Trade Dynamics When Tariffs are not Tariffs*

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Abstract

We show that the response of U.S. imports to the tariff increases in the second Trump administration depends on the legal statute used to implement the tariffs. Imports of goods that received tariff increases in 2025 under the IEEPA statute—which were subsequently refunded with interest—fell less than imports of goods tariffed under Section 232 over the same period. We argue that the smaller elasticity of imports to IEEPA tariffs can be attributed to importers placing a positive probability on a refund, thereby reducing the expected tariff used in making decisions. Consistent with this view, we find no statistically significant change in the elasticity of imports to shipping costs, which were not subject to potential refunds. We also find the pass-through of IEEPA tariffs to producer prices is considerably lower than that of Section 232 tariffs.

JEL Classifications: F12, F13, F14

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1 Introduction

Not all tariffs are created equal. Some are expected to persist, others to be short-lived, and still others to ultimately be refunded. While the effects of expected tariff persistence on trade are well understood (Ruhl, 2011), much less is known about how the possibility of a refund affects trade while a tariff remains in force. We study a set of tariffs imposed under a novel and legally contested authority that were ultimately refunded with interest. We find that these tariffs generated substantially smaller trade responses than contemporaneous tariffs imposed under a more established legal authority. In contrast, we find little difference in how trade responded to changes in shipping costs between goods affected by the legally contested tariffs and goods affected by the uncontested tariffs. We interpret these findings as evidence that expectations of tariff refunds weakened the response of imports to the contested tariffs.

Our analysis centers around the tariff actions of the second Trump administration, particularly those announced on "Liberation Day." On April 2, 2025, President Donald J. Trump announced sweeping tariffs on most U.S. imports, invoking the International Emergency Economic Powers Act (IEEPA, 50 USC 1701 *et seq.*) as the legal authority. The use of IEEPA to impose tariffs was unprecedented and immediately challenged by legal analysts and, subsequently, in court. This raised fundamental questions about the tariffs' legality, durability, and ultimate cost to importers. Would the tariffs remain in place? If struck down, would duties already collected be refunded? And what tariffs, if any, would replace them? Trade policy uncertainty surged following the announcement and remained elevated until the Supreme Court struck down the IEEPA tariffs.

Economic theory predicts that the response to a policy shock depends on both its expected magnitude and its expected duration. While previous research has emphasized the importance of tariff persistence for trade dynamics, the possibility of tariff refunds creates a gap between the applied tariff measured in the data and the expected tariff relevant for importing. The tariff actions of the second Trump administration provide a setting to study this distinction. Alongside the legally uncertain IEEPA tariffs, the administration imposed substantial tariffs under Section 232 of the Trade Expansion Act of 1962 (hereafter, Section 232), which authorizes restrictions on imports deemed to threaten national security. Unlike IEEPA, Section 232 had

an established history as a tariff authority. Tariffs on steel and aluminum had been in place since 2018, and the Supreme Court upheld the use of Section 232 to impose import charges in 1976. Consequently, importers had reason to expect Section 232 tariffs to be less likely to be refunded than IEEPA tariffs.

We divide goods into two groups: those that were subject to Section 232 tariffs in 2025 and those that were not. Tariff variation in the second group is mostly driven by IEEPA tariff changes, so we refer to this group as the *IEEPA group*. There is almost no overlap between the groups as the two tariff orders did not stack. For each group, we document how the quarterly short-run tariff elasticity changes over time, based on first differences of imports and tariffs. We find the tariff elasticity to the subsequently refunded IEEPA tariffs is weaker than usual for these goods while there is no change in the short-run tariff elasticity for Section 232 tariffs. In contrast to the significant reduction in the short-run tariff elasticity on IEEPA goods relative to that on Section 232 goods, we find no statistically significant change in the short-run elasticity of imports to shipping costs over time between the two sets of goods. This is consistent with our interpretation that the applied tariff overstates the expected tariff that is relevant for importing.

Our focus is on the short-run response to an expected tariff change. We attribute differences in the response to applied duties across goods by tariff statute to differences in the likelihood that the tariffs would be refunded—a likelihood for which there is both ex-ante and ex-post evidence. The different trade responses could also arise from differences in the present value of tariffs, which may be quite different than the short-run change in tariffs; however, most empirical work finds relatively small effects of the present value of tariffs on imports at the horizons we consider. For instance, empirical work around Brexit finds very little substitution away from EU goods until the new trading arrangement is established (Dhingra and Sampson, 2022; Alessandria et al., 2026). Moreover, in most firm-level theories of investment in export market access there is very slow adjustment to the present value of tariffs (Steinberg, 2019; Alessandria et al., 2025).

Our paper contributes to the literature on how expectations about trade policy affect international trade. Numerous papers show that future tariffs influence exporter entry, investment, and trade flows even when current tariffs remain unchanged (Ruhl, 2011; Handley, 2014; Pierce

and Schott, 2016; Handley and Limão, 2017; Alessandria et al., 2021). More closely related, Alessandria et al. (2024a) distinguish the effects of expected tariff changes from uncertainty around those expectations, while Alessandria et al. (2025) emphasize how the expected duration of tariff changes shapes the dynamic response of trade. We complement this literature by examining a novel source of variation in the expected effective tariff: the possibility that duties collected today will ultimately be refunded. This mechanism can reduce the expected cost of a tariff even while its statutory rate remains unchanged, weakening its effect on trade flows. It also creates a challenge for empirical work because it implies that direct measures of trade policy (statutory or applied tariffs) may not be the relevant objects for trade participants.

2 Policy background

The two authorities mainly used to levy tariffs in 2025 differed substantially in their perceived legal applicability. Section 232 had a long history of being used to levy tariffs, whereas IEEPA had never been used for such purposes prior to 2025. These differences created greater uncertainty around both the applicability and durability of tariffs issued under IEEPA than those issued under Section 232.

Section 232 of the Trade Expansion Act of 1962 provides authority for the President to "adjust the imports of the article and its derivatives so that such imports will not threaten to impair the national security."[1] The process begins with a request for a national security review of the imported good, which is undertaken by the Department of Commerce. The Secretary of Commerce reports the findings of the investigation to the President. If the Secretary finds a threat to U.S. national security, and the President concurs with the findings, the President can take action.

The legality of authorizing monetary fees on imports under Section 232 has been challenged in the U.S. Supreme Court and upheld. In 1975, President Ford imposed a license fee on imported oil, having found that oil imports threatened U.S. national security. In *FEA v. Algonquin SNG, Inc.* (426 U.S. 548) the plaintiffs argued that Section 232 did not authorize setting pecuniary measures, only quantity restrictions. The D.C. Circuit court struck down the fee, but the Supreme Court unanimously overturned that ruling, finding the fee permissible

[1] Trade Expansion Act of 1962 § 232(c)(1)(A)(ii), 19 U.S.C. § 1862(c)(1)(A)(ii).

under the Act.

Before 2017, Section 232 actions were rarely used. During 1995–2017, only two investigations were undertaken: petroleum (1999) and iron ore and steel (2001). The President did not take action on the affirmative finding on petroleum and Commerce did not find a national security threat in the steel investigation. Commerce undertook seven investigations in the first Trump administration, the Biden administration undertook one investigation, and the second Trump administration has launched more than a dozen investigations. When the 2018 Section 232 tariffs on steel and aluminum were challenged in *American Institute for International Steel, Inc. v. United States*, the tariffs were upheld and the Supreme Court declined to take up the challenge.[2]

In contrast, IEEPA had not been used to impose tariffs before 2025. Enacted in 1977 to circumscribe the peacetime emergency powers provided by the Trading with the Enemy Act, IEEPA had mainly served as the legal foundation for economic sanctions. Presidents used it to freeze foreign assets, prohibit financial and commercial transactions, restrict investment, and, in some cases, embargo imports or exports (Casey et al., 2025). The Trump administration first used IEEPA as a tariff authority on February 1, 2025, imposing duties of 25 percent on most imports from Canada and Mexico and 10 percent on China (subsequently raised to 20 percent) in response to declared emergencies involving fentanyl trafficking.

On April 2, Executive Order 14257 extended the use of IEEPA further, imposing a baseline 10-percent tariff on most trading partners and country-specific "reciprocal" rates ranging from 11 percent for Cameroon and the Democratic Republic of the Congo to 50 percent for Lesotho.[3] Importantly, the reciprocal-tariff order expressly excluded steel, aluminum, automobiles, and other goods already subject—or made subject in the future—to Section 232 tariffs. Later rules also prevented the Canada and Mexico drug-trafficking tariffs from stacking with the Section 232 tariffs. Thus, goods were generally subject to either Section 232 tariffs or IEEPA tariffs, but not both.[4]

Legal challenges to the IEEPA tariffs were almost immediate. The plaintiffs in *V.O.S. Selections, Inc. v. Trump* filed suit in the Court of International Trade on April 14, 2025, and the

[2] *American Institute for International Steel, Inc. v. United States*, 376 F. Supp. 3d 1335 (Ct. Int'l Trade 2019).
[3] EO 14193, EO 14194, and EO 14195; EO 14228; EO 14257.
[4] See EO 14257, sec. 3(b); EO 14289 and U.S. Customs and Border Protection (2025).

plaintiffs in *Learning Resources, Inc. v. Trump* filed in federal district court on April 22. Both lower courts ruled against the Trump administration, and the Federal Circuit affirmed the Court of International Trade's decision in August. On February 20, 2026, the Supreme Court consolidated the two cases and held, by a six-to-three vote, that IEEPA does not authorize the President to impose tariffs.[5]

The administration responded the same day by announcing a new 10-percent surcharge under Section 122 of the Trade Act of 1974, effective February 24. Section 122 expressly authorizes tariffs, but only to address specific balance-of-payments problems and for no more than 150 days. That measure was also challenged and invalidated by the Court of International Trade on May 7, although it remained in effect until its statutory expiration on July 24.[6] Meanwhile, the U.S. Trade Representative (USTR) initiated Section 301 investigations against 60 countries in response to their alleged failures to prohibit imports produced with forced labor. When the Section 122 surcharge expired, it was immediately replaced with similar tariff rates under the Section 301 authority, and new court challenges were launched that same day.[7] Thus, replacing the IEEPA tariffs with levies imposed under other statutes did not eliminate uncertainty. Throughout our sample, the legal basis and expected duration of the global tariffs remained unsettled—a sharp contrast with tariffs imposed under the more established Section 232 authority.

Prediction markets provide evidence of substantial doubt over the legality of the IEEPA tariffs before the Supreme Court ruling. Figure 1 plots the prices of several contracts on tariff-related outcomes traded on the prediction-market platform Polymarket. The contracts are often contingent on the outcome of the legal challenge as well as a timeline for refunds. A contract that paid $1 if a court blocked tariffs before June 1, 2025 traded around $0.30 in early April 2025. A contract that paid $1 if the Supreme Court ruled in favor of Trump's tariffs traded near $0.50 in the fall of 2025. The market eventually converged on the realized outcome: contracts

[5] *Learning Resources, Inc. v. Trump*, 607 U.S. ___ (2026), consolidated with *Trump v. V.O.S. Selections, Inc.*, https://www.supremecourt.gov/opinions/25pdf/24-1287_new_3135.pdf.

[6] Proclamation 11012, 91 Fed. Reg. 9339 (February 25, 2026), https://www.federalregister.gov/documents/2026/02/25/2026-03824/; *State of Oregon v. United States*, Slip Op. 26-47 (Ct. Int'l Trade May 7, 2026), https://www.cit.uscourts.gov/sites/cit/files/26-47.pdf; and *State of Oregon v. Trump*, No. 26-1804 (Fed. Cir. June 11, 2026).

[7] Office of the United States Trade Representative, "Notice of Actions in Section 301 Investigations," 91 Fed. Reg. 44159 (July 28, 2026), https://www.federalregister.gov/documents/2026/07/28/2026-15181/; *Burlap and Barrel, Inc. v. Greer*, complaint filed July 24, 2026.

on a denied appeal and tariff refunds by June 30, 2026 traded at $0.99 by the end of May 2026. The rise in the value of this contract after the Supreme Court ruling against the IEEPA tariffs primarily reflects the timing of the refund rather than the legality of the refund. While markets existed on the imposition of Section 232 tariffs, there were no Polymarket contracts trading on the potential repeal of any Section 232 tariff, suggesting that the likelihood of overturning and refunding these tariffs was so low that it was not worth creating such a market.

3 Data sources

We use two main sources of data. First, we collect U.S. import and tariff data from the U.S. Census Bureau, covering January 2023 to June 2026, at the 8-digit level of the Harmonized System (HS8), which is the level of aggregation at which tariffs are typically determined. We perform our analysis at the quarterly frequency.[8] Log imports of a good g from country i in period t are denoted v_{igt}. Applied tariffs, denoted τ_{igt}, are measured as the log of one plus calculated duties divided by dutiable import values.

Second, we obtain tariff data by policy regime at the HS8 level from Wove, which uses AI to construct trade compliance and tariff data by automatically turning Federal Register notices into good-level duty rates.[9] We use data from the first day of each month between January 2025 and June 2026. For each HS8 good, Wove provides the MFN tariff rate and the rates corresponding to all temporary and special legislation detailed by chapters 98 and 99 of the HTS code.[10] For our sample period, this includes rates corresponding to Sections 201, 232, 301, IEEPA, antidumping and countervailing duties, and others. Moreover, Wove's database flags those HS8 goods (derivatives of targeted goods) whose inputs are subject to Section 232 tariffs. For example, in the case of combined refrigerator-freezers fitted with separate external doors/drawers (HS8 code 8418.10.00), Section 232 tariffs targeted "the value of the steel content in each product."

We split goods into two groups: those that were affected by Section 232 tariff orders in 2025 or 2026, and those that were not. This strategy relies on the fact that the Section 232

[8] In Appendix A we demonstrate that results are similar, but noisier, at the monthly frequency.

[9] https://wove.com/.

[10] Goods are defined by chapters 1–97 of the HTS code. However, the HTS codes only provide tariff lines corresponding to the column 1 (MFN) and column 2 (NNTR) rates, while chapters 98 and 99 specify temporary and special tariff legislation but do not include a mapping to each of the HS8 goods of chapters 1–97.

tariff orders did not "stack" on top of the IEEPA tariffs; goods were subject either to IEEPA tariffs or Section 232 tariffs, but not both.[11] We classify a good as a *Section 232 good* if, in at least one period, (i) the Section 232 rate on imports from at least one country is positive, or (ii) the good is flagged as a derivative product of another good subject to Section 232 tariffs.[12] Out of 10,928 HS8 goods in our sample, we classify 1,181 as Section 232 goods. The tariff variation in the goods that did not receive Section 232 tariffs is almost entirely due to the IEEPA tariffs, so we refer to these goods as *IEEPA goods*.

Figure 2(a) plots the aggregate applied tariff rate, weighted by 2022 annual import volumes, by statute. It shows that applied tariffs tracked each other in the lead-up to the second Trump administration. Then, applied tariffs rose together in 2025 and 2026 under both statutes, with the IEEPA tariffs peaking at 7.7 percent compared to 5.6 percent for the Section 232 tariffs. The IEEPA tariff rate fell to 4.5 percent in March 2026 as IEEPA was overturned and the Section 122 10-percent tariff went into effect. The Section 232 tariff was more stable, falling to 4.3 percent in July 2026.[13] As of November 3, 2026, about 91 percent of IEEPA tariff revenue has been refunded. To get a feel for the difference between the measured applied tariff and an entirely refunded tariff, we extend the IEEPA tariff from January 2025 forward (the dashed line). The gap between the measured tariff and the refunded tariff peaks at 7 percentage points in October 2025.

Figure 2(b) plots the quarterly per-period tariff changes for the two sets of goods. The circles and diamonds report the median tariff changes, the dashes report the 25th and 75th percentiles, and the extremes of the bars indicate the 10th and the 90th percentiles. Prior to 2025Q1, there are no significant tariff changes in either group. In 2025Q1, the implementation of the fentanyl tariffs on China, Mexico, and Canada, and the stepped-up Section 232 tariffs on aluminum and steel are visible. By 2025Q2, both groups see large tariff increases. Tariff

[11] The April 2, 2025 IEEPA order initially said that "articles and derivatives of steel and aluminum subject to" Section 232 were exempt from the reciprocal tariff. Subsequently, in Proclamation 10947 of June 3, 2025, the administration clarified that "the non-aluminum, non-steel content of all aluminum and steel articles and derivative articles shall be subject to tariffs pursuant to the reciprocal IEEPA tariffs;" see https://www.federalregister.gov/documents/full_text/html/2025/06/09/2025-10524.html. In Appendix A.2, we show that our results are unchanged when we drop goods targeted by Section 232 due to their derivative steel and aluminum content.

[12] Appendix A.2 provides results for alternative policy regime classifications.

[13] The applied Section 232 tariff rate may change due to changes in composition or actions that occasionally adjusted coverage or statutory rates (Table A8).

changes remain mostly positive throughout the second half of 2025, but by 2026 begin to revert; tariff changes are mostly negative for both groups. In general, the tariff changes on Section 232 goods were slightly larger and more dispersed than the tariff changes on IEEPA goods.

4 Import elasticities

Our first goal is to study whether trade became more or less sensitive to tariffs with the onset of the new tariffs in 2025. We focus on the short-run (one-period) trade elasticity. The sample runs from 2023Q1 to 2026Q1. Our baseline specification is

$$\Delta v_{igt} = \beta \Delta \tau_{igt} + \sum_{t'=2023Q2}^{2026Q1} \delta_{t'} \mathbb{1}_{\{t=t'\}} \Delta \tau_{igt} + D_{it} + D_{gt} + u_{igt}, \tag{1}$$

where Δv_{igt} is the one-period change in log import values of good g from country i in period t and $\Delta \tau_{igt}$ is the one-period change in the log applied tariff. We estimate the change in elasticities, δ_t, for all periods $t \neq 2024Q4$, by interacting the tariff changes with time dummies. The δ_t are relative to the elasticity in 2024Q4, which is captured by β. The coefficient β will be negative. If we estimate a positive δ_t, then the elasticity in t will be smaller than the 2024Q4 elasticity.

To control for aggregate shocks in exporting countries, such as exchange rate fluctuations or changes in aggregate productivity, we include country-time fixed effects, D_{it}. Similarly, we control for good-specific U.S. demand shocks using good-time fixed effects, D_{gt}. Given this set of fixed effects, the trade elasticities are identified from variation in tariff changes across countries, within each good.[14] This empirical strategy is similar to previous work, such as Fajgelbaum et al. (2020), except we estimate separate elasticities for each sample period and use a different set of baseline fixed effects.

Figure 2(c) reports our estimates of the changes of the short-run trade elasticity, δ_t, from (1). Before 2025, there is no significant difference relative to the elasticity in 2024Q4, which is estimated to be –2.9.[15] By 2025Q1, the short-run trade elasticity decreased by around 1.5 points

[14] In Appendix A we report similar results using alternative sets of fixed effects.
[15] Figure A1 of the Appendix plots the elasticities without referencing them to 2024Q4.

and settled at an elasticity of about –1.4. The elasticity remained relatively stable through 2026Q1.[16] This indicates that, on average, trade flows became less sensitive to tariff changes following the tariff-related executive orders in 2025. Other studies of import responses to the 2025 tariffs report estimates of similar magnitudes. Fajgelbaum and Khandelwal (2026), Azzimonti and Titcomb (2026), and Gopinath and Neiman (2026) report estimates of 1.81, 1.45, and 1.13, respectively. Gopinath and Neiman (2026) also find a smaller response in 2025 than in 2018–2019, although their sample is shorter for the later episode than for the earlier one.[17]

Our second goal is to determine whether changes in the elasticity of trade to tariffs were related to the legal authority that was used. We estimate an extension of (1), where we interact the change in tariffs not only with a time dummy, but also with a group dummy:

$$\begin{aligned}\Delta v_{igt} =& \beta^{232} \mathbb{1}_{\{g \in \text{Section 232}\}} \Delta\tau_{igt} + \sum_{t'} \delta_{t'}^{232} \mathbb{1}_{\{g \in \text{Section 232} \wedge t=t'\}} \Delta\tau_{igt} \\ &+ \beta^{\text{IEEPA}} \mathbb{1}_{\{g \notin \text{Section 232}\}} \Delta\tau_{igt} + \sum_{t'} \delta_{t'}^{\text{IEEPA}} \mathbb{1}_{\{g \notin \text{Section 232} \wedge t=t'\}} \Delta\tau_{igt} \\ &+ D_{it} + D_{gt} + u_{igt}. \end{aligned} \tag{2}$$

Whereas (1) estimates pooled per-period trade elasticities for all tariff changes, (2) estimates separate elasticities for Section 232 tariff changes and IEEPA tariff changes.

Figure 2(d) reports our estimated δ_t^{232} and δ_t^{IEEPA} from (2). It shows that the decrease in the average trade elasticity starting in 2025 was driven almost entirely by goods that were subject to the tariffs levied under IEEPA, which we have argued were more likely to be refunded than the Section 232 tariffs. Before 2025, the short-run trade elasticity for IEEPA goods, shown in blue, was insignificantly different from the elasticity in 2024Q4 ($\beta^{\text{IEEPA}} = -3.5$); after 2025, it drops by about two. In contrast, the short-run trade elasticity for Section 232 goods, shown in red, does not experience a statistically significant change after 2025. The Section 232 goods

[16] Figure A2 shows that the decrease in the elasticity occurred in March 2025, coinciding with the imposition of the so-called "fentanyl tariffs" that were levied against China, Mexico, and Canada using IEEPA.

[17] Fajgelbaum and Khandelwal (2026) use quarterly first differences, instrument applied tariffs with statutory tariffs, include good-time and country (not country-time) fixed effects, and estimate a single elasticity for a pooled 2024–2025 sample. Azzimonti and Titcomb (2026) use 12-month differences, good and country-time fixed effects, and an inverse-hyperbolic-sine transformation that accommodates zero flows. Gopinath and Neiman (2026) use good fixed effects and exchange-rate controls. Their 2025 estimate uses changes from December 2024 to December 2025, while their 2018–2019 estimate uses changes from December 2017 to December 2019.

elasticity in 2024Q4, β^{232}, is –1.3, and the δ_t fluctuate between –0.5 and 1.0, but are never statistically significant. Before 2025, the elasticity (β^{232} + δ_t^{232}) fluctuates between 0.5 and 2.0, and afterwards it remains stable between 1 and 1.2.[18]

These results indicate that the import responses to the tariffs imposed in 2025 depended sharply on the tariffs' legal authority. Goods that were targeted by Section 232 tariffs responded with the same elasticities estimated from pre-2025 data. In contrast, goods that were targeted by IEEPA tariffs responded much less than historical data would predict.

To provide additional support for this interpretation, we estimate a version of (2) where we use changes in shipping costs as the explanatory variable instead of changes in applied tariffs. If the differential response of trade to IEEPA tariffs versus Section 232 tariffs was driven by a belief that the former were likely to be reversed and refunded, one would not expect such a difference in the response of trade to changes in shipping costs. The results are shown in Figure 2(e). Indeed, there is no statistically significant change in the elasticity of imports to shipping-cost changes after 2025 for either group. We also estimate an extended specification where we include both changes in tariffs and shipping costs as independent variables, each interacted with the Section-232 indicator. Figure 2(f) plots the differences between the estimated elasticities of imports to tariffs and shipping costs for each group of products, e.g., $\delta_t^{\text{IEEPA,tariff}} - \delta_t^{\text{IEEPA,shipping}}$. The results look similar to the baseline results in Figure 2(d).

5 Tariff pass-through

Legally contested tariffs not only induce smaller trade responses; they also induce smaller downstream changes in producer prices.[19] To identify the pass-through of the 2025 tariffs to producer prices, we follow the approach of Amiti et al. (2026), which separates the effects of two potential forces: import-competing firms raising prices when tariffs make foreign goods less competitive in the domestic market (the strategic-complementarity channel), and import-

[18]The fact that Section 232 goods have lower trade elasticities throughout the period is consistent with the literature. The Section 232 tariffs target specific sectors that are often estimated to have particularly low elasticities. For example, Caliendo and Parro (2015) estimate a trade elasticity for autos that is one-fifth as large as their average estimate. Table A1 reports the broad sectors that were targeted by Section 232 tariffs in 2025.

[19]We focus on pass-through to producer prices. Amiti et al. (2026) have shown that the pass-through at the border is close to complete.

using firms raising prices when tariffs make imported inputs more expensive (the marginal-cost channel). Our data construction follows theirs closely, so we relegate the details to Appendix B.

We use monthly data from January 2025 to March 2026, focusing on year-on-year changes in sectoral producer price indices, $\Delta_{12}P_{kt}$, where k indexes sectors (i.e., six-digit NAICS codes). The strategic-complementarity channel is measured by the year-on-year change in tariffs on goods produced in that sector, $\Delta_{12}\tau_{kt}$, weighted by that sector's import penetration in 2022, s_k. We denote this channel $X_{kt} \equiv s_k \Delta_{12}\tau_{kt}$. The marginal-cost channel weights the change in tariffs on a sector's intermediate inputs, $\Delta_{12}\tau^N_{kt}$, calculated using the 2017 IO table, by the share of imported material inputs over the sector's total variable cost in 2022, s^N_k. This channel is denoted $X^N_{kt} \equiv s^N_k \Delta_{12}\tau^N_{kt}$.

We depart from Amiti et al. (2026) by studying how the pass-through of IEEPA tariffs differs from the pass-through of Section 232 tariffs. We measure sector k's exposure to the strategic-complementarity channel by its share of 2022 imports (M) subject to Section 232 tariffs,

$$q^{232}_k \equiv \frac{\sum_{g\in\Omega_k} M_{g,22}\mathbb{1}\{g \in \text{Section 232}\}}{\sum\limits_{g\in\Omega_k} M_{g,22}}, \tag{3}$$

where Ω_k is the set of HS8 goods that are part of the NAICS sector k. We measure sector k's exposure to the marginal-cost channel by the input-output weighted, 2022 import share subject to Section 232 tariffs,

$$r^{232}_k = \sum_n w_{nk} q^{232}_n, \tag{4}$$

where w_{nk} is sector n's expenditure share of sector k's total variable cost using the 2017 IO table.[20]

We construct indicator functions to classify sectors by their exposure to Section 232 tariffs. Q^{232}_k is equal to one if sector k's exposure to Section 232 tariffs, as measured by q^{232}_k, is above the median and zero otherwise. Analogously, we define R^{232}_k to be one if r^{232}_k is above the

[20] We follow Amiti et al. (2026) and define the total variable cost as the sum of expenditures on non-oil material inputs and the wage bill.

median and zero otherwise. Our estimating equation is

$$\begin{aligned}\Delta_{12} P_{kt} = \gamma_0 \left(1 - Q_k^{232}\right) X_{kt} + \gamma_1 Q_k^{232} X_{kt} \\ + \gamma_0^N \left(1 - R_k^{232}\right) X_{kt}^N + \gamma_1^N R_k^{232} X_{kt}^N + D_k + D_t + \epsilon_{kt},\end{aligned} \tag{5}$$

where D_k are sector fixed effects and D_t are time fixed effects. If tariff pass-through is lower for IEEPA goods, we would expect $\gamma_0 < \gamma_1$ and $\gamma_0^N < \gamma_1^N$.

Table 1 reports the results. In Column 1, we show estimates from a specification that omits the interaction terms. Pass-through of the marginal-cost channel is nearly complete (96 percent), while pass-through of the strategic-complementarity channel is insignificant and close to zero (8 percent). These findings are virtually identical to those of Amiti et al. (2026).[21]

We find pass-through is lower for IEEPA goods than for Section 232 goods. Column 2 reports the results of the full specification, (5). Pass-through of the marginal-cost channel (γ_0^N) is around 40 percent for sectors with below-median Section 232 exposure, versus 93 percent for sectors with above-median exposure (γ_1^N), and only the latter is statistically distinguishable from zero. Pass-through of the strategic-complementarity channel is low for sectors with both below ($\gamma_0 = 0.01$) and above median exposure ($\gamma_1 = 0.11$), although slightly higher (and statistically significant) for more-exposed sectors.

These results illustrate that aggregate pass-through of the 2025 tariffs is driven by exposure to tariffs that were implemented using Section 232. Tariffs implemented using IEEPA were not passed through to producer prices nearly as much.[22] This differential response of producer prices to tariffs is consistent with the differential import response documented above, which we argue can be attributed to expectations that IEEPA tariffs were likely to be reversed and refunded.

[21] Amiti et al. (2026) estimate a pass-through coefficient of 0.93 for the marginal-cost channel and an insignificant coefficient of 0.1 for the strategic-complementarity channel. They find similar results when instrumenting applied tariffs with statutory tariffs. See their Table 2.

[22] In Appendix B, we show that these results are robust to alternative sample design choices and measures of statutory classification, and that they are specific to the sample period 2025–2026Q1.

6 Discussion

In canonical models of trade policy risk, forward-looking firms delay sunk investments in market access because a tariff might be imposed or revoked in the future, leading to muted extensive-margin responses to trade reforms in the long run (Handley, 2014; Alessandria et al., 2024b; Alessandria et al., 2025). The mechanism driving our results in this study is different: when importers place a positive probability on a legal reversal that triggers retroactive refunds, tariffs look more like temporary cash deposits than ad-valorem taxes, reducing the effective tariff that governs intensive-margin responses in the short run.

Consider an importer facing a tariff increase, $\Delta\tau_{igt}$, under a contested statute. The importer assigns a probability π_t to receiving a refund after m periods, and discounts that payout by a factor $d_t(m, r - \bar{r})$, which is increasing in both the delay m and the spread between the firm's internal cost of funds r and the statutory interest rate paid by the government on refunds $\bar{r}$. The expected effective tariff change is then $(1 - \pi_t d_t)\Delta\tau_{igt}$. When one regresses import or price changes on applied tariff changes $\Delta\tau_{igt}$, rather than expected tariff changes, the estimated short-run elasticity or pass-through coefficient is attenuated by the factor $(1 - \pi_t d_t)$. For financially unconstrained importers whose borrowing costs are close to the statutory interest rate ($d_t \approx 1$), a refund probability of $\pi_t \approx 0.50$ implies that the measured short-run tariff elasticity should fall by half—similar to the decline from roughly 3.5 to 2 that we document in Figure 2(d).

There are other examples of retroactive tariff relief, such as Generalized System of Preferences (GSP) renewals, product exclusions, and antidumping duties. Historically, Congress has allowed U.S. GSP tariff preferences for developing countries to lapse periodically before renewing them retroactively. During a lapse, importers must pay MFN duties, which are eventually refunded after reauthorization passes. However, unlike the IEEPA refunds, GSP reauthorizations explicitly stipulate that duties collected during a lapse are refunded without interest.[23] Thus, effective tariffs are positive during a lapse (i.e., $d_t < 1$) even if retroactive

[23] Every recent retroactive reauthorization of the GSP program includes an explicit statutory prohibition on interest payments: "Any amounts owed by the United States pursuant to the liquidation or reliquidation of an entry of an article ... shall be paid, without interest, not later than 90 days after the date of the liquidation or reliquidation" (see, e.g., Public Law 112-40, § 1(b)(2)(C), 125 Stat. 402; Public Law 114-27, § 201(b)(2)(C), 129 Stat. 371; and Public Law 115-141, Div. M, Title V, § 501(b)(2)(C), 132 Stat. 1051; codified at 19 U.S.C. § 2465 note, as well as implementing U.S. Customs and Border Protection guidance in CSMS #18-000296).

renewal is guaranteed. This is consistent with evidence documented by Hakobyan (2020) of trade declines during GSP lapses.

Exemptions from Section 232 and Section 301 tariffs are also retroactively refunded, as are exemptions under Canada's remission framework for retaliatory surtaxes on U.S. imports. However, these exemptions typically apply only to specific products or firms, and the outcome of an application for relief is highly uncertain, whereas IEEPA refunds applied to all imports that were subject to those duties. By contrast, overpayments of preliminary antidumping and countervailing duty estimates are refunded with interest after administrative review, creating an expectations wedge closer in spirit to the IEEPA episode.

Finally, the extent to which refund expectations mute trade and pricing responses could vary with importers' financial conditions. Large importers with easy access to credit may be able to absorb temporary duty outlays and behave in line with the expected effective tariff. Smaller, liquidity-constrained importers, however, may face a high shadow cost of capital ($r \gg \bar{r}$), forcing them to reduce imports even when π_t is high. Anecdotal evidence supports this view: a secondary market emerged in which liquidity-constrained importers sold their legal claims to potential IEEPA tariff refunds to distressed-debt investors and hedge funds at steep discounts, often for substantially less than the refund probabilities implied by prediction-market contracts.[24] Exploring how financial constraints and tariff-rate non-linearities mediate the response to refundable tariffs using firm-level customs data is a promising avenue for future research.

7 Conclusion

The tariffs initiated at the start of the second Trump administration and the legal challenges to some, but not all, of these tariffs provide variation in expected tariffs that can be used to understand variation in short-run import and pricing dynamics. We find that imports of products

[24] Distressed-debt brokers such as Seaport Global and Cherokee Acquisition established dedicated trading desks in 2025 to match importers seeking to sell their IEEPA refund claims with hedge funds seeking to buy them. These claims traded at prices below prediction-market-implied values, both before and after the Supreme Court's February 2026 decision. Prior to the decision, they traded at 20–40 cents on the dollar, well below the prices of Polymarket contracts on a positive refund outcome. After the decision, refund claim prices rose to 60–85 cents on the dollar, still well below par. For example, Academy Sports & Outdoors sold $72.2 million in IEEPA refund claims for $10.5 million, while Xerox Holdings Corp. and Funko, Inc. sold $105 million and $22 million in refund receivables for $80 million and $19.2 million, respectively. See, e.g., Childs (2026), Politico (2026), Hedgeweek (2026), and Fernandes (2026).

whose tariffs were legally challenged and ultimately refunded responded less to measured changes in applied tariffs. This indicates that firms made decisions based on the expected tariff that would ultimately be applied to a given shipment, rather than the tariff that was legally in force at the time that shipment cleared customs.

For researchers, our findings imply that neither applied nor revised tariffs should be used to measure the elasticity of imports to tariffs in the presence of this kind of legal risk. Instead, one could use a measure of the expected tariff, which can be inferred from the probability of a refund implied by prediction markets. For policymakers, the small trade responses during this period are unlikely to generalize to other contexts, and should not be used to provide guidance about the likely effects of future changes in trade policy. Policymakers should use established legal authorities if they seek to use trade policy to reallocate expenditures from imports to domestic products.

Declaration of interests

George Alessandria has no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. Alessandria received support from the National Science Foundation, award #2214852.

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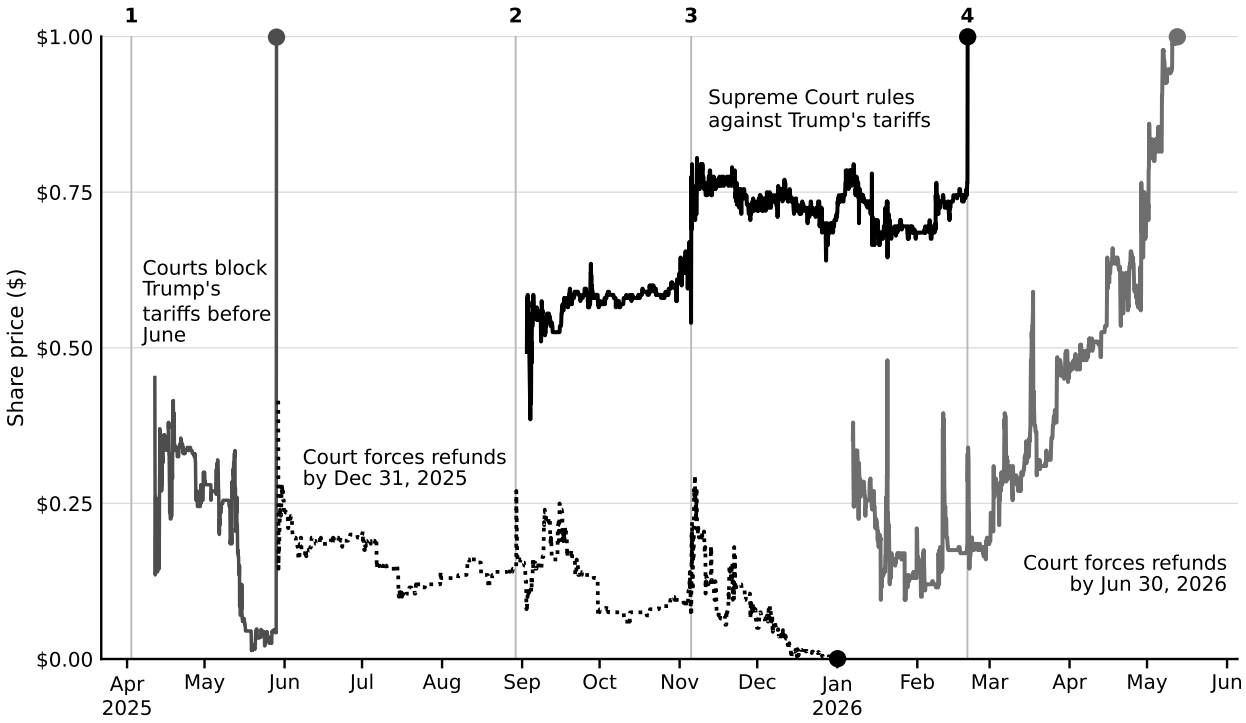
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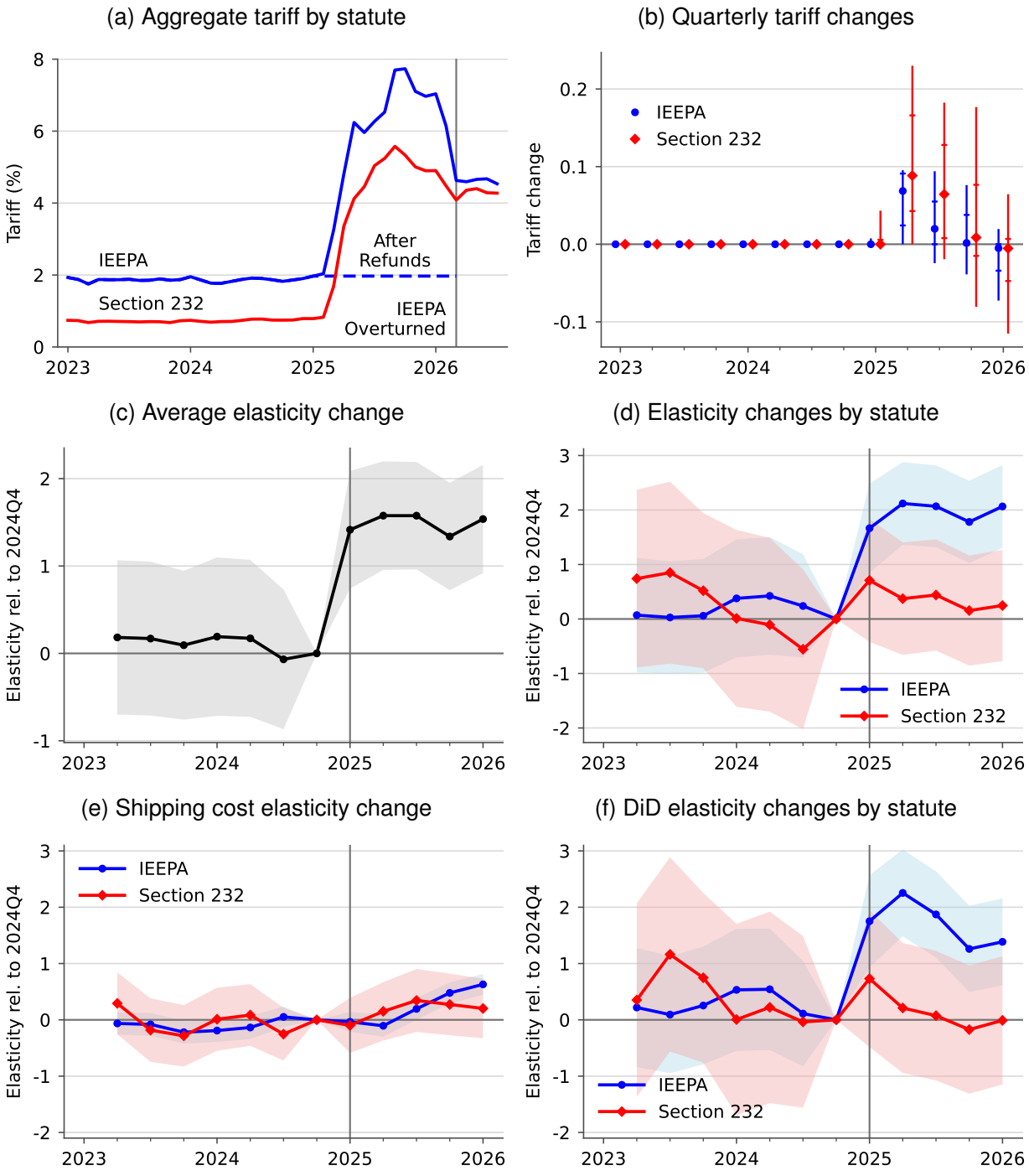
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Figure 1: Prediction markets



Notes: Prices of contracts that pay one dollar if the event occurs. Events: (1) Liberation Day tariffs announced, Apr 2, 2025; (2) Federal Circuit rules the tariffs exceeded IEEPA authority, Aug 29; (3) Supreme Court oral argument, Nov 5; (4) Supreme Court rules against the tariffs, Feb 20, 2026.

Figure 2: Tariff changes and the short-run trade elasticity



Notes: 2(a) aggregate applied tariffs (total duties over imports) for Section 232 and IEEPA goods, using constant imports from 2022. 2(b) median, 25/75th, and 10/90th percentiles of tariff-change distribution by quarter. 2(c) estimates of δ_t using (1). 2(d) estimates of δ_t^a for $a = \{232, \text{IEEPA}\}$ using (2). 2(e) estimates from (2) using shipping costs as the explanatory variable instead of tariffs. 2(f) extends (2) with shipping costs, plotting difference between tariff and shipping-cost coefficients, i.e., $\delta_t^{a,\text{tariff}} - \delta_t^{a,\text{shipping}}$ for $a = \{232, \text{IEEPA}\}$. Shaded areas mark 95-percent confidence intervals constructed using standard errors clustered by country-good.

Table 1: Tariff pass-through by statute

Dep. Var.: $\Delta_{12} P_{kt}$	(1)	(2)
X_{kt}^N	0.96^{***}	
	(0.13)	
X_{kt}	0.08	
	(0.06)	
$R_k^{232} \times X_{kt}^N$		0.93^{***}
		(0.13)
$(1 - R_k^{232}) \times X_{kt}^N$		0.43
		(0.29)
$Q_k^{232} \times X_{kt}$		0.11^{*}
		(0.06)
$(1 - Q_k^{232}) \times X_{kt}$		0.01
		(0.10)
Observations	3,155	3,155
Adjusted R^2	0.63	0.63

Notes: Column 1 reports estimates of (5) without interaction terms for Section 232 exposure. Column 2 reports estimates of (5). The strategic-complementarity channel is captured by X_{kt}. The marginal-cost channel is captured by X_{kt}^N. R_k^{232} is an indicator equal to one for sectors with above-median exposure to Section 232 tariffs on intermediate inputs. Q_k^{232} equals one for sectors with above-median exposure to Section 232 tariffs on outputs. Heteroskedasticity-robust standard errors are reported in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Online appendix

A Robustness

A.1 Countries, fixed effects, and shipping costs

Here we document that our main results are robust to the exclusion of China, Mexico, and Canada from our sample, to the use of alternative fixed effects, to the inclusion of shipping cost controls, leads and lags of tariff changes, and lagged import values. We also show that following the 2018 tariffs, there was no change in the short-run import elasticities for Section 232 and IEEPA goods. To simplify the exposition, instead of estimating per-period short-run trade elasticities, we consider the average short-run trade elasticity before and after 2025Q1 by estimating

$$\begin{aligned}\Delta v_{igt} = {} & \beta^{232} \mathbb{1}_{\{g \in \text{Section 232}\}} \Delta\tau_{igt} + \delta^{\text{post},232} \mathbb{1}_{\{g \in \text{Section 232} \wedge t > 2025Q1\}} \Delta\tau_{igt} \\ & + \beta^{\text{IEEPA}} \mathbb{1}_{\{g \notin \text{Section 232}\}} \Delta\tau_{igt} + \delta^{\text{post,IEEPA}} \mathbb{1}_{\{g \notin \text{Section 232} \wedge t > 2025Q1\}} \Delta\tau_{igt} \\ & + D_{it} + D_{gt} + u_{igt}. \end{aligned} \tag{6}$$

The results, reported in column 2 of Table A2, show that excluding China from our sample increases the short-run trade elasticity pre-2025Q1 of IEEPA goods, but it does not change the other three elasticities, thus preserving our main result. Our main result is also robust to excluding Canada, China, and Mexico (column 3).

Column 4 shows that there were no significant changes in the short-run trade elasticities following the 2018 tariffs. For this placebo test we consider the sample period 2017–2019 and exclude China, since it was the main target of U.S. tariff policy. Analogous to our approach in (6), we then consider an indicator variable that is equal to one after 2018Q2 and zero otherwise. There is no significant change in the elasticity after 2018Q2 for either Section 232 or IEEPA goods, and the elasticities are similar to the ones between 2023 and 2024.

The results in Table A3 demonstrate that our baseline results do not depend on the set of fixed effects in the regression equation. Column 2 indicates that including tighter sector-

country-period fixed effects does not change our results.[25] Similarly, excluding *gt* (column 3) or *it* (column 4) fixed effects does not affect the results. In fact, dropping fixed effects altogether leaves our baseline results virtually unchanged (column 5).

Table A4 studies the inclusion and role of shipping costs, which we calculate as the CIF import value minus the FOB import value, as a percentage of the CIF import value. Columns 2 and 4 indicate that including shipping costs does not affect the short-run trade elasticities, whether the shipping costs are interacted with an indicator variable of Section 232 goods (column 4) or not (column 2). Column 3 indicates the elasticity of trade to shipping costs also changed slightly after 2025Q1, although much less than the elasticity with respect to tariffs. In the case of shipping costs, the trade elasticity fell for both Section 232 and IEEPA goods, but only by 8 and 16 percent, respectively. This indicates that even though trade may have generally become less responsive, the extent to which trade has become less responsive to tariffs is significantly larger. Finally, in Table A6, we show that our results are also robust to the inclusion of lags and leads of tariff changes and lagged changes in import values.

A.2 Statutory regime classification

To identify goods subject to Section 232 tariffs, we use Wove's AI-powered tariff database. We classify all goods with non-zero Section 232 tariffs and all goods that are derivatives of inputs targeted by Section 232 tariffs to be Section 232 goods. Here, we provide three alternative classifications and show the robustness of our main results. First, we consider only goods with non-zero Section 232 tariff rates. Under this criterion, the number of goods classified as Section 232 drops from 1,181 to 983. Second, we use our "own" classification system based on available information and customs data. Namely, we consider observations (HS8-country-month) between 2025Q1 and 2026Q2 as corresponding to Section 232 if (1) they belong to HS 2-digit codes 40, 44, 70, 72, 73, 74, 76, 83, 84, 85, 87, 94; (2) their applied tariff rate minus the scheduled MFN rate is larger than 2 percentage points; (3) their applied tariff rate is within 2 percentage points of 25 or 50 percent; and (4) the Section 301 and 201 rates indicated by Wove are zero. We then classify a good as a Section 232 good if there is at least one observation that satisfies the previous four requirements. This procedure generates 1,924

[25] We define a sector at the HS2 level.

Section 232 goods. Finally, our third classification considers all goods classified as Section 232 under our baseline criteria and the second alternative criteria.

The results of using these alternative classifications are reported in Table A5. All of the estimated elasticities are very similar to their baseline values, reported in column 1, indicating that the main results are robust to alternative classifications of goods into Section 232 goods.

A.3 Tariff variation in 2025 and the role of fixed effects

While Table A3 shows that our results are robust to the set of fixed effects included in the estimating equation, in this section, we consider the role of fixed effects with regard to tariff variation in 2025. The IEEPA tariffs were country-specific and Section 232 tariffs were good-specific, so it is possible that the inclusion of *it* and *gt* fixed effects would absorb a large share of the tariff variation. In fact, as illustrated by Figure A3(a), the explanatory power of both sets of fixed effects, and, especially, of country-time fixed effects, has increased significantly since 2025Q1 when considering quarterly tariff changes.

Nevertheless, the residual variation in tariff changes that identifies our elasticities has also increased significantly since 2025. We can see this by regressing the quarterly tariff change on *it* and *gt* fixed effects and then plotting the distribution of the residuals over time. Figure A3(b) plots the results. The residual tariff variation is very low prior to 2025Q1 and becomes significantly larger afterwards, for both IEEPA and Section 232 goods. There are many reasons why we should expect significant tariff variation even in the presence of country-time and good-time fixed effects in 2025.

First, the actual tariff changes from IEEPA and Section 232 included several exemptions and carve-outs. For example, Annex II of the April 2 executive order excluded products such as certain pharmaceutical products, semiconductors, critical minerals, and energy products from the reciprocal tariffs; the UK obtained a carve-out from the June 4 steel and aluminum rate increase to 50 percent under Section 232; qualifying USMCA entries from Canada and Mexico were exempt from the additional border-related IEEPA duties and some nonqualifying potash and energy products from Canada received a reduced 10-percent rate, rather than the general 25-percent rate; for the EU, the July 31 agreement specified an additional reciprocal duty that brought covered goods with a Column 1 rate below 15 percent up to 15 percent while goods

already at or above 15 percent received no additional reciprocal duty; Brazil's additional 40-percent duty excluded goods such as Brazil nuts and orange juice, among others. Moreover, for qualifying articles with at least 20-percent U.S. content, reciprocal tariffs excluded the U.S.-originating value.

Second, some of the variation in tariff changes is due to differences in arrival times of goods, as the reciprocal tariff rules included in-transit exceptions. Finally, it is important to note that the additive nature of the tariff increases is not preserved when considering log changes. For instance, a tariff increase from 0 to 10 percent is equivalent to a 0.041 log-point increase, while the same tariff increase of 10 percentage points from 20 to 30 percent is equivalent to a 0.034 log-point increase, resulting in additional variation beyond the variation induced by legislation and shipping times.

B Further details on the tariff pass-through results

Our approach to estimating the downstream price effects of the 2025 tariffs follows Amiti et al. (2026) and replicates their findings. Motivated by the differential trade effects indicative of the importance of expected refunds, our main departure lies in distinguishing the effect of the Section 232 tariffs from the IEEPA tariffs. Here, we briefly describe how we construct the sample and the main variables and discuss some robustness checks for the results reported in Table 1. For more details regarding the sample and variable construction, see Amiti et al. (2026).

B.1 Data

We use three main data sources. First, we use the Bureau of Labor Statistics (BLS) Producer Price Index (PPI) to measure changes in sector-k output prices ($\Delta_{12}P_{kt}$), generally available at the NAICS 6-digit level. Following Amiti et al. (2026), we drop oil-related industries. Our regressions include the 211 sectors for which the import data needed to construct the tariff, import-share regressors, and Section 232 exposures are available. Second, we use the BEA input-output (IO) table from 2017 to measure, by sector, intermediate input use and total variable costs, measured as expenditure on non-oil material inputs plus the wage bill. The published table distinguishes 402 BEA sectors; outside of government and a few special cat-

egories, each corresponds to one or more NAICS industries. Third, we obtain U.S. import, export, and tariff data from the U.S. Census Bureau at the HTS 10-digit, country, and monthly level. Here, we denote origin countries as i and HTS-10 products as h (our trade-response results use HS8 goods). The NAICS-6 to HTS-10 concordance is from the U.S. Census Bureau (https://www.census.gov/foreign-trade/reference/index.html), and the mapping between BEA IO sectors and NAICS-6 is provided by the BEA.

B.2 Variable construction

The first regressor of Amiti et al. (2026), X_{kt}, captures the strategic-complementarity channel, and is measured as the product of the sector's import penetration, s_k, and the change in the sector's tariff, $\Delta_{12}\tau_{kt}$. The sector's (output) tariff changes are calculated as good-level tariff changes weighted by 2022 import values,

$$\Delta_{12}\tau_{kt} = \sum_{h,i\in\Omega_k} \omega_{khi}\Delta_{12}\tau_{hit}, \qquad \omega_{khi} = \frac{M_{hi}}{\sum_{h,i\in\Omega_k} M_{hi}}, \tag{7}$$

where M_{hi} are imports of good h, from country i, in 2022. Import penetration is measured as the ratio of imports to domestic absorption in 2022,

$$s_k \equiv \frac{M_k}{Q_k + E_k - M_k}, \tag{8}$$

where Q are domestic sales and E are exports.

Their second regressor, X^N_{kt}, captures the marginal-cost channel and is measured as the product of the sector's material input exposure to imports, s^N_k, and the change in input tariffs, $\Delta_{12}\tau^N_{kt}$. The change in sector k's input tariffs is calculated as the weighted average of the tariffs on non-oil material input sectors, n, used by sector k, as reported in the IO matrix,

$$\Delta_{12}\tau^N_{kt} \equiv \sum_n w_{nk}\Delta_{12}\tau_{nt}, \qquad w_{nk} = \frac{V_{nk}}{\sum_j V_{jk}}, \tag{9}$$

where V_{nk} is the intermediate input of sector n used in sector k from the 2017 IO table.[26] The

[26]Material inputs include those from NAICS codes beginning with 1, 2, or 3, excluding oil and gas extraction (211) and petroleum refining (324), consistent with the exclusion of oil products elsewhere.

sectoral material input exposure to tariffs is calculated as the share of imported intermediate inputs in total variable costs, TVC_k,

$$s_k^N \equiv \frac{\sum_n V_{nk}^M}{TVC_k}, \qquad V_{nk}^M = V_{nk} \frac{Imports_{n,2022}}{Absorption_{n,2022}} \tag{10}$$

where TVC_k is the sum of expenditure on non-oil material inputs and the wage bill, as reported in the 2017 IO table, and import shares are calculated using 2022 imports and 2017 material input usages per sector. Note that this implies that each sector k uses the same proportion of imported material inputs from sector n as the aggregate economy.

To study the price pass-through patterns distinguishing the exposure to Section 232 tariffs versus IEEPA tariffs, we follow the logic of Amiti et al. (2026) and consider two channels: (1) exposure at the output-level (or the strategic-complementarity channel); and (2) exposure at the input-level (or the marginal-cost channel). We measure the output-level exposure by the share of imports affected by Section 232 using 2022 import values at the HS8 level,

$$q_k^{232} \equiv \frac{\sum_{g \in \Omega_k} M_g \mathbb{1}\{g \in \text{Section 232}\}}{\sum_{g \in \Omega_k} M_g}, \tag{11}$$

where $\mathbb{1}\{g \in \text{Section 232}\}$ is the indicator variable that uses our baseline classification of goods into Section 232. The input-level exposure of sector k is calculated as the output-level exposure of the input sector n, weighted by its input share, again using the 2017 IO table,

$$r_k^{232} = \sum_n w_{nk} q_n^{232}. \tag{12}$$

For our baseline results from (5), we include indicator variables for above- and below-median exposure to Section 232: $Q_k = \mathbf{1}\{q_k^{232} > \text{median}_j(q_j^{232})\}$ and $R_k = \mathbf{1}\{r_k^{232} > \text{median}_j(r_j^{232})\}$.

B.3 Robustness and additional results

Table A7 provides some robustness checks for the baseline results in Table 1 and some additional results. Column 1 considers a specification in which the effect of above-median exposure to Section 232 is estimated additively, instead of separately, for below- and above-median exposures. Consistent with the baseline result, the additive term is significant, albeit only at the

10-percent level. Column 2 considers the interaction effect of (continuous) exposure shares, i.e., q_k^{232} and r_k^{232}, instead of the indicator variables for below- and above-median exposure. The coefficients on the interaction terms are both positive, but statistically insignificant. Column 3 considers the baseline specification (5) but extends the sample period to 2022Q1–2026Q1. The pass-through coefficients from the marginal-cost channel are now close to one for both above- and below-median exposure to Section 232, indicating that prior to 2025, there are no differential pass-through patterns between the two sets of goods. Finally, columns 4 and 5 consider two alternative classifications of goods into Section 232: one that excludes the derivative products of Section 232 (column 4) and one that considers the goods for which "our" (see Appendix A.2) and the Wove classifications overlap. In both cases, the results are virtually unchanged.

C Additional tables and figures

Table A1: Sectors targeted by Section 232

Sector	Main HS2 chapters affected	Rates
Steel and steel derivatives	72, 73, 84, 85, 87, 94	25% 3/12/2025; 50% 6/4/2025
Aluminum and aluminum derivatives	76, 83, 84, 85, 87, 94	25% 3/12/2025; 50% 6/4/2025
Automobiles and auto parts	40, 70, 73, 83, 84, 85, 87, 94	25% 4/3/2025
Copper products	74, 85	50% 8/1/2025
Medium/heavy trucks and buses	40, 70, 73, 83, 84, 85, 87, 94	25% (buses 10%) 11/1/2025

Table A2: Trade elasticities by policy regime: robustness to countries

Countries:	All	$\sim$ CN	$\sim$ CN, MX, CA	$\sim$ CN
Dep. Var.: Δv_{igt}	(1)	(2)	(3)	(4)
$\mathbb{1}_{\{g \notin \text{Section 232} \wedge t > 2025Q1\}} \times \Delta\tau_{igt}$	1.50***	2.44***	2.93***	
	(0.16)	(0.22)	(0.25)	
$\mathbb{1}_{\{g \in \text{Section 232} \wedge t > 2025Q1\}} \times \Delta\tau_{igt}$	-0.07	-0.02	-0.09	
	(0.22)	(0.25)	(0.26)	
$\mathbb{1}_{\{g \notin \text{Section 232}\}} \times \Delta\tau_{igt}$	-3.03***	-4.06***	-4.40***	-4.14***
	(0.16)	(0.21)	(0.24)	(0.29)
$\mathbb{1}_{\{g \in \text{Section 232}\}} \times \Delta\tau_{igt}$	-0.94***	-1.04***	-0.98***	-1.15***
	(0.21)	(0.24)	(0.25)	(0.40)
$\mathbb{1}_{\{g \notin \text{Section 232} \wedge t > 2018Q2\}} \times \Delta\tau_{igt}$				-0.40
				(0.37)
$\mathbb{1}_{\{g \in \text{Section 232} \wedge t > 2018Q2\}} \times \Delta\tau_{igt}$				0.19
				(0.47)
Fixed Effects	*it*, *gt*	*it*, *gt*	*it*, *gt*	*it*, *gt*
Observations	1,656,197	1,560,376	1,423,775	1,254,476
Adjusted R^2	0.04	0.04	0.04	0.03

Notes: Table reports estimates of (6). Column 1 shows results under our baseline approach (analogous to Figure 2(d)). Columns 2 and 3 exclude China, and then China, Canada, and Mexico. Standard errors, clustered at the *ig* level, are reported in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A3: Trade elasticities by policy regime: robustness to fixed effects

Dep. Var.: Δv_{igt}	(1)	(2)	(3)	(4)	(5)
$\mathbb{1}_{\{g \notin \text{Section 232} \wedge t > 2025Q1\}} \times \Delta\tau_{igt}$	1.50***	1.44***	1.32***	1.39***	1.47***
	(0.16)	(0.17)	(0.17)	(0.16)	(0.16)
$\mathbb{1}_{\{g \in \text{Section 232} \wedge t > 2025Q1\}} \times \Delta\tau_{igt}$	-0.07	-0.07	-0.22	-0.08	0.01
	(0.22)	(0.23)	(0.22)	(0.22)	(0.22)
$\mathbb{1}_{\{g \notin \text{Section 232}\}} \times \Delta\tau_{igt}$	-3.03***	-3.05***	-2.79***	-2.92***	-2.74***
	(0.16)	(0.16)	(0.17)	(0.15)	(0.16)
$\mathbb{1}_{\{g \in \text{Section 232}\}} \times \Delta\tau_{igt}$	-0.94***	-0.98***	-0.85***	-0.92***	-0.88***
	(0.21)	(0.22)	(0.21)	(0.21)	(0.21)
Fixed Effects	*gt*, *it*	*gt*, *i*-*HS2*-*t*	*it*	*gt*	–
Observations	1,656,197	1,633,592	1,669,361	1,656,327	1,669,491
Adjusted R^2	0.04	0.05	0.01	0.03	0.00

Notes: Table reports estimates of (6). Column 1 shows results under our baseline approach (analogous to Figure 2(d)). Column 2 uses more restrictive *i*-*HS2*-*t* fixed effects. Columns 3 and 4 only use *it* and *gt* fixed effects, respectively, and column 5 uses no fixed effects. Standard errors, clustered at *ig* level, are reported in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A4: Trade elasticities by policy regime: robustness to shipping costs

Dep. Var.: Δv_{igt}	(1)	(2)	(3)	(4)
$\mathbb{1}_{\{g \notin \text{Section 232} \wedge t > 2025Q1\}} \times \Delta\tau_{igt}$	1.50***	1.49***		1.49***
	(0.16)	(0.16)		(0.16)
$\mathbb{1}_{\{g \in \text{Section 232} \wedge t > 2025Q1\}} \times \Delta\tau_{igt}$	-0.07	-0.14		-0.14
	(0.22)	(0.22)		(0.22)
$\mathbb{1}_{\{g \notin \text{Section 232}\}} \times \Delta\tau_{igt}$	-3.03***	-2.96***		-2.96***
	(0.16)	(0.15)		(0.15)
$\mathbb{1}_{\{g \in \text{Section 232}\}} \times \Delta\tau_{igt}$	-0.94***	-0.83***		-0.82***
	(0.21)	(0.21)		(0.21)
$\mathbb{1}_{\{t > 2025Q1\}} \times \Delta shipping_{igt}$		0.38***		
		(0.04)		
$\Delta shipping_{igt}$		-2.39***		
		(0.03)		
$\mathbb{1}_{\{g \notin \text{Section 232} \wedge t > 2025Q1\}} \times \Delta shipping_{igt}$			0.37***	0.38***
			(0.05)	(0.05)
$\mathbb{1}_{\{g \in \text{Section 232} \wedge t > 2025Q1\}} \times \Delta shipping_{igt}$			0.21	0.24*
			(0.13)	(0.13)
$\mathbb{1}_{\{g \notin \text{Section 232}\}} \times \Delta shipping_{igt}$			-2.34***	-2.34***
			(0.03)	(0.03)
$\mathbb{1}_{\{g \in \text{Section 232}\}} \times \Delta shipping_{igt}$			-2.77***	-2.77***
			(0.08)	(0.08)
Fixed Effects	*it*, *gt*	*it*, *gt*	*it*, *gt*	*it*, *gt*
Observations	1,656,197	1,656,197	1,656,197	1,656,197
Adjusted R^2	0.04	0.06	0.06	0.06

Notes: Table reports estimates of (6). Column 1 shows results under our baseline approach (analogous to Figure 2(d)). Column 2 includes controls for shipping costs. Column 3 uses shipping costs instead of tariffs as the explanatory variable. Column 4 includes shipping costs and tariffs, each interacted with the Section 232 dummy. Standard errors, clustered at *ig* level, are reported in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A5: Trade elasticities by policy regime: robustness to policy classification

Policy Measure:	Baseline	No Derivatives	Applied	Overlap
Dep. Var.: Δv_{igt}	(1)	(2)	(3)	(4)
$\mathbb{1}_{\{g \notin \text{Section 232} \wedge t > 2025Q1\}} \times \Delta\tau_{igt}$	1.50***	1.51***	1.52***	1.49***
	(0.16)	(0.16)	(0.17)	(0.16)
$\mathbb{1}_{\{g \in \text{Section 232} \wedge t > 2025Q1\}} \times \Delta\tau_{igt}$	-0.07	0.04	0.13	-0.05
	(0.22)	(0.27)	(0.21)	(0.23)
$\mathbb{1}_{\{g \notin \text{Section 232}\}} \times \Delta\tau_{igt}$	-3.03***	-3.03***	-2.96***	-3.00***
	(0.16)	(0.16)	(0.16)	(0.15)
$\mathbb{1}_{\{g \in \text{Section 232}\}} \times \Delta\tau_{igt}$	-0.94***	-1.02***	-1.37***	-0.93***
	(0.21)	(0.26)	(0.20)	(0.22)
Fixed Effects	*it*, *gt*	*it*, *gt*	*it*, *gt*	*it*, *gt*
Observations	1,656,197	1,610,329	1,656,197	1,656,197
Adjusted R^2	0.04	0.04	0.04	0.04

Notes: Table reports estimates of (6). Column 1 shows results under our baseline approach (analogous to Figure 2(d)). Column 2 excludes goods classified as derivatives of products subject to Section 232 tariffs. Column 3 uses our alternative classification approach described in Appendix A.2. Column 4 classifies goods as Section 232 goods only if the baseline Wove classification overlaps with the alternative approach. Standard errors, clustered at *ig* level, are reported in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A6: Trade elasticities by policy regime: robustness to lags and leads

Dep. Var.: Δv_{igt}	(1)	(2)	(3)	(4)	(5)
$\mathbb{1}_{\{g \notin \text{Section 232} \wedge t > 2025Q1\}} \times \Delta\tau_{igt}$	1.50***	1.24***	1.14***	1.55***	1.49***
	(0.16)	(0.15)	(0.16)	(0.18)	(0.19)
$\mathbb{1}_{\{g \in \text{Section 232} \wedge t > 2025Q1\}} \times \Delta\tau_{igt}$	-0.07	0.02	0.03	0.03	-0.02
	(0.22)	(0.20)	(0.21)	(0.24)	(0.25)
$\mathbb{1}_{\{g \notin \text{Section 232}\}} \times \Delta\tau_{igt}$	-3.03***	-2.76***	-2.71***	-3.04***	-2.95***
	(0.16)	(0.14)	(0.16)	(0.17)	(0.18)
$\mathbb{1}_{\{g \in \text{Section 232}\}} \times \Delta\tau_{igt}$	-0.94***	-1.14***	-1.21***	-1.09***	-1.07***
	(0.21)	(0.20)	(0.21)	(0.23)	(0.24)
$\Delta\tau_{ig,t-1}$		-0.46***	-0.49***		
		(0.04)	(0.04)		
$\Delta\tau_{ig,t+1}$			-0.03		
			(0.03)		
$\Delta v_{ig,t-1}$		-0.42***	-0.41***		
		(0.00)	(0.00)		
$\mathbb{1}_{\{g \notin \text{Section 232} \wedge t > 2025Q1\}} \times \Delta v_{ig,t-1}$				-0.41***	-0.40***
				(0.00)	(0.00)
$\mathbb{1}_{\{g \in \text{Section 232} \wedge t > 2025Q1\}} \times \Delta v_{ig,t-1}$				-0.38***	-0.38***
				(0.00)	(0.01)
$\mathbb{1}_{\{g \notin \text{Section 232} \wedge t > 2025Q1\}} \times \Delta\tau_{ig,t-1}$				-0.36***	-0.36***
				(0.05)	(0.05)
$\mathbb{1}_{\{g \in \text{Section 232} \wedge t > 2025Q1\}} \times \Delta\tau_{ig,t-1}$				-0.21***	-0.23***
				(0.07)	(0.07)
$\mathbb{1}_{\{g \notin \text{Section 232} \wedge t > 2025Q1\}} \times \Delta\tau_{ig,t+1}$					0.14***
					(0.05)
$\mathbb{1}_{\{g \in \text{Section 232} \wedge t > 2025Q1\}} \times \Delta\tau_{ig,t+1}$					0.02
					(0.06)
Fixed Effects	*it*, *gt*	*it*, *gt*	*it*, *gt*	*it*, *gt*	*it*, *gt*
Observations	1,656,197	1,485,224	1,378,564	1,485,224	1,378,564
Adjusted R^2	0.04	0.21	0.21	0.10	0.10

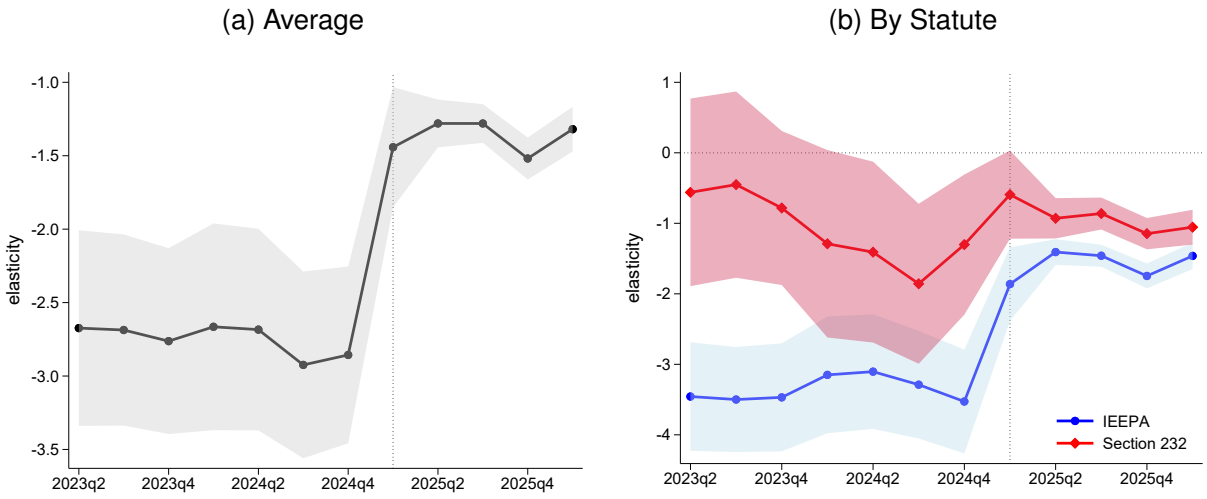
Notes: Table reports estimates of (6). Column 1 shows results under our baseline approach (analogous to Figure 2(d)). Column 2 includes lagged changes in import values and tariffs. Column 3 further includes the lead of tariff changes. Column 4 interacts lags with indicator variables for Section 232; column 5 further includes the interacted lead of tariff changes. Standard errors, clustered at *ig* level, are reported in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Table A7: Tariff pass-through by statute: robustness

	Different Specifications		2022-2026Q1	$\mathbb{1}\{g \in$ Section 232$\}$	
Dep. Var.: $\Delta_{12} P_{kt}$	(1)	(2)	(3)	No Derivatives (4)	Overlap (5)
X_{kt}	0.01	0.05			
	(0.10)	(0.08)			
X_{kt}^N	0.43	0.66*			
	(0.29)	(0.34)			
$r_k^{232} \times X_{kt}^N$		0.40			
		(0.52)			
$q_k^{232} \times X_{kt}$		0.14			
		(0.13)			
$Q_k^{232} \times X_{kt}$	0.11		0.05	0.11	0.11*
	(0.10)		(0.06)	(0.07)	(0.07)
$(1 - Q_k^{232}) \times X_{kt}$			0.05	0.06	0.02
			(0.10)	(0.09)	(0.10)
$R_k^{232} \times X_{kt}^N$	0.50*		1.03***	0.94***	0.93***
	(0.26)		(0.12)	(0.13)	(0.13)
$(1 - R_k^{232}) \times X_{kt}^N$			1.40***	0.45	0.33
			(0.29)	(0.30)	(0.31)
Observations	3,155	3,155	10,789	3,155	3,155
Adjusted R^2	0.63	0.63	0.36	0.63	0.63

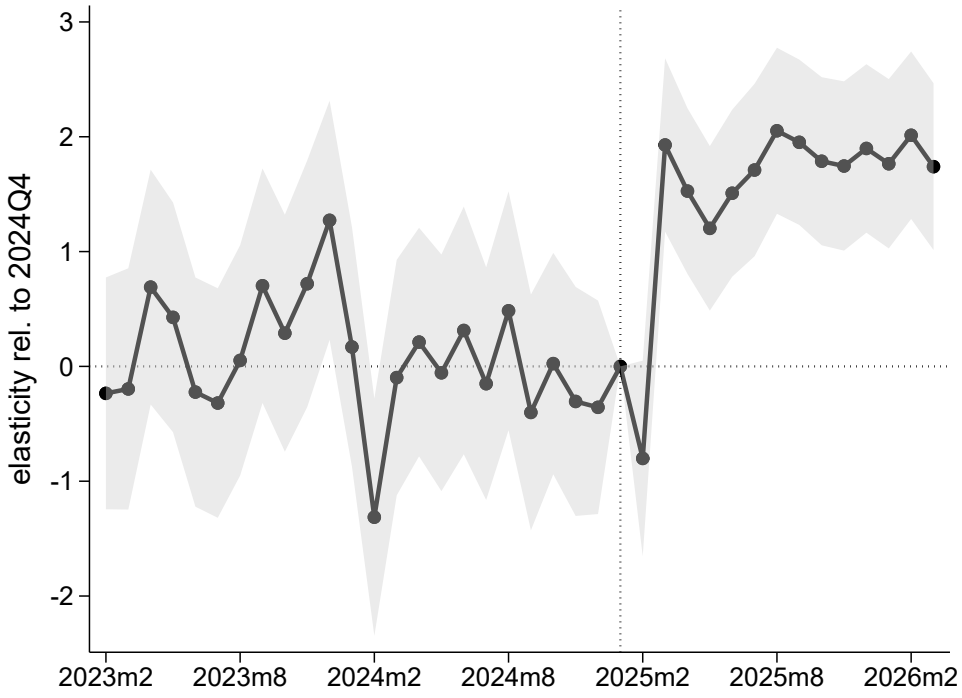
Notes: Table reports estimates of tariff pass-through by exposure to Section 232. Column 1 stacks pass-through for more-exposed sectors with less-exposed sectors (instead of estimating them separately). Column 2 considers interactions with continuous measures of exposures; r_k^{232} is the share of imports targeted by Section 232 along the input dimension, and q_k^{232} along the output dimension. Column 3 extends the sample period to 2022Q1–2026Q1. Column 4 excludes Section 232 derivatives. Column 5 uses overlap between the baseline Wove classification and our alternative classification, as described in Appendix A.2. Heteroskedasticity-robust standard errors are reported in parentheses. $^{*}p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$.

Figure A1: Elasticities without referencing to 2024Q4



Notes: This figure plots the estimates of a modified version of (1) and (2) in which we estimate elasticities per period without referencing them to 2024Q4. The shaded areas mark the 95-percent confidence intervals constructed using standard errors clustered by country-good.

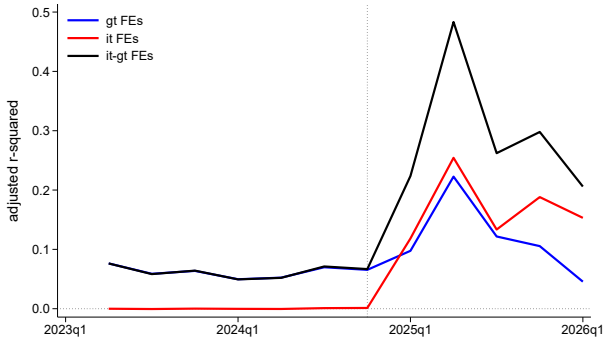
Figure A2: The average elasticity change at the monthly frequency



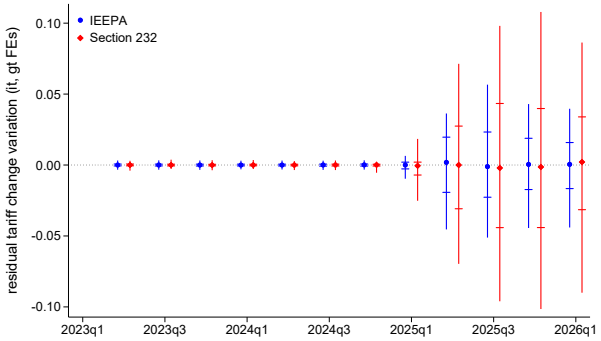
Notes: This figure plots the estimates of δ_t at the monthly frequency using (1). The shaded area marks the 95-percent confidence interval constructed using standard errors clustered by country-good.

Figure A3: The role of fixed effects and tariff variation

(a) Adjusted R-squared of tariff changes



(b) Residual tariff change variation



Notes: Panel A3(a) plots the adjusted R-squared of regressing quarterly tariff changes on different sets of fixed effects and different sample periods. The black line includes *gt* and *it* fixed effects. The red and blue lines include only *it* or *gt* fixed effects, respectively. Panel A3(b) plots the median, 25/75th, and 10/90th percentiles of the distribution of the residual from regressing the quarterly change in tariffs on *it* and *gt* fixed effects.

D Tariff action timelines

Table A8: Section 232 tariff actions, second Trump administration (through 2026Q2)

Date	Action	Official source
2025		
Feb 10, 2025	Steel and aluminum tariffs restored at 25%; country exemptions and alternative agreements terminated; effective Mar 12, 2025.	Proc. 10895 (90 FR 9807); Proc. 10896 (90 FR 9817)
Mar 26, 2025	25% tariff on imported automobiles (effective Apr 3, 2025) and certain automobile parts (effective May 3, 2025).	Proc. 10908
Apr 29, 2025	Import adjustment offset for U.S.-assembled automobiles (3.75% of MSRP for vehicles assembled Apr 3, 2025–Apr 30, 2026); same-day non-stacking order (EO 14289).	Proc. 10925
Jun 3, 2025	Steel and aluminum tariffs raised from 25% to 50%, effective Jun 4, 2025 (UK remains at 25%).	Proc. 10947
Jun 16, 2025	U.S.–UK Economic Prosperity Deal: annual quota of 100,000 UK vehicles at a 10% tariff rate.	EO 14309 (90 FR 26419)
Jul 30, 2025	50% tariff on semi-finished copper products and intensive copper derivatives, effective Aug 1, 2025.	Proc. 10962
Aug 19, 2025	407 HTSUS codes added to steel and aluminum derivative coverage, effective Aug 18, 2025.	BIS notice, FR Doc. 2025-15819
Sep 4, 2025	U.S.–Japan Agreement implemented, including tariff treatment of Japanese automobiles, parts, and civil aircraft.	EO 14345
Sep 25, 2025	U.S.–EU Framework implemented: tariff changes for EU automobiles and parts (retroactive to Aug 1, 2025), aircraft, and generic pharmaceuticals.	Commerce/USTR notice, FR Doc. 2025-18660
Sep 29, 2025	10% on softwood timber and lumber; 25% on upholstered wooden products, kitchen cabinets, and vanities; effective Oct 14, 2025.	Proc. 10976
Oct 17, 2025	25% on medium- and heavy-duty vehicles and listed parts; 10% on buses; effective Nov 1, 2025; auto tariff system conformed to the truck program.	Proc. 10984 (90 FR 48451)
Dec 31, 2025	Scheduled Jan 1, 2026 increases on upholstered furniture, kitchen cabinets, and vanities delayed to Jan 1, 2027.	Proc. 11000 (91 FR 1039)
2026 (Q1–Q2)		
Jan 14, 2026	25% tariff on a narrow set of advanced computing chips, effective Jan 15, 2026; two-phase plan with negotiations.	Proc. 11002
Jan 14, 2026	Processed critical minerals: national security threat finding; no tariffs; negotiations directed.	Proc. 11001
Apr 2, 2026	Metals overhaul: duties applied to full customs value in 50%/25% tiers, effective Apr 6, 2026; derivative inclusion processes terminated.	Proc. 11021

Continued on next page

Table A8 continued

Date	Action	Official source
Apr 2, 2026	100% default tariff on patented pharmaceuticals and ingredients, phased in Jul 31 and Sep 29, 2026; 20% for approved onshoring plans; generics and biosimilars excluded.	Proc. 11020 (91 FR 18183)
May 28, 2026 (eff. May 1)	U.S.–Taiwan agreement implemented: 15% caps on Taiwanese automobile parts and wood products; no Section 232 metals duties on certain civil aircraft components.	Commerce/USTR notice, FR Doc. 2026-10571
Jun 1, 2026	Metals adjustment effective Jun 8, 2026–Dec 31, 2027: U.S.-content threshold lowered from 95% to 85%; aluminum lithographic plates and steel racks added as derivatives.	Proc. 11032

Table A9: IEEPA and other tariff actions, second Trump administration (through 2026Q2)

Date	Action	Official source
A. IEEPA		
Feb 1, 2025	First use of IEEPA for tariffs: 25% on Canada (10% on Canadian energy), 25% on Mexico, 10% on China. China duties effective Feb 4, 2025.	EO 14193; EO 14194; EO 14195
Feb 3, 2025	Canada and Mexico duties delayed to Mar 4, 2025.	EO 14197; EO 14198
Feb 5, 2025	De minimis treatment for covered Chinese goods kept until Commerce certifies collection systems are in place.	EO 14200
Mar 3, 2025	China and Hong Kong duty raised from 10% to 20%, effective Mar 4, 2025. Canada and Mexico duties take effect Mar 4, 2025.	EO 14228
Mar 6, 2025	USMCA-qualifying goods from Canada and Mexico exempted from the border duties.	EO 14231; EO 14232
Mar 24, 2025	Authorizes 25% tariffs on goods of countries that import Venezuelan oil.	EO 14245
Apr 2, 2025	"Reciprocal" tariffs: 10% baseline on all trading partners, higher country-specific rates for listed partners. Separate order ends de minimis for Chinese and Hong Kong goods, effective May 2, 2025.	EO 14257; EO 14256
Apr 8, 2025	China reciprocal rate raised to 84% in response to Chinese retaliation.	EO 14259
Apr 9, 2025	China reciprocal rate raised to 125%; country-specific rates for other partners paused 90 days, leaving 10% in place.	EO 14266
May 12, 2025	Geneva arrangement: China reciprocal rate cut to 10%, effective May 14, 2025.	EO 14298
Jul 7, 2025	Pause on country-specific reciprocal rates extended to Aug 1, 2025.	EO 14316
Jul 30, 2025	Additional 40% duty on goods of Brazil.	EO 14323
Jul 31, 2025	Canada border duty raised from 25% to 35%, effective Aug 1, 2025. Country-specific reciprocal rates reset, effective Aug 7, 2025.	EO 14325; EO 14326
Aug 6, 2025	Additional 25% duty on goods of India over purchases of Russian oil, effective Aug 27, 2025.	EO 14329
Aug 11, 2025	Suspension of the higher China reciprocal rate extended to Nov 10, 2025.	EO 14334

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Table A9 continued

Date	Action	Official source
Sep 5, 2025	Reciprocal tariff exemptions revised and procedures set for implementing trade and security agreements, effective Sep 8, 2025.	EO 14346
Nov 4, 2025	U.S.–China arrangement: China fentanyl duty cut from 20% to 10%, and suspension of the 34% reciprocal rate extended to Nov 10, 2026; both effective Nov 10, 2025.	EO 14357; EO 14358
Nov 14, 2025	Certain agricultural products exempted from reciprocal tariffs.	EO 14360
Nov 20, 2025	Coffee and certain other agricultural products exempted from the 40% Brazil duty.	EO 14361
Jan 29, 2026	Authorizes additional duties on goods of countries that supply oil to Cuba; no rate set.	EO 14380
Feb 6, 2026	Authorizes additional duties on goods of countries that purchase goods or services from Iran; no rate set.	EO 14382
Feb 6, 2026	Additional 25% duty on India eliminated, effective Feb 7, 2026.	EO 14384
Feb 20, 2026	After the Supreme Court held in *Learning Resources, Inc. v. Trump* that IEEPA does not authorize tariffs, duties under EOs 14193, 14194, 14195, 14245, 14257, 14323, 14329, 14380, and 14382 (as amended) end and are to stop being collected as soon as practicable.	EO 14389
B. Section 122 (Trade Act of 1974)		
Feb 20, 2026	Temporary 10% import surcharge for balance-of-payments purposes, effective Feb 24, 2026, for 150 days (to Jul 24, 2026). Exempts goods subject to Section 232, USMCA goods of Canada and Mexico, energy, critical minerals, pharmaceuticals, and other listed products.	Proc. 11012
C. Section 301 (Trade Act of 1974)		
Apr 17, 2025	China shipbuilding: fees on Chinese-owned or -operated vessels and on Chinese-built vessels, starting at $0 and first charged Oct 14, 2025; tariffs on ship-to-shore cranes and cargo-handling equipment proposed.	USTR notice, FR Doc. 2025-06927
Jun 5, 2025[a]	178 China product exclusions extended to Aug 31, 2025.	FR Doc. 2025-10203
Jul 15, 2025	Investigation of Brazil initiated (digital trade, tariffs, IP, ethanol, deforestation, anti-corruption).	FR Doc. 2025-13498
Sep 2, 2025[a]	178 China product exclusions extended to Nov 29, 2025.	FR Doc. 2025-16733
Oct 10, 2025	China shipbuilding action modified: 100% duty on ship-to-shore cranes and intermodal chassis and parts, effective Nov 9, 2025.	FR Doc. 2025-19568
Oct 24, 2025	Investigation of China's implementation of the Phase One Agreement initiated.	FR Doc. 2025-19679
Nov 10, 2025	China shipbuilding fees and crane/chassis duties suspended for one year, through Nov 9, 2026, under the U.S.–China arrangement.	FR Doc. 2025-19873
Dec 1, 2025[a]	178 China product exclusions extended to Nov 9, 2026.	FR Doc. 2025-21671
Dec 10, 2025	Nicaragua (labor and human rights; found actionable Oct 20, 2025): tariff on non-CAFTA-DR-originating goods of 0% in 2026, 10% from Jan 1, 2027, and 15% from Jan 1, 2028.	FR Doc. 2025-19635; 2025-22690

Continued on next page

Table A9 continued

Date	Action	Official source
Dec 23, 2025	China semiconductors (legacy chips): additional tariff of 0%, rising on Jun 23, 2027 to a rate announced at least 30 days earlier.	FR Doc. 2025-23912
Mar 11, 2026	Investigations of structural excess capacity in manufacturing in 16 economies initiated.	FR Doc. 2026-05214
Mar 12, 2026	Investigations of 60 economies' failure to prohibit imports of goods made with forced labor initiated.	FR Doc. 2026-05151
May 6, 2026[a]	Second four-year review of the China technology-transfer tariffs (Lists 1–4) initiated.	FR Doc. 2026-08806
May 29, 2026	Investigation of Vietnam's IP protection and enforcement initiated.	FR Doc. 2026-11043
Jun 2, 2026	Forced-labor investigations: all 60 economies found actionable; proposed additional duties of 10% or 12.5%, excluding goods subject to Section 232.	FR Doc. 2026-11296
Jun 4, 2026[a]	Brazil: practices found actionable; proposed 25% tariff on goods of Brazil, with exemptions including Section 232 goods.	FR Doc. 2026-11158
Jun 18, 2026	Investigation of Germany's pricing of innovative pharmaceuticals initiated.	FR Doc. 2026-12671

[a] Federal Register publication date; the notice does not state a separate action date.