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Economic Diplomacy and Agricultural Trade

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Bilateral Economic Diplomacy, Regional Integration and Agricultural Trade

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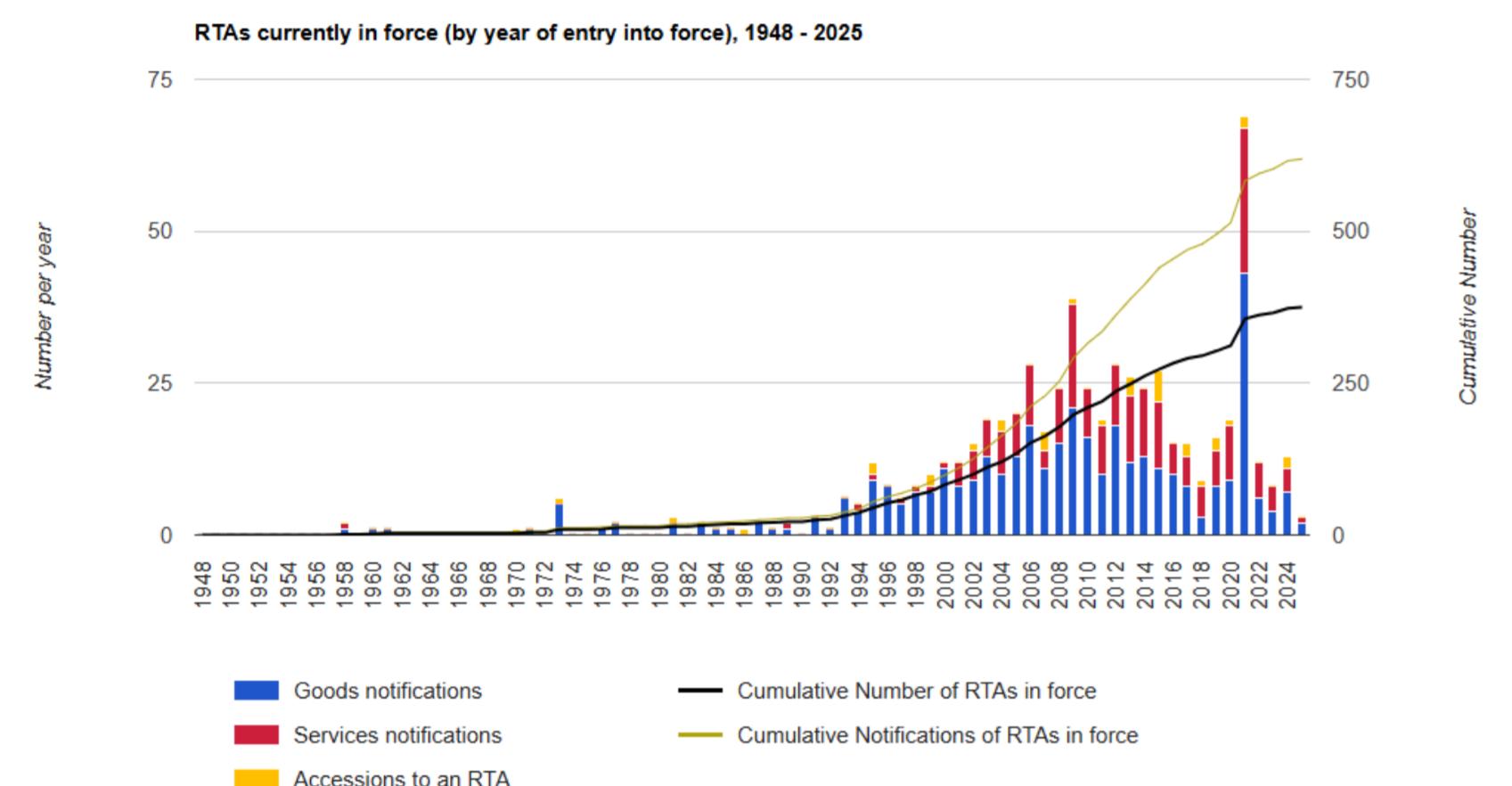
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Introduction

Increasing geopolitical tensions underscore the importance of understanding the strategic use of foreign policy tools to facilitate international trade.

The Trump administration's plans to close around 30 embassies and consulates raise concerns about what implications it will have on trade flows.¹

Regional Trade Agreements: Widespread and often highlighted in the global trading system (The number of RTAs in force as of 2025 is 616) (WTO,2025)



Relevance of Economic Diplomacy for Agriculture

Diplomatic ties can have a heterogeneous effect on trade based on the nature of the products that are traded.

Agriculture:

A highly protected sector

- Higher tariffs and NTBs – The average bound tariff reported by WTO is 54.4 % for agricultural products while it is 27.6 % for non-agricultural products (WTO, 2023)
- Trade liberalization through trade agreements is limited within the agricultural sector (Afesorgbor and Beaulieu, 2021)

A key source of diplomatic and trade conflicts – sensitivity and high levels of protectionism (Josling, 2019)

- NTBs are widely present in the agricultural sector which act as the main cause of trade disputes.

Research Gap and Objectives

Existing literature on the effects of economic diplomacy on trade focuses on aggregate trade effects

No studies so far conducted on the economic diplomacy's effect on agricultural trade, and the interaction between bilateral diplomacy and RTAs is underexplored.

Objectives

- To assess how bilateral economic diplomacy impacts agricultural trade, at aggregated and disaggregated product levels
- To examine how the levels of bilateral economic diplomacy impact agricultural trade
- To investigate the interaction effect of bilateral diplomacy and RTAs on agricultural trade

Empirical Model

The structural gravity model by augmenting it with diplomatic representation and regional integration as additional determinants of agricultural trade flows.

$$\ln X_{ijt}^k = \alpha_{i,t}^k + \alpha_{j,t}^k + \alpha_{ij}^k + \alpha_t + \beta \ln M_{it} + \gamma \ln M_{jt} + \rho D_{ij}(t) + \delta DE_{ijt} + \mu RTA_{ijt} + \theta (DE_{ijt} \times RTA_{ijt}) + \epsilon_{ijt}$$

Variable	Description
X_{ijt}^k	Bilateral agricultural trade flow between exporter i and importer j at time t for product k .
$\alpha_{(i(j)),t}^k$	Exporter (i) and importer (j) country-product k -year fixed effects (proxy for multilateral resistance).
α_{ij}^k	Exporter (i)-importer (j) pair-product (k) fixed effects.
α_t	Time fixed effects.
$M_{(i(j))t}$	Monadic variables: GDP, population of exporter/importer at time t .
$D_{ij}(t)$	Dyadic variables: distance, common border, common language, historical colonial ties.
DE_{ijt}	Diplomatic exchange dummy
RTA_{ijt}	RTA dummy
$(DE_{ijt} \times RTA_{ijt})$	Interaction term between diplomatic exchange and RTA between the country pair at time t

Econometric concerns

We address three main econometric concerns:

1. Multilateral resistance: (Anderson and van Wincoop, 2003)– Use time-varying fixed effects.
2. Zero flows: Use Poisson Pseudo Maximum Likelihood (PPML) estimator.
3. Endogeneity: Use the Generalized Synthetic Control (GSC) method (Xu, 2017), which accommodates multiple treated units and varying treatment periods. This leads us to estimate the Average Treatment Effect on the Treated (ATT): the difference in average outcomes between the treated group and a control group reweighted to match the treated group's characteristics.

$$\tau_{ATT} = \mathbb{E}[X_{ijt}(1) | DE_{ijt} = 1; C = c] - \mathbb{E}[X_{ijt}(0) | DE_{ijt} = 1; C = c]$$

Effects of Diplomatic Exchange and Regional Trade Agreements on Agricultural Trade

Dependant Var - Trade	All	Bulk commodities	Sugars	Labor-intensive crops	Processed foods	Live animals, meat & animal products
DE	0.229***	0.298***	0.157*	0.249***	0.105***	0.245***
RTA	0.223***	0.215***	0.488***	0.284***	0.179***	0.157***
$(DE \times RTA)$	-0.109***	0.0364	-0.705***	-0.135***	-0.223***	-0.0669
Constant	9.213***	9.503***	8.260***	9.772***	5.405***	7.662***
Observations	2,332,285	542,749	173,620	541,523	659,666	414,727

Effects of Levels of Diplomatic Exchange on Agricultural Trade

	(1)	(2)	(3)	(4)	(5)
Ambassador	0.258***		0.0715***		
Charge d'Affairs	0.254***			0.0101	
Ministry	-0.363				-0.171
Interest Desk	0.244				0.130
Interests Served By	0.267				
RTA	-0.0104	0.217***	0.218***	0.218***	0.218***
Constant	5.244***	9.242***	9.254***	9.254***	9.254***

Average Treatment on Treated

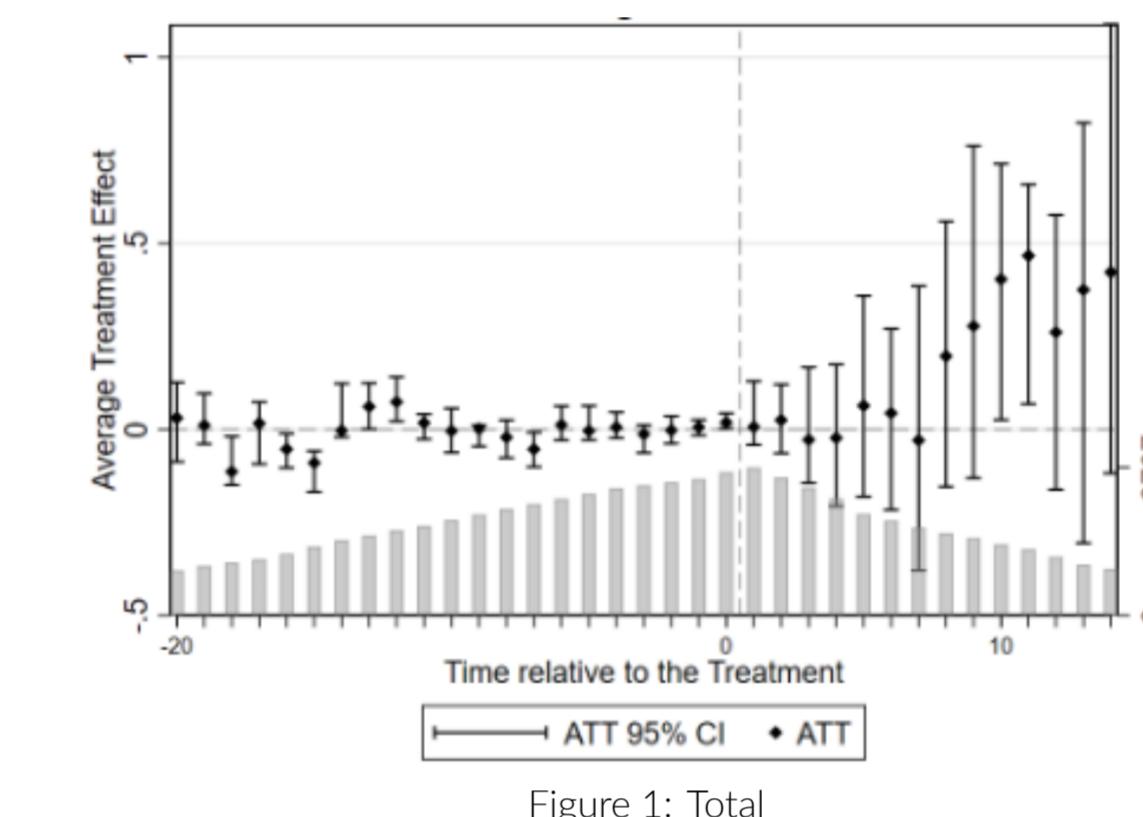


Figure 1: Total

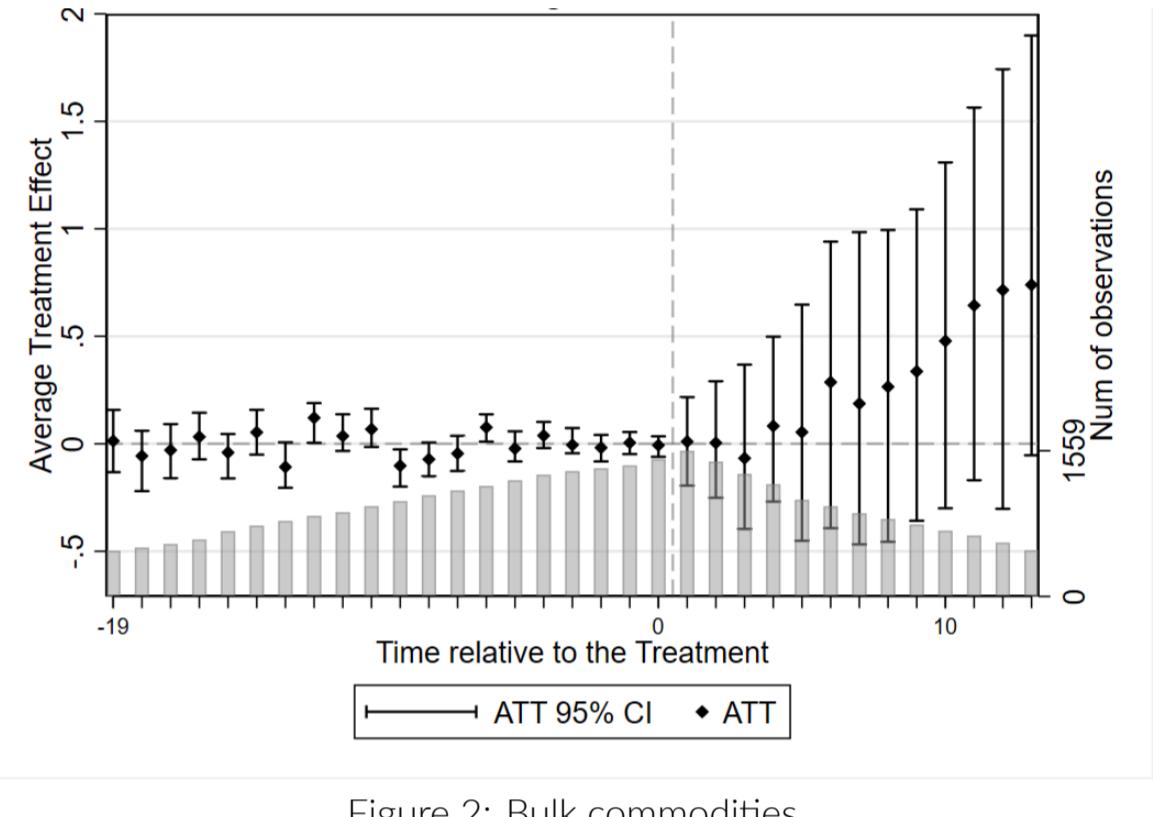


Figure 2: Bulk commodities

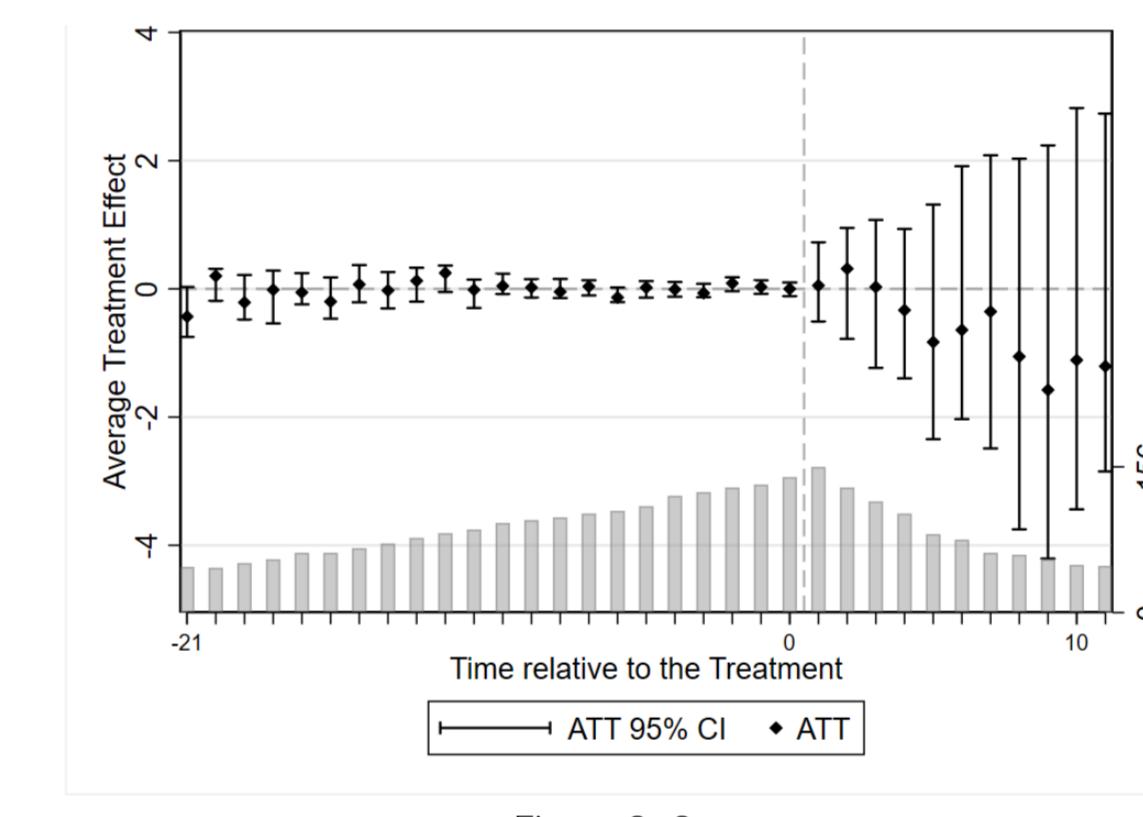


Figure 3: Sugars

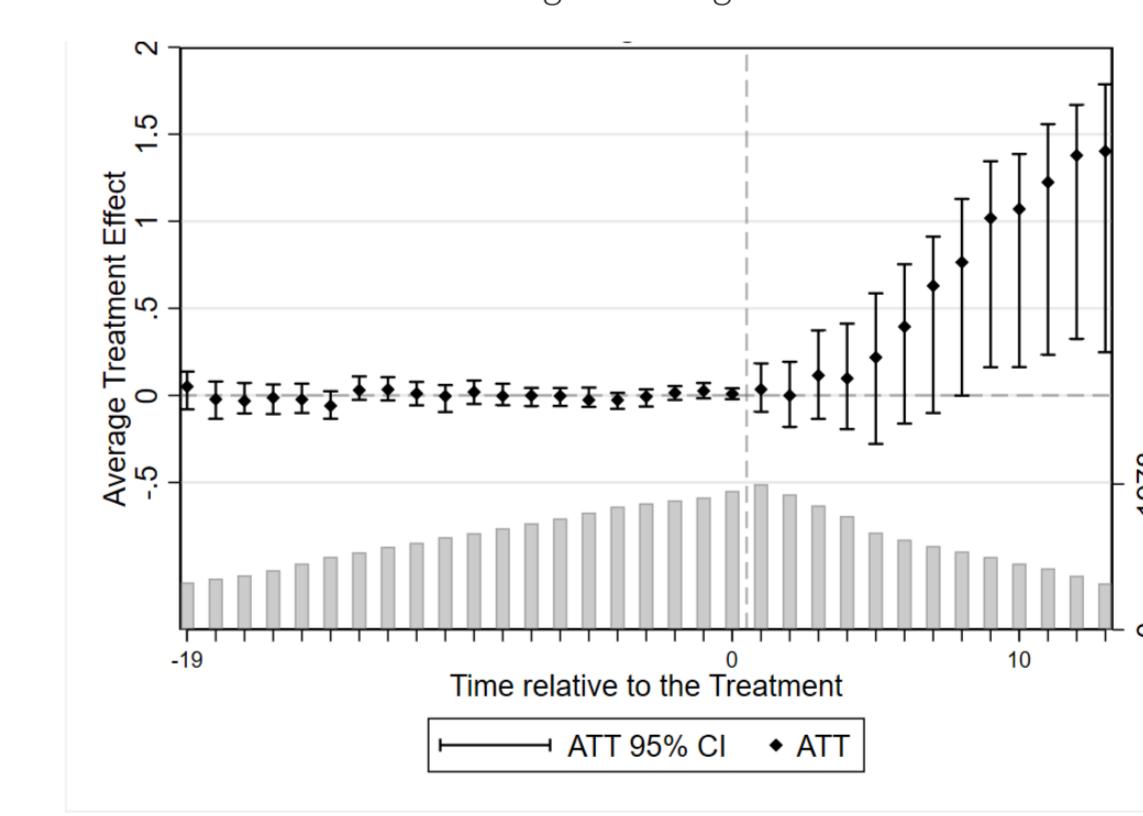


Figure 4: Labor-intensive crops

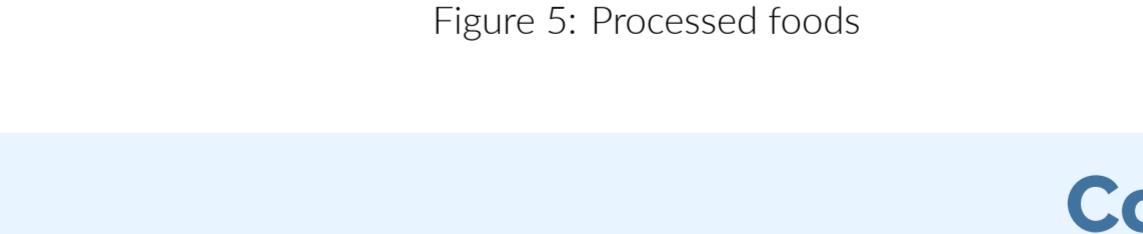


Figure 5: Processed foods



Figure 6: Live animals, meat, and animal products

Conclusions

- Bilateral diplomatic representation and RTAs have trade-stimulating effects on agriculture at both aggregated and disaggregated product levels.
- Compared to regional integration, bilateral diplomatic exchange has a greater impact on agricultural trade flows.
- There is a trade-off effect between diplomatic exchange and RTAs – regional integration can crowd out bilateral diplomatic ties.
- The presence of an Ambassador and Charge d'Affaires as diplomatic ties has a statistically significant trade-promoting effect on agricultural trade.