

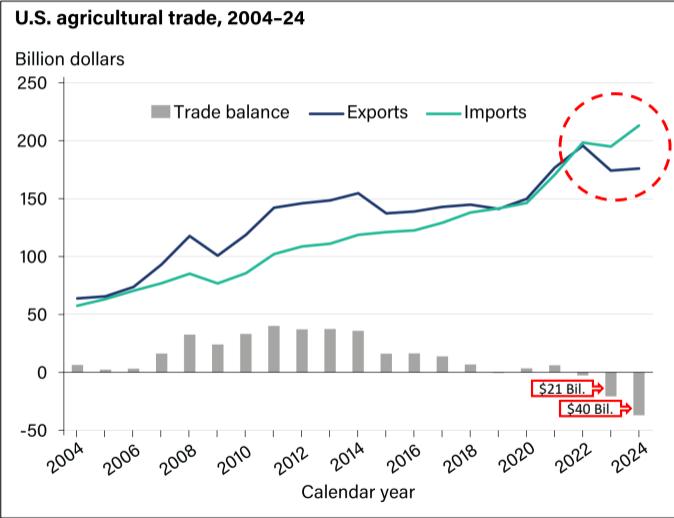
Trade Agreements and the U.S. Agricultural Trade Deficit: Simulating Future Opportunities

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Motivation



Motivation

April 2, 2025



Reciprocal tariff rate

$$\Delta\tau_i = \frac{x_i - m_i}{\varepsilon * \phi * m_i}$$

ε = Elasticity of import

ϕ = Pass through rate

x_i = Total exports

m_i = Total imports



November 11, 2025

Vietnam eyes tariff deal soon, as US seeks to cut huge trade deficit

By Khanh Vu and Francesco Guarascio

November 11, 2025 9:40 PM CST - Updated November 11, 2025



Vietnam Deputy Prime Minister Bui Thanh Son speaks during a session of the Russian Energy Week International Forum in Moscow, Russia, October 19, 2025. REUTERS/Manni Stoltkov/Duchess/Liaison/Retna

Summary

- Vietnam aims to finalise trade deal with US amid ongoing negotiations
- Washington seeks to reduce trade deficit with Vietnam, largest after China and Mexico
- Talks focus on tariff exemptions for Vietnamese goods, preferential access for US products



November 13, 2025

White House agrees to lower tariffs on some goods from Latin America — including Argentinian beef

The U.S. announced new trade agreements with Argentina, Guatemala, El Salvador and Ecuador.



These are exactly the kind of deals the president is trying to strike to help balance out our trade deficits," said a senior administration official. | Bonnie Cash/AP

by ARI HAWKINS, DANIEL DESROCHERS and MEGAN MESSERLY
11/13/2025 04:54 PM EST



November 14, 2025

US, South Korea release details of trade deal

By Reuters

November 14, 2025 2:32 AM CST - Updated November 14, 2025



U.S. Defense Secretary Pete Hegseth, left, and South Korean Defense Minister Anri Gyu-Baek, shake hands after the joint press conference following the 57th Security Consultative Meeting at the Defense Ministry in Seoul, South Korea, Tuesday, Nov. 4, 2025. Lee Jin-man/Pool via REUTERS/Duchess/Liaison/Retna

Research Question

What is the relationship between **U.S. preferential trade agreements (PTA)** with its trading partners and **its agricultural and food trade deficit**?

- 1 What is the estimated impact of the **PTAs** on **annual bilateral agriculture and food trade flows**?
- 2 How have total U.S. agriculture and food **exports, imports, and the trade balance** evolved under current PTAs relative to counterfactual scenarios without PTAs and with expanded PTA coverage?
- 3 How would **U.S. welfare** differ under the current PTA regime compared with counterfactual scenarios without PTAs and with additional PTAs?

Contribution

- Earlier work has analyzed **structural breaks in the U.S. agricultural trade deficit** (Li et al. 2025). → We examine how the **agricultural trade deficit evolves in the presence of PTAs**.
- Previous literature has examined the **effects of PTAs and customs unions on agriculture and food trade flows** (e.g. Afesorgbor, Fiankor, and Demena 2024; Ghazalian 2017). → We analyze the **impact of PTAs on the agriculture and food trade deficit**, disaggregated by major industries.
- We also contribute to a growing literature **applying the gravity model for general equilibrium analysis** (GEPPML, GEGRAVITY) (e.g. Anderson, Larch, and Yotov 2018; Ridley and Devadoss 2023; Zurita and Steinbach 2025) → We extend this literature by using the gravity model to examine **the effects of trade policy on the agriculture and food trade deficit**.

Trade Model

- We set up a **universal gravity model** separately for each agriculture and food industry (Allen, Arkolakis, and Takahashi 2020).
- Each industry has N countries (i, j) , each producing goods with a **constant returns to scale Cobb-Douglas production function** using labor, L_i , and intermediate inputs, M_i .
- We assume **perfect competition** (profits are zero).
- **Labor is the only factor of production.**
- The **price of a good** produced in i in country j , p_{ij} , is equal to

$$p_{ij} = p_i \tau_{ij}, \tag{1}$$

where p_i is the price of output in i and $\tau_{ij} > 1$ are **iceberg trade costs**.

Trade Model

- A representative consumer in country i has **CES preferences**, and we assume that goods are **only differentiated by country of origin** (Armington 1969).
- The consumer's optimization problem yields the **demand for good** from country i in country j , X_{ij} :

$$X_{ij} = \frac{(p_i \tau_{ij})^{-\theta}}{P_j^{-\theta}} E_j, \quad (2)$$

- θ is the **trade elasticity**.
- $P_j^{-\theta} = \sum_{k=1}^N (p_k \tau_{kj})^{-\theta}$ is the **importer multilateral resistance term**.
- $E_j = \sum_i X_{ij}$ is **total expenditure**.
- We set the **numeraire** $\sum_i Y_i = \bar{Y} > 0$.

Empirical Approach

- Bilateral trade costs, τ_{ij} , evolve over time according to:

$$\tau_{ij,t} = \exp \left(\beta_1 GATT/WTO_{ij,t-1} + \beta_2 PTA_{ij,t-1} + \beta_3 CSTU_{ij,t-1} + Int_{ij,t} + \vec{\lambda}_{ij} \right) , \quad (3)$$

- $GATT/WTO_{ij,t-1}$ indicate whether countries i and j are both members of GATT or the WTO in year $t - 1$, and is set to zero when $i = j$ (Larch et al. 2025)
- $PTA_{ij,t-1}$ is an indicator that countries i and j participate in a **preferential trade agreement** in year $t - 1$.
- $CSTU_{ij,t-1}$ is an indicator that countries i and j belong to the same **customs union** in year $t - 1$.
- $Int_{ij,t}$ are international border-year dummies to control for **globalization effects** (Bergstrand, Larch, and Yotov 2015).
- $\vec{\lambda}_{ij}$ are directional country pair fixed-effects to control for unobserved time-invariant trade costs.

Empirical Approach

- Using the **PPML estimator** (Santos Silva and Tenreyro 2006), we estimate agriculture and food trade flows, $X_{ij,t}$:

$$X_{ij,t} = \exp(\alpha_1 GATT/WTO_{ij,t-1} + \alpha_2 PTA_{ij,t-1} + \alpha_4 CSTU_{ij,t-1}) \times \exp(Intl_{ij,t} + \mu_{j,t} + \mu_{i,t} + \vec{\mu}_{ij}) + \varepsilon_{ij,t} \quad (4)$$

- $\alpha_2 = -\theta\beta_2$ is the **trade elasticity** with respect to $PTA_{ij,t-1}$.
- $Intl_{ij,t} = -\theta Int_{ij,t}$ are globalization effects. Including these terms **helps prevent upward bias** in the estimated impact of PTAs on bilateral trade flows.
- $\mu_{j,t}$ and $\mu_{i,t}$ are **importer-time and exporter-time fixed effects**, respectively, accounting for inward and outward multilateral resistances.
- $\vec{\mu}_{ij} = -\theta\vec{\lambda}_{ij}$ are **directional country-pair fixed effects**, to control for unobserved time-invariant trade costs.
- $\varepsilon_{ij,t}$ is an **error term clustered at the importer-exporter level**.

Partial and General Equilibrium Effects

Partial Effects

The elasticity (α_2) provides the **partial effects** of PTAs on trade flows.

These are **direct effects** that capture the **initial impact** of changes in trade costs on trade flows.

Partial effects assume that prices, incomes, and expenditures remain constant.

General Equilibrium Effects

Changes in bilateral trade costs may also change prices, incomes, and expenditures.

General equilibrium (GE) effects of religious composition should capture the **final impact** of changes in trade costs on trade flows.

GE effects account for adjustments in prices, incomes, and expenditures.

Quantifying General Equilibrium Effects

- Using the **hat–algebra framework** (Dekle, Eaton, and Kortum 2007), we estimate the **GE effect** of PTAs from the implied changes in bilateral trade costs, $\hat{\tau}_{ij,t}^{-\theta}$, given by:

$$\hat{\tau}_{ij,t}^{-\theta} = \frac{\tau_{ij,t}'^{-\theta}}{\tau_{ij,t}^{-\theta}} = \frac{\exp(\alpha_2 PTA'_{ij,t-1})}{\exp(\alpha_2 PTA_{ij,t-1})} = \exp(\alpha_2 [PTA'_{ij,t-1} - PTA_{ij,t-1}]) \quad (5)$$

- For example, if we simulate the removal of a PTA, $\hat{\tau}_{ij,t}^{-\theta} = \exp(-\alpha_2)$.
- We solve for \hat{p}_i , \hat{P}_i , and trade balances using the **iterative algorithm** by Campos, Reggio, and Timini (2024). Defining ψ as the supply elasticity, we compute the following GE effects:

$$\text{GE Impact on Trade Flows: } \hat{X}_{ij} = \hat{\tau}_{ij,t}^{-\theta} \hat{p}_i^{-\theta} \hat{P}_i^\theta \hat{E}_j \quad (6)$$

$$\text{GE Impact on Welfare: } \hat{W}_i = \hat{\Xi} \hat{\xi}_i \frac{\hat{w}_i}{\hat{P}_i} = \hat{\Xi} \hat{\xi}_i \frac{\hat{c}_i}{\hat{L}_i} \left(\frac{\hat{p}_i}{\hat{P}_i} \right)^{\psi+1} \quad (7)$$

Methodology Summary: Current Version

- 1 Estimate the **trade elasticity or partial effect of trade flows with respect to PTAs** for the agriculture and food sectors using a **single aggregate regression**.
- 2 **Sector-level supply elasticities**, ψ are calculated based on prior literature (Campos et al. 2023).
- 3 **Industry-level demand elasticities**, θ , are also calculated based on prior literature (Fontagné, Guimbard, and Orefice 2022).
- 4 **Run simulations for each industry in the agriculture and food sectors**, separately for every year from 1986 to 2023.

Data

- We obtain bilateral trade data from an updated version of **USITC's ITPD-S** (Borchert et al. 2024). We extend the database for the **agriculture and food industries through 2023**.
- **Data on PTAs and customs unions** are from the USITC Dynamic Gravity Dataset, the CEPII Gravity Database, and the WTO RTA Database.
- **We calculate a supply elasticities for the food sector** using the intermediate input share from the EUKLEMS & INTANProd (Bontadini et al. 2023).
- Industry-level demand elasticities are calculated using product-level estimates from Fontagné, Guimbard, and Orefice (2022).
- In our final dataset, we observe bilateral trade among **251 countries across 40 industries from 1986 to 2023**.

Table 1: Partial Effect of PTAs on Agriculture and Food Trade

	(1)	(2)	(3)
$GATT/WTO_{t-1}$	0.134*** (0.038)	0.102*** (0.039)	0.128*** (0.039)
$GATT/WTO_{t-5}$		0.088 (0.063)	
PTA_{t-1}	0.101*** (0.029)	0.054* (0.028)	0.130*** (0.031)
PTA_{t-5}		0.086*** (0.031)	
$PTA_{t-1} \times USA^{exp}$			0.034 (0.095)
$PTA_{t-1} \times USA^{imp}$			-0.345*** (0.095)
$CSTU_{t-1}$	1.055*** (0.044)	0.731*** (0.040)	1.047*** (0.044)
$CSTU_{t-5}$		0.369*** (0.038)	
Observations	1,244,354	1,201,682	1,244,354
Pseudo R^2	0.996	0.996	0.996

Note: *p < 0.10, **p < 0.05, ***p < 0.01.

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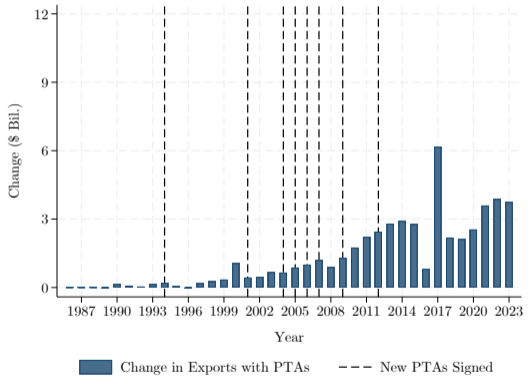
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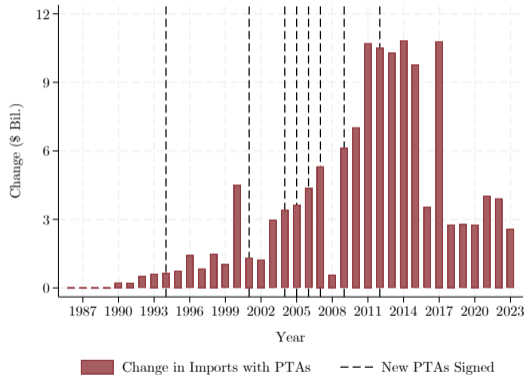
Scenarios

- **Scenario 1: U.S. Removes All PTAs**
 - All existing PTAs between the U.S. and its trading partners are removed.
- **Scenario 2: U.S. Signs Additional PTAs with Regional Blocs** (pending)
 - The U.S. signs new PTAs with selected regional blocs, including ASEAN and Mercosur.
- The partial effect of PTAs on agriculture and food trade flows is $\alpha_2 = 0.101$.
- We have one value of θ for each industry.
- The supply elasticity, ψ , is 1.32 for industries in the agriculture sector and 2.88 for industries in the food sector.
- We apply the counterfactual scenarios to every year in our analysis.

Change in Exports and Imports under Scenario 1 (Change in \$)

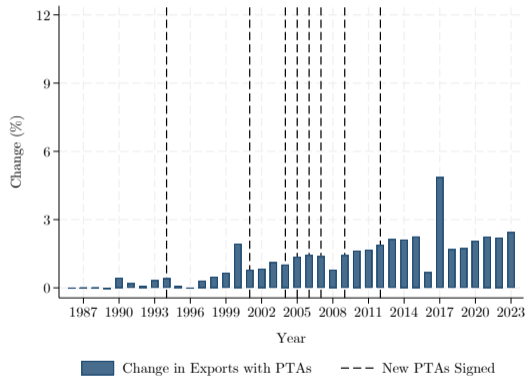


(a) Change in Exports

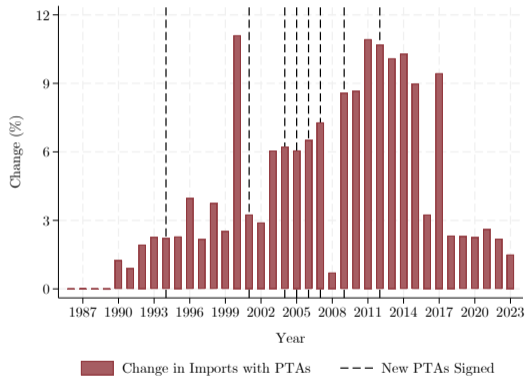


(b) Change in Imports

Change in Exports and Imports under Scenario 1 (Change in \$)

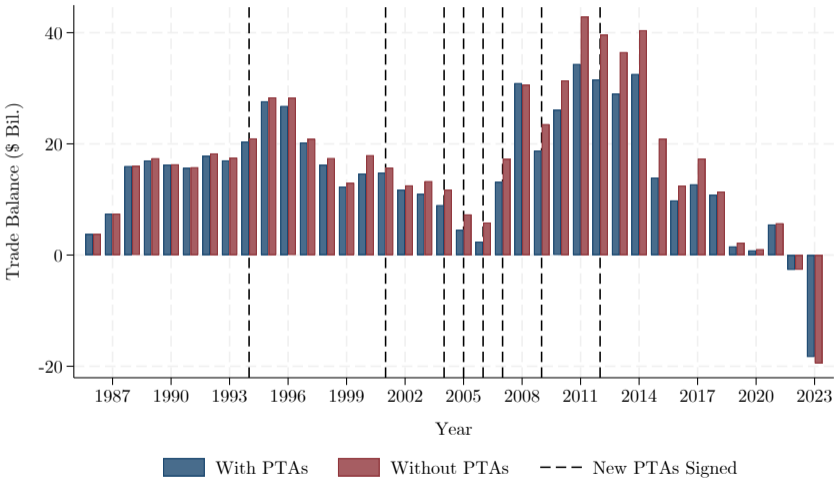


(a) Change in Exports



(b) Change in Imports

Change in Trade Balance under Scenario 1



Scenario 1: U.S. Removes All PTAs in the year 2023

Table 2: Changes under Scenario 1 for the Ten U.S. Industries Experiencing the Largest Welfare Losses

Rank	Industry Description	Total Exports in 2023 (\$)	Total Imports in 2023 (\$)	Changes (%)						
				Exports	Imports	Output Value	Output Quantity	Output Price	Price Index	Welfare
1	Tobacco leaves and cigarettes	1,158.78	650.04	-2.19	-2.67	-1.68	-2.41	0.75	2.63	-4.24
2	Distilling, rectifying and blending of spirits	8,784.90	12,475.14	-4.05	-3.51	-2.03	-2.69	0.68	1.64	-3.64
3	Pulses and legumes (dried, preserved)	1,359.47	661.53	-2.45	-4.03	-1.16	-1.71	0.57	1.89	-3.14
4	Animal feed ingredients and pet foods	2,534.42	292.37	-0.84	-1.60	-0.81	-1.28	0.48	1.47	-2.67
5	Other cereals	1,092.63	837.93	-1.17	-2.12	1.73	-0.53	2.28	2.69	-0.95
6	Other agricultural products, nec	6,175.67	9,298.81	-0.91	-0.81	-0.66	-0.54	-0.12	0.29	-0.93
7	Starches and starch products	2,434.71	2,166.53	-3.78	-4.08	-0.58	-0.53	-0.05	0.13	-0.70
8	Other meats, livestock products, and live animals	831.79	1,174.18	-0.66	-0.62	-0.61	-0.41	-0.20	0.11	-0.69
9	Wheat	4,413.39	898.85	-1.35	-6.65	-0.04	-0.36	0.33	0.60	-0.66
10	Other oilseeds (excluding peanuts)	1,300.93	1,184.30	-3.83	-4.18	-0.28	-0.27	-0.01	0.19	-0.47

Note: The table shows the estimated changes of the most relevant variables in our GE analysis under the scenario in which the United States eliminates all existing PTAs in 2023. We only report results for U.S. industries with export values exceeding \$500 million in 2023.

Conclusion

- Using bilateral trade data between 1986 and 2023, we examine how **PTAs impact the U.S. agriculture and food trade deficit.**
- Partial effects suggest that **the existence of a PTA increases agriculture and food trade flows by 10.6%.**
- GE results also show that **PTAs raise U.S. agriculture and food exports by up to 5% and increase imports by up to 11%.**
- In our counterfactual simulations, if the U.S. were to remove all PTAs, **the agriculture and food trade deficit would decrease. However, this reduction comes at the cost of nearly eliminating imports from certain industries, such as *Spices* and *Beverages, nec.***
- GE results indicate that removing all U.S. PTAs leads to **uneven welfare losses across industries.** The largest declines occur in *Tobacco Leaves and Cigarettes* (−4.24%) and *Distilling, Rectifying, and Blending of Spirits* (−3.64%).

Future Steps





- Run Scenario 2. Assess the impact **if the U.S. signs additional PTAs.**
- Run a scenario in which the **USMCA becomes a Customs Union**, representing deeper integration.
- Evaluate both **short- and long-run effects of PTAs.**
- **Incorporate tariffs** into the estimation of partial effects.
- **Estimate the impact of each individual agreement** (USMCA, NAFTA, US-AUS, etc.) on U.S. agriculture and food imports and exports.

Thank you!

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References I

-  Afesorgbor, Sylvanus Kwaku, Dela-Dem Doe Fiankor, and Binyam Afewerk Demena (2024). “Do regional trade agreements affect agri-food trade? Evidence from a meta-analysis”. In: *Applied Economic Perspectives and Policy* 46.2, pp. 737–759. DOI: <https://doi.org/10.1002/aepp.13410>. URL: <https://onlinelibrary.wiley.com/doi/abs/10.1002/aepp.13410>.
-  Allen, Treb, Costas Arkolakis, and Yuta Takahashi (2020). “Universal gravity”. In: *Journal of Political Economy* 128.2, pp. 393–433.
-  Anderson, James E., Mario Larch, and Yoto V. Yotov (2018). “GEPPML: General equilibrium analysis with PPML”. In: *The World Economy* 41.10, pp. 2750–2782. DOI: <https://doi.org/10.1111/twec.12664>. URL: <https://onlinelibrary.wiley.com/doi/abs/10.1111/twec.12664>.
-  Armington, Paul S (1969). “The Geographic Pattern of Trade and the Effects of Price Changes”. In: *Staff Papers-International Monetary Fund*, pp. 179–201.





References II

-  Bergstrand, Jeffrey H., Mario Larch, and Yoto V. Yotov (2015). “Economic integration agreements, border effects, and distance elasticities in the gravity equation”. In: *European Economic Review* 78, pp. 307–327. ISSN: 0014-2921. DOI: <https://doi.org/10.1016/j.euroecorev.2015.06.003>. URL: <https://www.sciencedirect.com/science/article/pii/S0014292115000847>.
-  Bontadini, Filippo et al. (2023). *EUKLEMS & INTANProd: Industry Productivity Accounts with Intangibles*. Tech. rep. LUISS Lab of European Economics, LUISS University. URL: <https://euklems-intanprod-llee.luiss.it/>.
-  Borchert, Ingo et al. (2024). *Globalization, Trade, and Inequality: Evidence from a New Database*. Tech. rep. USITC Working Paper 2024–11–A.
-  Campos, Rodolfo G, Iliana Reggio, and Jacopo Timini (2024). “ge_gravity2: a command for solving universal gravity models”. In: *arXiv preprint arXiv:2404.09180*.
-  Campos, Rodolfo G et al. (2023). “Geopolitical fragmentation and trade”. In: *Journal of Comparative Economics* 51.4, pp. 1289–1315.
-  Dekle, Robert, Jonathan Eaton, and Samuel Kortum (2007). “Unbalanced trade”. In: *American Economic Review* 97.2, pp. 351–355.

References III

-  Fontagné, Lionel, Houssein Guimbard, and Gianluca Orefice (2022). “Tariff-based product-level trade elasticities”. In: *Journal of International Economics* 137, p. 103593.
-  Ghazalian, Pascal L. (2017). “The Effects of NAFTA/CUSFTA on Agricultural Trade Flows: An Empirical Investigation”. In: *Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie* 65.2, pp. 219–248. DOI: <https://doi.org/10.1111/cjag.12119>. eprint: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/cjag.12119>. URL: <https://onlinelibrary.wiley.com/doi/abs/10.1111/cjag.12119>.
-  Larch, Mario et al. (2025). “On the trade effects of GATT/WTO membership: They are positive and large after all”. In: *Canadian Journal of Economics/Revue canadienne d'économie* 58.1, pp. 281–328. DOI: <https://doi.org/10.1111/caje.12755>. eprint: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/caje.12755>. URL: <https://onlinelibrary.wiley.com/doi/abs/10.1111/caje.12755>.

References IV

-  Li, Yi et al. (2025). “From Surplus to Deficit: Decoding the Fundamental Shift in US Agricultural Trade”. In: *Applied Economic Perspectives and Policy* 47.5, pp. 1774–1790. DOI: <https://doi.org/10.1002/aepp.70023>. URL: <https://onlinelibrary.wiley.com/doi/abs/10.1002/aepp.70023>.
-  Ridley, William and Stephen Devadoss (2023). “Competition and trade policy in the world cotton market: Implications for US cotton exports”. In: *American Journal of Agricultural Economics* 105.5, pp. 1365–1387. DOI: <https://doi.org/10.1111/ajae.12370>. eprint: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/ajae.12370>. URL: <https://onlinelibrary.wiley.com/doi/abs/10.1111/ajae.12370>.
-  Santos Silva, J. M. C. and Silvana Tenreyro (Nov. 2006). “The log of gravity”. In: *The Review of Economics and Statistics* 88.4, pp. 641–658. ISSN: 0034-6535. DOI: [10.1162/rest.88.4.641](https://doi.org/10.1162/rest.88.4.641).
-  Zurita, Carlos and Sandro Steinbach (2025). *Faith and Fermentation: The Impact of Religious Composition on Global Wine Trade*. Tech. rep. AAWE Working Paper No. 288.

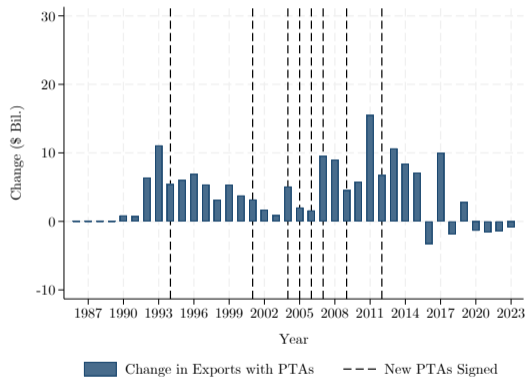
Scenario 1: U.S. Removes All PTAs in the year 2023 (Directional)

Table 3: Changes under Scenario 1 for the Ten U.S. Industries Experiencing the Largest Welfare Losses

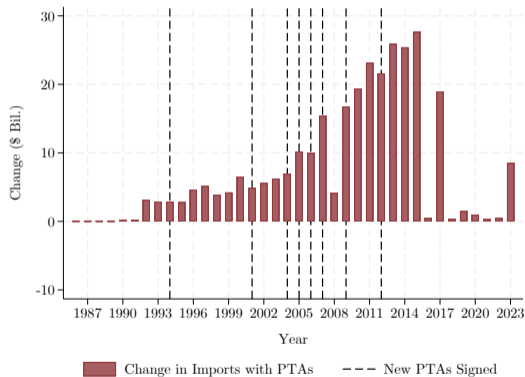
Rank	Industry Description	Total Exports in 2023 (\$)	Total Imports in 2023 (\$)	Changes (%)						
				Exports	Imports	Output Value	Output Quantity	Output Price	Price Index	Welfare
1	Other meats, livestock products, and live animals	831.79	1,174.18	-0.36	-0.37	-0.35	-0.10	-0.25	-0.18	-0.18
2	Wines	1,595.70	7,600.38	-1.55	-1.03	-0.84	-0.07	-0.77	-0.75	-0.10
3	Corn	14,707.04	434.35	0.61	7.58	0.09	0.02	0.08	0.07	-0.04
4	Dairy products	5,736.70	4,356.13	-1.34	-1.73	-0.50	-0.02	-0.48	-0.48	-0.03
5	Eggs	550.87	117.74	1.84	3.63	1.00	0.01	0.99	0.98	0.00
6	Prepared animal feeds	4,287.75	2,846.33	-0.27	-0.27	-0.81	0.02	-0.83	-0.83	0.01
7	Cotton	5,673.50	48.69	0.03	0.08	0.02	0.02	0.00	-0.02	0.03
8	Cocoa chocolate and sugar confectionery	2,680.15	8,852.59	-0.46	-0.38	-0.52	0.01	-0.53	-0.54	0.05
9	Nuts	7,712.84	1,845.00	0.19	1.01	-0.09	0.04	-0.13	-0.16	0.05
10	Soybeans	26,538.66	530.01	0.47	3.84	0.32	0.08	0.24	0.18	0.06

Note: The table shows the estimated changes of the most relevant variables in our GE analysis under the scenario in which the United States eliminates all existing PTAs in 2023. We only report results for U.S. industries with export values exceeding \$500 million in 2023.

Change in Exports and Imports under Scenario 1 (Directional, Δ \$)

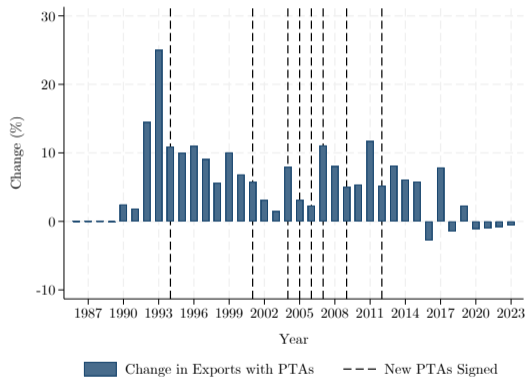


(a) Change in Exports

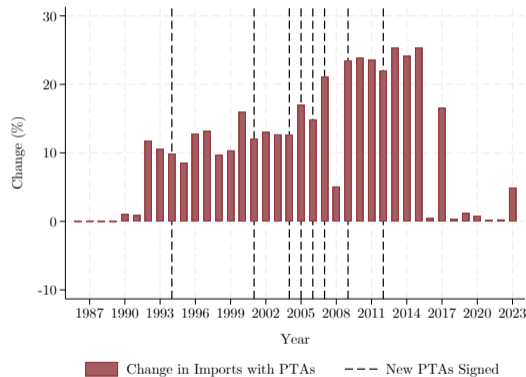


(b) Change in Imports

Change in Exports and Imports under Scenario 1 (Directional, $\Delta\%$)



(a) Change in Exports



(b) Change in Imports

Change in Trade Balance under Scenario 1

