The Effects of AUKUS: Trade Diversion or Creation?

We apply the gravity framework to find that Australia's national security policy has led to trade diversion from China. Following the research on the geopolitical realignment of trade we study the AUKUS announcement of 2021 to find evidence consistent with trade-diversion from China, but find no evidence of trade creation with AUKUS partners.

Key Takeaways

- Long-term geopolitical alignment seems to increase trade volumes with Australia's partners, in line with the growing literature on geopolitical distance.
- AUKUS has not led to the creation of trade with military allies; however, Australia appears to have taken the geopolitical positions of its trading partners more into account after 2021.
- Trade with China also fell significantly, supporting the hypothesis that AUKUS led to trade diversion.
- The Department of Foreign Affairs and Trade should consider that the trade diversion product of AUKUS may not be offset by the creation of trade with Australia's military allies.

Introduction

AUKUS membership has furthered the geopolitical proximity with the US and increased geopolitical distance to the People's Republic of China (PRC).

On 15 September 2021, it was announced that the Australia–United Kingdom (UK)–United States (US) Partnership (AUKUS) would provide Australia with (i) nuclear-powered submarine capability and (ii) military capabilities in the Indo-Pacific region was made public.

This announcement came on the back of reciprocating tariffs in the so-called US-China trade war, escalating tensions over territorial disputes over the South China Sea, and mounting threats from the PRC to the security and independence of Taiwan (DPMC, 2021). The military trilateral agreement was seen as intending to counterbalance the PRC's influence on the region. Thus, it reinforced its geopolitical alignment with the U.S. while raising tensions with the PRC, its largest trading partner.

In the aftermath of the AUKUS announcement, there was an observable decrease in trade between Australia and the PRC (see Figures 1 and 2), but no perceptible increase on harmful interventions on trade with Australia from the PRC (see Figure 3). Figures 2 and 4 in the Annex also show an increase in trade volumes with AUKUS partners after the announcement, but no observable increase on liberalizing interventions on trade from either partner. It follows that changes in trade following AUKUS may not be attributed to interventions from trading partners on trade.

The geographic proximity and economic size of the PRC can increase the trade costs of Australia's geopolitical alignment.

Distance and economic size are the two most important determinants of trade flows, as formalized in the gravity model of trade (Tinbergen, 1962; Anderson & van Wincoop, 2003). Indeed, countries are expected to trade more when they are larger (higher GDP) and closer geographically, as shorter distances reduce transportation costs.

Consistent with the gravity framework, the PRC is Australia's largest trading partner and accounted for 26 percent of Australia's international trade in 2023-24, with the US being the second largest, accounting for 10 percent of its trade in the same period. The central challenge for Australia is that it is geographically isolated from its geopolitical allies, while geographically close to the PRC–with whom relations are increasingly strained.

Figure 5 in the Annex visually presents this challenge to policymakers, and underscores the potential tradeoff between Australia's trade and geopolitical stance. As Australia strengthens ties with the U.S. and U.K., their economic relations may deepen while trade with the PRC may decline. Geographic isolation from AUKUS partners makes such trade realignment costly, as shifting supply chains would raise transport costs and limit market access.

Geopolitical Distance

Geopolitical distance increasingly influences trade flows by shaping economic relationships and trade policy choices.

Recent research shows that geopolitical distance reduces trade volumes between countries, and trade increases among politically proximate countries. Gopinath et al. (2023) find that foreign policy alignment leads to increased trade, particularly in strategic sectors. Similarly, Aiyar et al. (2023) highlight how political tensions have caused a rise in tariffs, protectionist industrial policies, and trade shifts among politically aligned nations. Blanga-Gubbay and Rubinova (2023) find that trade flows have become more sensitive to geopolitical distance since the start of the war in Ukraine.

Geopolitical distance affects trade through various mechanisms, including policy uncertainty and strategic interventions. Aiyar et al. (2023) indicate that trade policy uncertainty leads firms to favor partners in countries with a geopolitically stable relationship. Friend-shoring, as outlined in Bosone & Stamato (2024), has become a dominant strategy, prioritizing trade with allies over economic efficiency. Clayton, Maggiori, and Schreger (2024) emphasize that trade policy is increasingly used for political leverage, influencing global trade patterns.

The literature on geoeconomic fragmentation builds on research evaluating the economic impact of political alliances on trade during the Cold War, such as Gokmen (2017), and Morrow et al. (1998). Analogous to the Cold War fragmentation between Eastern and Western blocs, Aiyar et al. (2023) simulate the economic impact of modern fragmentation, assuming a sharp increase in trade costs between blocs of countries. Gopinath et al. (2023) estimate the relative increase in trade costs across blocs and decreased costs within blocs.

The empirical strategy to evaluate geoeconomic fragmentation has relied on UN voting records, which can be imperfect measures of geopolitical distance.

Although geopolitical agreement scores, measured through UN General Assembly voting patterns, provide a useful proxy for political alignment, much of international security policy lies beyond the scope of the UN, and security agreements, such as AUKUS, are not captured by country-pair agreement scores.

Gopinath et al. (2023) rely on these scores to estimate how long-term geopolitical realignment trends impact trade beyond traditional economic factors. However, voting records only reflect the public stance of countries on

issues brought to the UNGA. These do not fully account for geopolitical alignments that may be informal or agreed to on another platform and are ineffective at evaluating specific agreements.

Compared to this long-term structural approach, Fuchs & Klüver (2023) conduct event studies focusing on short-term geopolitical events, such as voting on UN resolutions regarding the wars in Syria and Ukraine, accession to military alliances, and significant diplomatic realignments. Their event-driven analysis helps assess how foreign direct investment (FDI) shifts immediately after political shocks but may miss longer-term strategic trade realignments.

The Cold-War perspective on fragmentation can be a flawed historical analogy for the current geopolitical realignment.

The literature on geoeconomic fragmentation has often drawn parallels to Cold War-era economic divisions, using them as a historical precedent to analyze modern geopolitical trade shifts. Campos, Heid, and Timini (2024) demonstrate that NATO and the Warsaw Pact restricted trade between rival blocs. Similarly, research on geopolitical alignment (Gopinath et al., 2023) assumes that contemporary global trade is once again restructuring along two main political blocs.

However, this Cold War analogy can be flawed. Unlike the rigid bipolar order of the Cold War, contemporary geopolitical fragmentation is multipolar and involves interwoven supply chains rather than strict bloc-based trade. Countries like India and ASEAN economies maintain trade with both Western and Chinese-led blocs (Gopinath et al., 2024), undermining the notion of a full-scale decoupling.

Countries such as these continue trading extensively with both major geopolitical alliances; reducing the fragmentation of global trade. For this reason, Quah and Ruge (2024) argue that Cold War frameworks may over-estimate the extent of economic bifurcation that may come with current geopolitical re-alignment.

For Australia, this means that security alliances may not necessarily lead to the same degree of economic decoupling seen during the Cold War. Instead of a strict East-West divide, policymakers must navigate selective economic realignments while managing dependencies on key trade partners by using "connector" countries as conduits for trade.

Trade Diversion or Creation

In a context of reconfiguration of trade along geopolitical lines, security agreements can shape trade in two main ways:

1. *Countries in security agreements trade more extensively due to mutual trust, reduced geopolitical risk, and preferential economic policies*. Fuchs and Klüver (2023) show that military alliances foster deeper economic integration among members, even in non-defense sectors.

2. *Security agreements can increase trade fragmentation as trade diverts from countries in opposing alliances.* Gopinath et al. (2023) highlight that the uncertainty of security tensions can disrupt trade as companies shift supply chains away from rival countries to reduce exposure.

Methodology

We draw from Fuchs and Klüver (2023), who demonstrate that security and political alliances influence trade flows beyond

traditional economic fundamentals. Their study finds that countries after NATO accession trade more with each other, even in non-defense sectors. This motivates our focus on whether AUKUS altered Australia's trade patterns by reinforcing economic ties with the AUKUS countries while potentially reducing trade with the PRC.

To test this, we conduct an event-study using the Poisson Pseudo-Maximum Likelihood (PPML) gravity model. The gravity framework is widely used in trade research to estimate the effects of distance, economic size, and trade costs. PPML is particularly useful as it accounts for heteroskedasticity and allows us to include country-pair fixed effects.

We use trade flow data to analyze Australia's trade with its partners, integrating bilateral trade flows, GDP figures, and distance measures between countries. We introduce key geopolitical variables, including AUKUS partnership indicators and agreement scores reflecting geopolitical alignment. We estimate the PPML gravity model using country-pair fixed effects to control for unobservable bilateral factors.

Our model specification includes economic size (GDP), geographic distance, and agreement scores (Table 1). We capture AUKUS effects through interaction terms that differentiate post-2021 trade with the PRC and AUKUS partners, allowing us to assess whether trade diversion from the PRC or trade creation with AUKUS partners occurred after the agreement. We also include an interaction term to capture the effect of agreement scores after 2021.

Results

- **AUKUS has not led to trade creation with the US or UK**; instead, trade with military allies has **declined post-2021**.
- **Security-driven agreements do not seem to automatically boost trade** with military allies.
- Post-AUKUS, **Australia increased the value of trade with geopolitically aligned countries**.
- **The value of trade with China also fell significantly**, supporting the hypothesis that AUKUS led to trade diversion.

The findings do not confirm trade creation with AUKUS partners, suggesting economic ties did not immediately strengthen despite geopolitical alignment (Table 2). The decline in trade with the PRC supports the hypothesis of trade diversion, likely due to political tensions. Geopolitical factors significantly influence trade patterns, aligning with recent research on security-driven trade shifts.

Recommendations

The Department of Foreign Affairs and Trade should consider that there may be trade costs to military alliances that are not offset by increasing the value of trade with military allies. These costs on trade should considered when setting Australia's national security policy.

Long-term trade effects of AUKUS and geoeconomic fragmentation remain uncertain: Australia may need alternative markets and conduits to mitigate risks of over-reliance on geopolitically distant partners.

Policymakers should identify and deepen economic relations with connector countries such as India and ASEAN. These countries can act as conduits for trade rerouting if direct trade with the PRC becomes restricted due to tariffs or sanctions.

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Annex

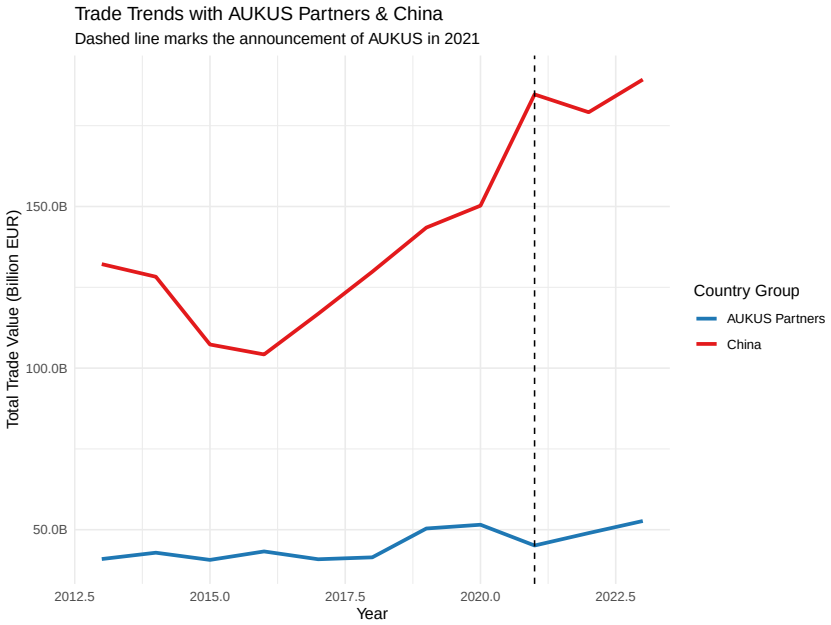

Figure 1: Trade Trends with China and AUKUS Partners

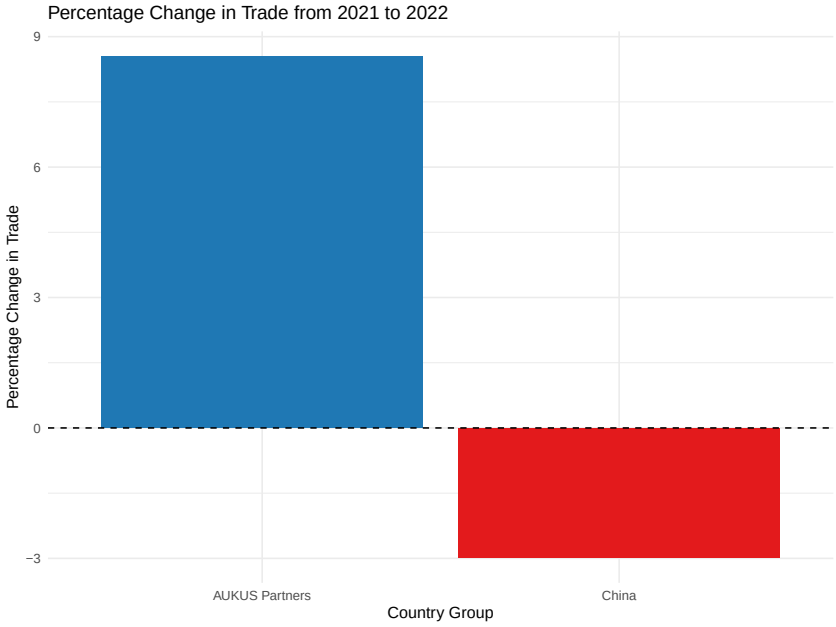

Figure 2: Change in Trade with China and AUKUS Partners

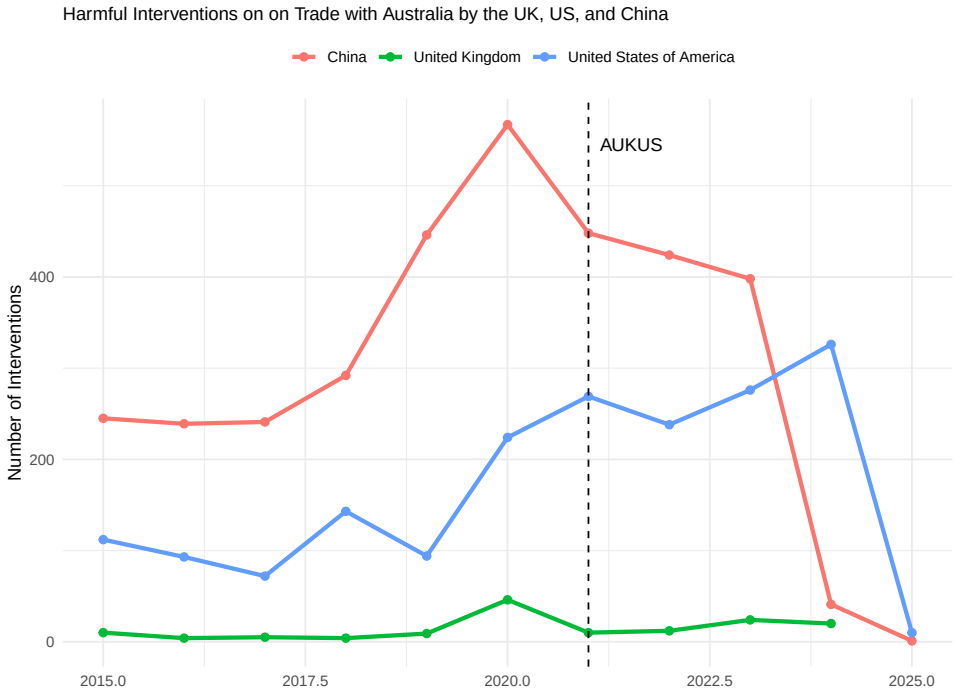

Figure 3: Trends on Harmful Interventions on Trade

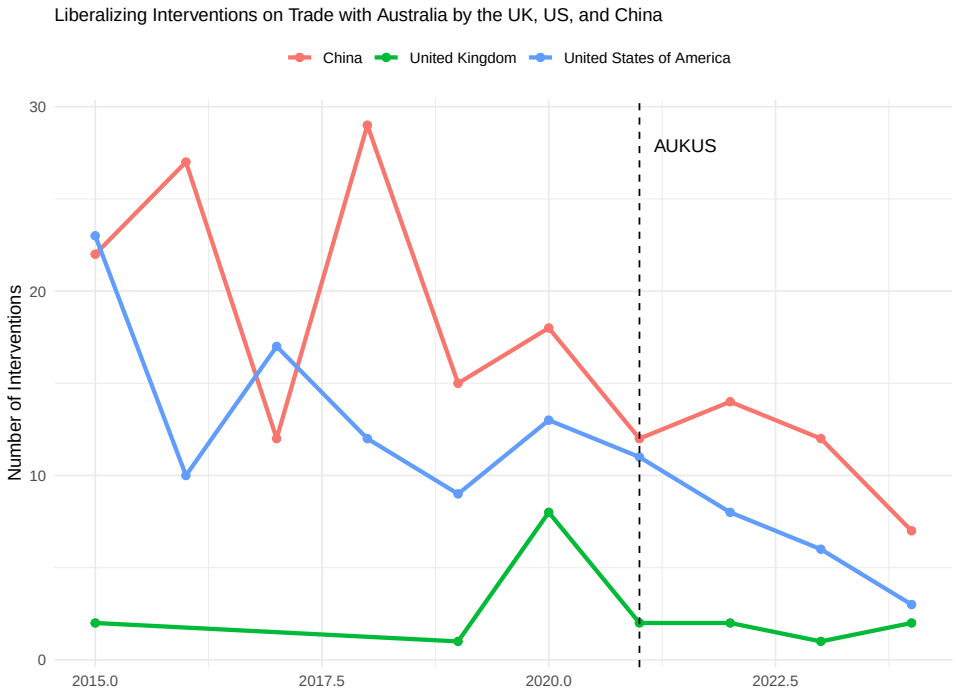

Figure 4: Trends on Liberalizing Interventions on Trade

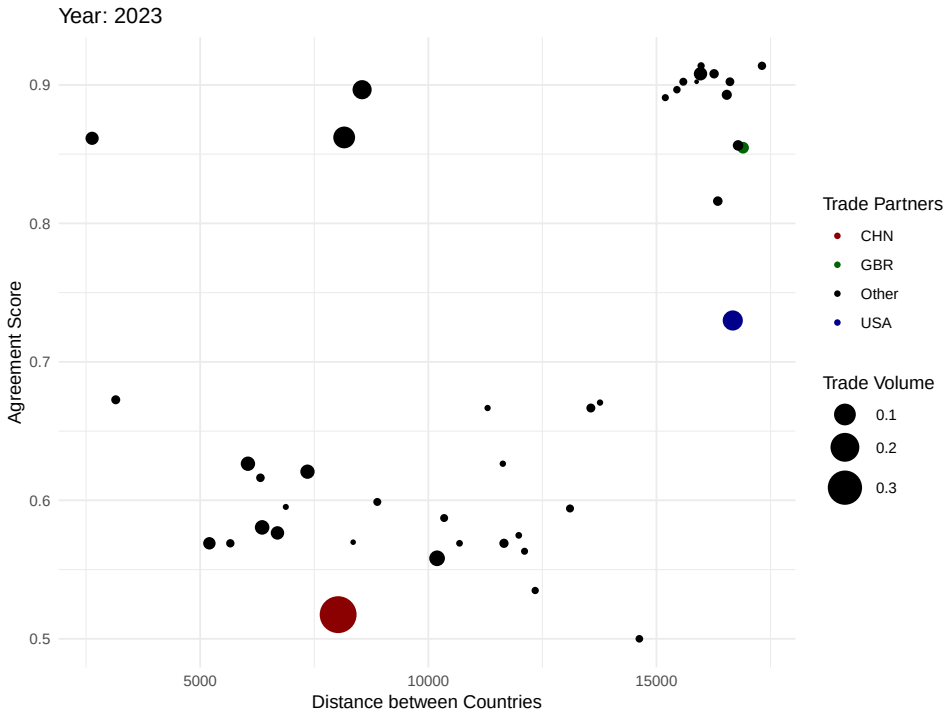

Figure 5: Agreement Scores and Geographic Distance (2023)

Table 1: PPML Gravity Model and Explanation

$$
\begin{aligned}
Trade_{ij,t} = \exp\Big(&\beta_0 + \beta_1 \log GDP_{i,t} + \beta_2 \log GDP_{j,t} \\
&+ \beta_3 \log Dist_{ij} + \beta_4 PostAUKUS_t \times AUKUS_j \\
&+ \beta_5 PostAUKUS_t \times China_j + \beta_6 Agree_{ij,t} \\
&+ \beta_7 PostAUKUS_t \times Agree_{ij,t} + \gamma_{ij} + \delta_t + \epsilon_{ij,t}\Big)
\end{aligned} \tag{1}
$$

Where $Trade_{ij,t}$ is the bilateral trade flow between country i and country j at time t, $GDP_{i,t}$ and $GDP_{j,t}$ are the gross domestic products of the exporter and importer, respectively, $Dist_{ij}$ is the geographical distance between the trading partners, $PostAUKUS_t$ is an indicator variable equal to 1 for years after the AUKUS announcement (September 2021) and 0 otherwise, $AUKUS_j$ is a dummy variable indicating whether the partner is in AUKUS (United States or United Kingdom), $China_j$ is a dummy variable indicating whether the partner is China, $Agree_{ij,t}$ represents the agreement score between countries i and j, γ_{ij} are country-pair fixed effects capturing time-invariant characteristics of trade relationships, δ_t are time fixed effects controlling for global shocks in a given year, and $\epsilon_{ij,t}$ is the error term.

Table 2: PPML Regression Results: AUKUS and Geopolitical Alignment

Variable	Estimate (Std. Error)	Significance
log(GDP Importer)	0.601 (0.000)	***
Agreement Score	0.095 (0.000)	***
UK and US (post AUKUS)	-0.281 (0.000)	***
China (post AUKUS)	-0.087 (0.000)	***
Agreement Score (post AUKUS)	0.164 (0.000)	***
Num. Obs.	3960	
R^2	0.964	

Notes: $p < 0.1$, $*$ $p < 0.05$, $**$ $p < 0.01$, $***$ $p < 0.001$. Higher GDP in the importing country significantly increases trade, consistent with the gravity framework. Agreement scores seem to increase trade flows, supporting the idea that politically aligned countries trade more. After AUKUS, trade with AUKUS partners decreased, suggesting no trade creation. Trade with China declined post-AUKUS, indicating possible trade diversion and a specific penalization in addition to the general geopolitical choices. The agreement score coefficient post-AUKUS suggests that Australia increased the value of trade with geopolitically aligned countries and penalized others

Table 3: Data Sources and Descriptions

Source	**File Name**	**Description**
UN Comtrade	`trade_gdp.csv`	Bilateral trade flows between Australia and its partners from 2010-2024
World Bank	`gdp_data.csv`	Annual GDP values for each country to normalize trade flows
CEPII	`gravity_variables.csv`	Distance, colonial ties, common language, and other gravity model variables
Global Trade Alert	`interventions_GTA.csv`	Trade policy interventions affecting Australia, classified as harmful or liberalizing
United Nations General Assembly	`agreement_scores.csv`	Voting alignment scores between Australia and other countries, used to measure geopolitical distance