criminalizing bribery on trade patterns. This model serves as a baseline for further extensions that incorporate enforcement measures to disentangle the effects of ratification from actual implementation.

The extended gravity model, Model 2. demonstrates that the ratification of the OECD Anti-Bribery Convention does not significantly influence bilateral trade flows neither standalone nor when it is interacted with corruption levels in destination countries. Enforcement variance during the extended period likely to introduce noise and diminish the significance of the Convention ratification. This finding suggests that the

mere ratification of anti-bribery laws without robust enforcement mechanisms does little to alter firms' trade decisions. Notably, the interaction term is nearly zero and insignificant, indicating that the broader dataset weakens the earlier findings. Consequently, the deterrent effects of the Convention are muted for most countries. This underscores the critical distinction between formal adoption (ratification) and practical implementation (enforcement) in shaping the Convention's effectiveness. These findings align with prior literature but highlight the need for a deeper focus on enforcement in future analyses.

In Model (3), enforcement of anti-bribery laws is interacted with corruption in destination countries to examine their joint impact on bilateral trade. Following Firth (2023)'s approach, I have included the variable of common OECD, to control for the effect of both trading partners being members of the OECD, which may capture institutional similarities and economic cooperation among OECD countries that influence trade flows. Additionally, I assigned zero to all missing enforcement values (NA) to ensure that the enforcement effect is analyzed broadly, irrespective of a country's formal ratification of the OECD Anti-Bribery Convention. This approach allows for a general comparison of enforcement impacts across both ratifying and non-ratifying countries. The significantly negative interaction term indicates that stricter enforcement reduces trade flows to more corrupt markets, likely due to the competitive disadvantage faced by firms under rigorous anti-bribery regulations. Enforcement alone does not have a standalone significant effect, because its impact is conditional on the corruption level in destination countries.

These three baseline models reveal a clear progression in understanding the Convention's impact on trade. Model (1) replicates earlier findings, showing that ratification reduces trade in corrupt markets. Model (2), with an expanded data set, finds ratification alone to be insignificant. Model (3) highlights enforcement as a critical factor, showing it significantly hampers trade to corrupt destinations through its interaction with corruption.

While these results provide strong evidence of enforcement's negative impact in corrupt markets, the dominant enforcement role of the US raises concerns about outlier effects. To ensure robustness, further checks excluding the US are necessary to confirm that these findings are not solely driven by its unique enforcement practices, providing a cleaner assessment of enforcement dynamics among other signatory countries.

Robustness Checks

To ensure the validity of the baseline results, this section conducts several robustness checks. First, I exclude the US from the sample, recognizing its disproportionate enforcement role, which could bias the results. The US, having enacted its foreign bribery preventive law since 1977, has allowed its firms to adapt over decades to stringent anti-bribery regulations. Additionally, the extraterritorial reach of US enforcement—often targeting firms and individuals outside its borders—solidifies its status as a persistent outlier among signatories. Removing the US, therefore, ensures that its unique enforcement practices do not distort the broader trends observed in the data.

Second, alternative specifications replace the year fixed effects with origin-year and destination-year fixed effects to better account for country-specific shocks over time. While factor-year fixed effects control for global time shocks, this model provides a finer-grained analysis by isolating temporal effects specific to each

Baseline estimates

| | (1) | (2) | (3) |
|--------------------------------------|-----------|-----------|-----------|
| Convention | 0.061* | 0.036 | |
| | (0.030) | (0.035) | |
| Corruption Destination | -0.214*** | -0.259*** | -0.261*** |
| | (0.031) | (0.024) | (0.022) |
| Regional trade agreement | 0.001 | 0.035+ | 0.032 |
| | (0.027) | (0.021) | (0.021) |
| Both countries in GATT/WTO | 0.435*** | 0.342*** | 0.221*** |
| | (0.069) | (0.067) | (0.024) |
| One country in GATT/WTO | 0.207** | 0.124+ | |
| | (0.065) | (0.063) | |
| Common currency | 0.051+ | -0.022 | -0.035 |
| | (0.030) | (0.037) | (0.036) |
| Log exchange rate volatility | -0.002* | -0.005*** | -0.004*** |
| | (0.001) | (0.001) | (0.001) |
| Log GDP per capita (origin) | 0.037*** | 0.175*** | 0.175*** |
| | (0.008) | (0.009) | (0.009) |
| Log GDP per capita (destination) | 0.138*** | 0.236*** | 0.239*** |
| | (0.021) | (0.011) | (0.011) |
| Log population (origin) | -0.136 | 0.199** | 0.187** |
| | (0.183) | (0.063) | (0.063) |
| Log population (destination) | 0.629*** | 0.590*** | 0.598*** |
| | (0.155) | (0.052) | (0.052) |
| Time * GDP interaction | -0.001* | -0.002*** | -0.002*** |
| | (0.000) | (0.000) | (0.000) |
| Convention * CorruptionDestination | -0.032** | -0.006 | |
| | (0.012) | (0.013) | |
| Enforcement * Corruption Destination | | | -0.023*** |
| | | | (0.003) |
| Both countries in OECD | | | 0.174*** |
| | | | (0.032) |
| Num.Obs. | 118 648 | 359 457 | 359 457 |
| R2 | 0.924 | 0.885 | 0.885 |
| Fixed Effects | od; t | od; t | od; t |

+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001

| Robustness Check | | | |
|--------------------------------------|------------|------------|----------|
| | (1) | (2) | (3) |
| Enforcement * Corruption Destination | -0.097* | -0.127** | 0.004 |
| | (0.041) | (0.039) | (0.008) |
| Regional trade agreement | 0.014 | 0.029 | 0.107 |
| | (0.022) | (0.026) | (0.086) |
| Common currency | -0.017 | 0.115* | |
| | (0.046) | (0.047) | |
| Log exchange rate volatility | -0.004*** | -0.003** | 0.002 |
| | (0.001) | (0.001) | (0.003) |
| Both countries in GATT/WTO | 0.189** | | 0.005 |
| | (0.063) | | (0.158) |
| Time * GDP interaction | 0.000* | 0.001 | 0.000 |
| | (0.000) | (0.001) | (0.001) |
| Both countries in OECD | -0.030 | -0.023 | |
| | (0.045) | (0.052) | |
| Corruption Destination | | | -0.125 |
| | | | (0.079) |
| Log GDP per capita (destination) | | | 0.209** |
| | | | (0.072) |
| Log population (destination) | | | 0.749*** |
| | | | (0.215) |
| Num.Obs. | 355 890 | 115 560 | 3567 |
| R2 | 0.897 | 0.952 | 0.971 |
| Fixed Effects | od; ot; dt | od; ot; dt | od; t |

+ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001

trading partner. Third, I restrict the sample to OECD Anti-Bribery Convention signatories to further isolate the enforcement effects. Finally, I test for the sensitivity of results by modifying control variables, ensuring that multicollinearity and omitted variable bias are minimized.

The following alternative model specification incorporates origin-year ($\delta_{o,t}$) and destination-year ($\delta_{d,t}$) fixed effects to capture yearly characteristics specific to the exporting and importing countries:

$$\ln(\text{export})_{ijt} = \alpha + \beta_1(\text{Enf}_{it} \times \text{Corr}_{jt}) + \beta_2(\text{Controls})_{ijt} + \delta_{od} + \delta_{o,t} + \delta_{d,t} + \epsilon_{ijt}$$

I exclude the US to ensure robustness in the first model, given its out-sized enforcement role and the long-standing presence of FCPA. Results from this first robustness check, including factor year fixed effects, show that enforcement significantly reduces exports to more corrupt markets ($= -0.3859$, not reported), consistent with expectations that firms from non-enforcing jurisdictions may gain competitive advantages as free-riders. However, when introducing origin-year and destination-year fixed effects, the magnitude of the

effect shrinks ($= -0.0968$), suggesting that country-specific shocks explain part of the baseline variation.

Secondly, I restrict the sample to the signatory countries of the Convention to focus on enforcement within compliant jurisdictions. Applying factor year fixed effects revealed the baseline result which is not reported here with a strong negative interaction term ($= -0.2770$), confirming the critics over enforcement imposing additional costs for firms trading in corrupt destinations. When origin-year and destination-year fixed effects are added as seen in the Robustness Checks, the coefficient remains negative and significant ($= -0.1265$), albeit smaller, reflecting that stronger fixed effects absorb part of the enforcement-corruption interaction.

Finally, I analyze the US enforcement effect separately in the third column. Unlike other countries, US enforcement has no significant impact on exports to corrupt markets, evidenced by the insignificant and slightly positive interaction term ($= 0.0041$). This finding aligns with theoretical expectations: US firms have long adapted to anti-bribery regulations, given the FCPA's decades-long presence, and they leverage reputational benefits, mitigating the competitive disadvantages seen in non-US jurisdictions. Notably, US enforcement measurement includes its wide extraterritorial reach, where firms headquartered outside the US are sanctioned if they violate anti-bribery laws through US-linked financial systems or transactions. This aggressive enforcement further amplifies the global dominance of US anti-bribery actions, distinguishing it from other jurisdictions and reinforcing its outsized role in shaping compliance dynamics. Alternative further researches can investigate the enforcement trend of the US distinguishing the extraterritorial enforcement and its corresponding effect on the overall US exports to the highly corrupt destinations. t

These robustness checks reinforce the key findings of this study that enforcement of the Convention imposes significant costs on exporters, particularly in corrupt markets, while ratification alone does not yield meaningful effects. The results are consistent across specifications but highlight critical nuances. First of all, stronger fixed effects reduce the magnitude of enforcement effect on the bilateral trades, suggesting that part of the effect arises from country-specific factors. Secondly, US firms, uniquely positioned with long-term compliance, are not affected by stricter enforcement significantly, underscoring their competitive adaptability and the benefits of reputational credibility. On the other hand, enforcement remains a critical determinant of trade outcomes for the rest of the signatories, reflecting the dual costs of compliance and corruption-related risk aversion.

These results highlight the complex interplay between anti-bribery enforcement, trade competitiveness, and institutional frameworks. Policymakers must carefully consider how stringent enforcement shapes international trade flows, particularly for firms operating in high-corruption markets.

Results and Concluded Remarks

This study provides a comprehensive and nuanced analysis of the economic impact of the OECD ABC, distinguishing between ratification and active enforcement. Leveraging an extended dataset (1996–2019) and robust econometric methods, the findings reveal that enforcement, aiming at promoting fair competition, can impose significant compliance costs on exporters, particularly in highly corrupt markets. This adverse effect varies across enforcement levels and jurisdictions, highlighting the multifaceted relationship between anti-bribery measures and international trade.

The results contribute new evidence to the understanding of corruption in international trade. Specifically, they document measurable changes in bilateral exports due to the criminalization of bribery, underscoring that such effects would not occur if firms were not previously engaging in bribery. This finding aligns with D’Souza’s insight, providing empirical confirmation that anti-bribery enforcement reshapes trade patterns by altering firms’ competitive behavior in corrupt markets.

The unique case of the US further underscores this complexity. Its enforcement, probably due to the extraterritorial characteristics and long-standing compliance under the FCPA, does not significantly hamper its exports. This suggests that firms operating under mature compliance frameworks may effectively mitigate enforcement-driven disadvantages, benefiting from reputational credibility and adapting through compliance-driven innovations. Yet further research can investigate the grounds of such divergence in the effect of active enforcement through case studies or firm-level analysis.

Saying that, however, achieving a full picture of enforcement remains inherently challenging. The reliance on enforcement case counts to measure anti-bribery efforts introduces limitations, as case numbers fail to capture informal deterrence, institutional capacity, or political will. Moreover, reverse causality complicates the analysis as enforcement levels may reflect underlying trade patterns, as countries with higher trade exposure to corrupt markets may have greater incentives to enforce anti-bribery laws. Addressing these challenges requires further exploration of causality and institutional dynamics.

As a result, this paper contributes to the literature by introducing a dynamic enforcement measurement that accounts for both intensity and sustainability, addressing shortcomings in existing metrics such as TI’s rankings and OECD reports. In addition, it provides empirical evidence that enforcement, not just ratification, drives changes in bilateral trade patterns. It further highlights the adaptability of firms under stringent enforcement regimes, particularly US firms, contributing to debates on the role of institutional capacity and reputational factors in shaping trade competitiveness.

The findings suggest a balanced approach to enforcement under the OECD Anti-Bribery Convention. While robust enforcement is crucial for promoting global transparency, it disproportionately burdens compliant jurisdictions, particularly smaller economies, by increasing compliance costs and risk aversion in corrupt markets. Policymakers should consider strategies such as coordinated multilateral enforcement efforts, capacity-building initiatives, and support mechanisms to alleviate compliance costs for exporters.

In conclusion, while enforcement under the OECD Anti-Bribery Convention introduces trade-offs by imposing measurable costs on compliant firms, it also reshapes international trade patterns by addressing the supply side of corruption. This study highlights the need for nuanced policy responses that balance anti-corruption objectives with trade competitiveness. By shedding light on enforcement dynamics, the findings pave the way for further empirical investigation and innovation in global governance strategies.

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