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**Trade Effects of the US–China Trade War  
on a Third Country: Preventing Trade  
Rerouting from China**

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January, 2024

**Abstract:** ASEAN countries might function as transshipment platforms for Chinese exports, enabling the evasion of US tariffs imposed on China in the US–China trade war. In response, in November 2019, the Thai government established a watchlist for high-risk products destined for the US and European Union (EU) markets. This initiative mandates exporters to submit additional documents for thorough verification of the origin of goods. We empirically investigate the impact of placing products on Thailand’s exports to the US and EU, as well as its imports from China. The analysis utilizes monthly trade data for Thailand from January 2017 to April 2023. One empirical challenge is the potential presence of reverse causality, in which products experiencing higher export growth to the US or EU may be deliberately selected for inclusion in the watchlist. To address this concern, we focus exclusively on products that meet the criteria for inclusion in the surveillance lists. Results indicate that the implementation of surveillance using the watchlist leads to a decrease in exports from Thailand to the EU. In contrast, exports to the US increased. Moreover, this initiative does not significantly impact China’s imports to Thailand.

**Keywords:** US–China disputes; Trade rerouting; Thailand

**JEL classification:** F15, F53

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# Trade Effects of the US–China Trade War on a Third Country: Preventing Trade Rerouting from China

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## 1. Introduction

The trade war between the world’s two largest countries, the US and China, has not only impacted their own economies, but has also cast ripple effects on third-party nations. In response to trade tensions, the US government implemented policy measures aimed at reducing imports from China through additional tariffs and exports to China by fortifying

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export controls ostensibly in the interest of national security. Unsurprisingly, these measures led to a decline in trade between the US and China, thereby altering the economic dynamics of third countries. One consequence is trade diversion, where third countries augment their exports to the US market by substituting for China's diminished exports. Anecdotal evidence supports this phenomenon. For instance, the Japanese multinational electronics company Ricoh Company, Ltd., relocated the production base of multifunction printers destined for the US market from China to Thailand.<sup>1</sup>

The US–China trade war has also prompted Chinese firms to employ trade circumvention strategies. US sanctions lead these firms to export products to third countries, particularly utilizing ASEAN nations as transshipment platforms, before re-exporting to the US without significant transformation. This practice allows them to bypass US tariffs on Chinese goods (Ha and Phuc, 2019).<sup>2</sup> Hayakawa (2022) provides evidence that specific Chinese-made products are rerouted through ASEAN countries to the US, especially for sanctioned items, revealing a positive correlation between imports from China and exports to the US. This underscores the role of third countries in mitigating the impact of trade tensions, demonstrating their significance in managing the repercussions of trade restrictions between the US and China.

In November 2019, the Department of Foreign Trade (DFT) of Thailand's Ministry of Commerce (MoC) implemented measures to counter trade circumvention. They established a watchlist for high-risk products in exports to the US and European Union (EU) markets, requiring exporters to submit additional documents. The list, comprising approximately 200 codes at a harmonized system (HS) eight-digit level for the US and EU markets, is updated regularly. In August 2022, the government intensified oversight and mandate official inspection by DFT authorities for export products on the watchlist to determine compliance with the origin criteria for the destination country. These policy measures aimed to effectively prevent trade circumventions in Thailand.

Given this context, we empirically examine how the enhanced surveillance of trade circumvention from China to the US and EU in Thailand impacts Thailand's exports to these destinations and imports from China. Specifically, we scrutinize the effect of including products in the watchlist on these trade values, utilizing monthly trade data in Thailand spanning from January 2017 to April 2023. An empirical challenge in this analysis is the

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<sup>1</sup> Several examples are available in an article published by *Nikkei Asia* on July 18, 2019: <https://asia.nikkei.com/Economy/Trade-war/China-scrambles-to-stem-manufacturing-exodus-as-50-companies-leave>.

<sup>2</sup> Many anecdotal examples of such transshipment through ASEAN countries are readily accessible. See <https://www.bangkokpost.com/business/1703740/us-china-tariff-dodgers-shipping-from-cambodia>, <https://www.woodworkingnetwork.com/cabinets/us-customs-border-protection-finds-us-cabinet-depot-evading-cabinet-duties>, <https://www.woodworkingnetwork.com/news/woodworking-industry-news/customs-finds-cabinet-importers-evaded-chinese-duties-transshipping>, and <https://www.forest-trends.org/blog/us-customs-and-border-protection-cbp-finds-chinese-timber-products-fraudulently-sold-in-us-as-made-in-vietnam-in-order-to-evade-tariffs/>.

potential presence of reverse causality, in which products experiencing higher export growth to the US or EU may be selectively included in the watchlist. To address this concern, we mitigate reverse causality by focusing solely on products eligible for inclusion in the surveillance lists. Our findings indicate that surveillance with the watchlist results in a decrease in exports from Thailand to the EU but an increase in exports to the US. Notably, this initiative does not significantly alter China's import to Thailand.

Our study contributes to the existing literature on the US–China trade war.<sup>3</sup> Numerous studies have extensively examined the direct effects of additional tariffs on the economies of the US (Amiti et al., 2019; Amiti et al., 2020; Fajgelbaum et al., 2020; Cavallo et al., 2021; Handley et al., 2020; Egger and Zhu, 2020; Blanchard et al., 2019) and China (Ma et al., 2021; Chor and Li, 2021; Cui and Li, 2021). Additionally, several studies explore trade effects in third economies (Choi and Nguyen, 2021; Cigna et al., 2022; Fajgelbaum et al., 2020; Hayakawa et al., 2023; Ma et al., 2021; Yang and Hayakawa, 2023). Building on this context, Hayakawa (2022) investigated the trade rerouting of Chinese goods to the US via ASEAN.<sup>4</sup> Ngoc and Wie (2023) also observed a substantial increase in the US imports of targeted goods from Vietnam as a consequence of the trade war.<sup>5</sup> In contrast to these studies, our research takes a step further in examining the aftermath of the US–China trade war, specifically focusing on the trade effects of policy measures designed to prevent trade circumvention arising from this war.

The remainder of this study is structured as follows. The subsequent section discusses the background of origin surveillance in Thailand. Following an explanation of our empirical framework in Section 3, Section 4 presents the estimation results. The study concludes in Section 5.

## 2. Background

The MoC is a government agency responsible for trade policies and their implementation. Although Thailand's trade policy has remained relatively stable over the last few decades, it has been steadfast in its commitment to a trade liberalization policy. This strategy aims to enhance Thailand's competitiveness in global trade and to foster economic

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<sup>3</sup> See Fajgelbaum and Khandelwal (2022) for a review of this literature.

<sup>4</sup> He discovered that in certain ASEAN countries, the positive correlation between imports from China and exports to the US is more pronounced in sanctioned products. An intriguing exploration into the trade dynamics of handkerchiefs and paper towels in this context can be found at the following link: <https://qz.com/1874110/how-much-trade-is-dodging-trumps-china-tariffs>. In addition, multiple studies explore China's trade circumvention in various contexts, as evidenced by works such as Rotunno et al. (2013), Liu and Shi (2019), and Li and Lin (2022).

<sup>5</sup> Mayr-Dorn et al. (2023) explore the impact of the US–China tariff war on wages in Vietnam. Their findings reveal that Vietnamese workers and districts with greater exposure to the trade war exhibit increased employment, working hours, and wages.

growth and development. Thailand's primary approach to trade liberalization involves participation in unilateral trade agreements within the framework of the World Trade Organization (WTO) and regional trade agreements (RTAs). Despite a slowdown in trade negotiations since the 2014 coup d'état led by General Prayut Chan-o-cha, Thailand has been actively engaged in RTAs as of 2020. As a member of the ASEAN, Thailand has signed RTAs with Australia–New Zealand, China, India, Japan, and the Republic of Korea. Thailand has bilateral RTAs with Australia, Chile, Japan, India, New Zealand, and Peru. Furthermore, Thailand is a signatory to the Regional Comprehensive Economic Partnership Agreement, a landmark agreement involving 15 member countries signed on November 15, 2020.<sup>6</sup>

In matters related to trade, including trade circumvention, the DFT within the MoC serves as the principal agency that oversees compliance with international trade agreements. It is responsible for implementing trade contingency measures and issuing import and export certificates, including a crucial certificate of origin (CO). The CO is an international trade document used to verify the country of origin of a product and to act as a declaration to meet export requirements. The two main types of CO are nonpreferential and preferential certificates of origin (e.g., forms to claim the use of RTA tariffs). As Thailand lacks RTAs with the US and EU, nonpreferential certificates of origin are required when exporting to these countries. For agricultural products (HS Chapters 1–24), producers/exporters must submit a commercial invoice, transport document (e.g., a bill of landing or an airway bill), an application form for pre-exportation verification of the origin of agricultural products, and any additional supporting documents (if necessary) simultaneously with the CO application. For industrial products (HS Chapters 25–97), producers/exporters must undergo pre-exportation verification and obtain the results of the pre-exportation verification of the origin of the goods issued by the DFT before submitting the CO application and all required documents through the DFT's electronic system.

To prevent export circumvention by foreign firms, the DFT implemented a stringent measure in November 2019 by establishing a watchlist for high-risk products in exports to the US and EU markets. Producers/exporters are now required to submit additional documents (e.g., a factory license or a list of raw materials used in production) when applying for nonpreferential CO. Since its inception, the DFT has regularly updated the watchlist, expanding from 35 items in November 2019 to 48 items in January 2023. Plans are in place to update its watchlist semiannually. Moreover, on August 1, 2022, the MoC issued a notification on the inspection of origin quality to bolster the function of oversight. Export products listed on the watchlist are now subject to official inspections by DFT authorities to

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<sup>6</sup> In 2020, Thailand's simple average preferential tariff rates were found to vary across bilateral and regional trade agreements. These rates ranged from zero (under the ASEAN Trade in Goods Agreement, ATIGA) to 14.2% (under the Thailand–India FTA), demonstrating a lower average compared with the most favored nation tariff rate of 14.5% (WTO, 2021). Thailand's average utilization rates for FTAs stand at approximately 25.9% on the import side and 31.1% on the export side for the period from 2015 to 2019 (Kohpaiboon and Jongwanich, 2022).

ascertain whether a product meets the origin criteria for a destination country. The inspection certificate obtained from this process is valid for two years. Producers/exporters are required to submit this certificate when applying for the issuance of a nonpreferential CO.

The watchlist primarily encompasses products in Chapters 4 (dairy produce, bird eggs, natural honey, and edible products of animal origin), 29 (organic chemicals), 40 (rubber), 70 (glass and glassware), 73 (iron or steel), 76 (aluminum), 84 (general machinery), 85 (electrical machinery), and 87 (vehicles other than railway or tramway rolling stock). According to the DFT, specific items such as aluminum foil and e-bikes have been identified as having a high risk of circumvention in the EU market because of a significant surge in export values in recent years.<sup>7</sup> Figure 1 illustrates the changes over time in the number of watchlist items in exports to the US and EU markets at an HS eight-digit level. At the onset of surveillance, more than 150 codes were included in the US market, whereas only approximately 50 codes were listed for the EU market. However, in the fourth quarter of 2020 and the first quarter of 2021, the number of watchlist items for the EU market substantially increased, reaching a number similar to that of the US market. In 2022, approximately 200 codes were listed for both the US and EU markets. Notably, in the latter half of 2022, the number in the US market decreased slightly. Comparing the products listed at least once during the study period, 130 codes overlapped between the lists for the US and EU markets. Additionally, 262 codes are exclusively listed for the US market, whereas 152 codes are exclusive to the EU market.

=== Figure 1 ===

### 3. Empirical Framework

This section elucidates our empirical framework to probe the effects of surveillance on trade in Thailand. If China is involved in reexporting to the US or EU through Thailand without substantial transformation of goods, this measure is anticipated to lead to a reduction in exports from Thailand to the US or EU as well as imports from China in Thailand. To scrutinize these decreases, we analyze Thailand's exports and imports separately. We employ the following straightforward equation to estimate exports from Thailand to the US and EU:

$$\ln Export_{cpt} = \alpha List_{cpt} + u_{cp} + u_{ct} + u_{pt} + \varepsilon_{cpt} . \quad (1)$$

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<sup>7</sup> Arunmas, Phusadee. "Measures Tightened amid Trade Circumvention Fears," *Bangkok Post*, September 28, 2022. Retrieved from <https://www.bangkokpost.com/business/2402085/measures-tightened-amid-trade-circumvention-fears>.

$Export_{cpt}$  represents exports of product  $p$  from Thailand to country  $c$  in time  $t$ . The product is defined at the HS eight-digit level in Thailand. The trade partner countries include almost all countries in the world (248 countries), and time  $t$  is defined at the year-month level, covering the period from January 2017 to April 2023.

The main independent variable is  $List_{cpt}$ , taking a value of 1 if product  $p$  exported to country  $c$  is included in the surveillance list at time  $t$ . This variable is binary and can only take a value of 1 when exporting to the US or EU countries. If surveillance decreases exports to these countries, the coefficient for  $List_{cpt}$  is expected to be negative. We control for three types of fixed effects. Country-product fixed effects ( $u_{cp}$ ) account for the product preferences in each destination country. Country-time fixed effects ( $u_{ct}$ ) capture the national demand size in that country, controlling for the effects of COVID-19 in export-destination countries. Product-time fixed effects ( $u_{pt}$ ) control for factor prices and technology in Thailand, absorbing the product-level effect of COVID-19 in Thailand. The error term is denoted as  $\epsilon_{cpt}$ . We estimate this equation using the ordinary least squares (OLS) method.<sup>8</sup>

Similarly, the equation for examining imports from China to Thailand is as follows:

$$\ln Import_{cpt} = \beta List_{pt} \times China_c + u_{cp} + u_{ct} + u_{pt} + \epsilon_{cpt} . \quad (2)$$

$Import_{cpt}$  represents imports of product  $p$  from country  $c$  in Thailand at time  $t$ . The product is also defined at an HS eight-digit level in Thailand, and the trading partners include 250 countries. The independent variables are slightly modified compared with those in the export equation.  $List_{pt}$  takes a value of 1 if product  $p$  (regardless of export destinations) is included in the surveillance list at time  $t$ .  $China_c$  takes a value of 1 if country  $c$  is China. If surveillance decreases imports from China, the interaction term is expected to have a negative coefficient. We control for three types of fixed effects. Country-product fixed effects ( $u_{cp}$ ) control for product-level technology in Thailand that does not change during the study period. Country-time fixed effects ( $u_{ct}$ ) capture factor prices and technology in exporting countries while controlling for the effect of COVID-19 in exporting countries. Product-time fixed effects ( $u_{pt}$ ) control for product-level demand sizes in Thailand in addition to the product-level effect of COVID-19. The error term is denoted as  $\epsilon_{cpt}$ . We estimate this equation using the OLS method.

Trade data for this study are sourced from the Global Trade Atlas (IHS Markit), using the data reported by Thailand. In our baseline analyses, all products are included as study

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<sup>8</sup> In this study, we exclude observations with zero-valued trade to manage computational challenges associated with the explosive increase in the number of observations. Our analysis is conducted monthly and covers all products defined at a eight-digit level, making the inclusion of such observations computationally unfeasible.



products. A data-related challenge arises from our study period, encompassing both the HS 2017 and 2022 versions. Trade values before 2022 are reported in the HS 2017 version, whereas those in 2022 and 2023 are reported in the HS 2022 version. Owing to the absence of a converter table between the two versions at an HS eight-digit level, we use the converter available at an HS six-digit level from the United Nations.<sup>9</sup> Subsequently, we define a product in fixed effects at the six-digit level of the HS 2017 version, noting that our estimation is conducted at the HS eight-digit level. The surveillance lists used in the analysis were obtained from the MoC in Thailand, as detailed in the previous section.

An important empirical concern is the potential presence of endogeneity, particularly the existence of reverse causality, where products with higher growth in exports to the US or EU may be selectively included in the surveillance lists. To address this issue, the selection of products in the surveillance lists should be discussed. These lists categorize products based on whether the US or the EU imposed antidumping measures against China or whether products are subject to Section 301 of the US Trade Act of 1974. The latter pertains to whether additional tariffs were imposed on China during the Trump administration. Products subjected to either of these measures are listed for surveillance. Consequently, we later narrow down our study products to only those falling under these categories. This restriction serves the dual purpose of addressing possible reverse causality and controlling for the substitution effects of these two measures on Thailand's exports to the US and the EU. In essence, it accounts for the scenario in which, in lieu of China, Thailand increases exports of products that the US or EU imposes as trade sanctions against China.

Before presenting our estimation results, we provide an overview of Thailand's trade. Figure 2 illustrates exports from Thailand to the US, distinguishing between listed (Treatment) and unlisted (Control) products. As outlined in Section 2, the product list undergoes continuous updates. However, for the purposes of this figure, a product is considered "listed" if it appeared in the lists for the US at least once during our study period. The export values are normalized to a value of one in December 2019, the time when the first list was released. After December 2019, exports of listed products to the US increase less than those of unlisted products. Conversely, before December 2019, exports of listed products increased more than those of unlisted products. Similarly, Figure 3 illustrates exports from Thailand to EU countries. Since 2021, exports of listed products have decreased, whereas those of unlisted products have increased slightly. Finally, Figure 4 depicts imports from China to Thailand, considering products as "listed" if they appeared in the lists for the US or EU at least once during our study period. Contrary to expectations, imports of listed products from China increase more than those of unlisted products.

=== Figures 2–4 ===

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<sup>9</sup> <https://unstats.un.org/unsd/classifications/Econ>

## 4. Empirical Results

This section presents our estimation results, with Table 1 displaying the outcomes of Equation (1), using the OLS method. Standard errors are clustered at the country-product (HS six-digit) level. In column (I), the coefficient for the *List* dummy is negative but statistically insignificant. As outlined in Section 2, more stringent surveillance measures were initiated in August 2022. To assess this additional impact, we introduce the interaction term of the *List* dummy with a dummy variable that takes a value of one after July 2022 (Aug2022). The results are reported in column (II), revealing insignificant coefficients for both the *List* dummy and its interaction term. These findings imply that, on average, the effect of surveillance on Thailand's exports to the US or EU is not statistically significant.

== Table 1 ==

Continuing our analysis, we aim to mitigate reverse causality and account for substitution effects by focusing on products subject to antidumping measures by the US or EU and/or additional tariffs imposed during the Trump administration. As demonstrated in the Appendix, these products are likely to be included in the surveillance list. Specifically, we narrowed down our study products to include only those meeting the following criteria: (i) products with a difference between the minimum and maximum rates of US tariffs against China from January 2018 to December 2019 greater than 20 percentage points (mean value of differences) or (ii) products subjected to antidumping measures by the US or EU against goods from China from January 2017 to January 2023. The results are presented in columns (III) and (IV) of Table 1, where the coefficients for *List* and its interaction term remain insignificant.

We proceed with various robustness checks to bolster the validity of our findings. Initially, we exclude China from our study countries, focusing on reexporting from China through Thailand. The results, presented in columns (I) and (II) of Table 2, remain statistically insignificant. Additionally, we extend our efforts to control for the impacts of COVID-19 in the export-destination countries. Although the common effects of this pandemic across industries have already been accounted for through country-time fixed effects, prior studies have highlighted divergent effects within industries (e.g., Hayakawa and Mukunoki, 2021). To address this, we introduce an interaction term involving the degree of strictness in lockdown orders and industry dummy variables (defined at an HS Section classification). The data on the degree of strictness were sourced from the COVID-19 Data Repository maintained by the Center for Systems Science and Engineering at Johns

Hopkins University.<sup>10</sup> The results, outlined in columns (III) and (IV) of Table 2, once again show no statistically significant effects.

=== Table 2 ===

Moreover, we introduce controls for changing demand in export-destination countries. Although our fixed effects manage national-level demand impact, individual products may experience diverse trends. To address this, we incorporate the logarithm of product-level imports from the world (*Total imports<sub>cpt</sub>*). To avoid simultaneity issues, we exclude Thai imports. Data availability depends on monthly import data from each country, so we calculate this measure for 40 countries.<sup>11</sup> The estimation results in columns (V) and (VI) reveal significantly positive coefficients for total logged imports, aligning with expectations. However, the *List* dummy and its interaction term remain statistically insignificant.

Up to this point, we have not distinguished between the surveillance lists for the US and the EU. In Table 3, we address this distinction. Surprisingly, we observe a clear contrast: a significantly positive effect on exports to the US and a significantly negative effect on exports to EU countries. Although we do not find a significant difference in each effect over time (i.e., interaction terms with Aug2022), these divergent outcomes between exports to the US and the EU, coupled with multiple EU countries in our observations, rendered the average effect insignificant in previous tables. The results indicate that surveillance reduced exports to the EU but increased exports to the US. Although the former aligns with our expectation, the latter poses an unexpected result, which we will further explore in the last part of this section.

=== Table 3 ===

Moving on, we proceed to estimate the import equation, i.e., Equation (2). The results for all products are presented in column (I) of Table 4, with a positive and insignificant coefficient. In column (II), we introduce the interaction term with Aug2022, which also exhibits an insignificant coefficient. Similar to the export equation estimation, we narrow down the study products to only (i) those with a difference between the minimum and maximum rates of US tariffs against China from January 2018 to December 2019 greater than 20 percentage points or (ii) those subject to US or EU imposed antidumping measures on goods from China from January 2017 to January 2023. The outcomes, detailed in columns (III) and (IV) of Table 5, again reveal insignificant coefficients.

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<sup>10</sup> <https://github.com/CSSEGISandData/COVID-19>. See also Dong et al. (2020).

<sup>11</sup> These countries are ARG, AUS, AUT, BEL, BRA, CAN, CHE, CHN, CIV, DEU, DNK, ESP, FIN, FRA, GBR, GRC, HKG, IDN, IND, IRL, IRN, ISR, ITA, JPN, KEN, KOR, LUX, MEX, MYS, NLD, NZL, PHL, PRT, RUS, SGP, SWE, TWN, USA, VNM, and ZAF.

=== Table 4 ===

Table 5 presents additional estimation results. Columns (I) and (II) incorporate the interaction term of the degree of lockdown orders' strictness with industry dummy variables to account for industry-level effects of COVID-19. Once again, the coefficients are estimated to be insignificant. In columns (III) and (IV), we factor in time-variant product-level export capacity in exporting countries by introducing the log of product-level exports to the world (*Total exports<sub>cpt</sub>*). To prevent the simultaneity issue, this variable excludes exports to Thailand. Despite the significantly positive coefficients for this export variable, *List*-related variables maintain insignificant coefficients. In summary, our findings imply that, on average, surveillance does not alter imports from China in Thailand.

=== Table 5 ===

Similar to the export equation, we distinguish between surveillance lists for the US and the EU. The estimation results are displayed in Table 6. In contrast to exports, *List*-related variables do not yield any significant results for imports from China.<sup>12</sup> In essence, imports from China have not undergone significant changes since the implementation of surveillance. Consequently, the impact on whether export circumvention to the US and EU markets has ceased or not remains unclear. Nevertheless, our findings indicate that Thailand experienced an increase in exports to the US and a decrease in exports to the EU. One plausible interpretation is that the scale of trade circumvention by Chinese exporters may not have been substantial enough to bring about significant alterations in Thailand's imports. The introduction of surveillance in Thailand enhances the credibility of Thai products, reducing inspection burdens at US customs compared with the pre-surveillance period. This enhancement might facilitate easier export of Thai products to the US market. Conversely, this enhanced credibility may not have a discernible impact on EU customs inspections, as export circumvention from China through Thailand has not posed a significant issue in the EU compared with the US. Consequently, stricter inspection measures on the Thai side decrease exports of high-risk circumvention products to the EU market by Thai firms.

=== Table 6 ===

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<sup>12</sup> These insignificant results persist even with the introduction of the interaction terms among List (US) \* List (EU) \* China to identify the products that coincide in the lists for both US and EU markets.

## **5. Concluding Remarks**

In this study, we empirically investigated how the strengthened surveillance of trade circumvention from China to the US and the EU in Thailand impacted Thailand's exports to the US and the EU, as well as imports from China. Utilizing monthly trade data in Thailand from January 2017 to April 2023, our analysis reveals a decrease in exports from Thailand to the EU but an increase in exports to the US. Importantly, it does not lead to a significant change in imports from China in Thailand. The observed increase in exports to the US may indicate enhanced export opportunities for Thai firms, possibly driven by the heightened credibility of Thai products in US customs. As of May 2023, the DFT is contemplating additional measures, such as introducing QR codes to certificates of origin and developing watermarks to enhance document authentication and deter counterfeiting. These measures are anticipated to provide further safeguards against trade circumvention.

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Table 1. OLS Results for Exports

	(I)	(II)	(III)	(IV)
List	-0.009 [0.069]	-0.031 [0.070]	-0.032 [0.069]	-0.043 [0.071]
List * Aug2022		0.096 [0.061]		0.047 [0.062]
Products	All	All	Restricted	Restricted
Number of obs.	5,780,704	5,780,704	3,957,681	3,957,681
Adj. R-squared	0.57	0.57	0.568	0.568

*Notes:* Estimation results were obtained using the OLS method. \*\*\*, \*\*, and \* denote statistical significance at 1%, 5%, and 10% levels, respectively. Standard errors clustered by country and product (a six-digit level of HS 2017) are shown in brackets. In all specifications, we control for country-time fixed effects, country-product fixed effects, and product-time fixed effects. The product-fixed effects are defined at the six-digit level of HS 2017. In column “Restricted,” we restrict study products only to (i) those where the difference between the minimum and maximum rates of US tariffs against China from January 2018 to December 2019 is greater than 20 percentage points or (ii) US or EU imposed antidumping measures on goods from China from January 2017 to January 2023.



Table 2. OLS Results for Exports: Robustness Checks

	(I)	(II)	(III)	(IV)	(V)	(VI)
List	-0.038 [0.070]	-0.048 [0.071]	-0.034 [0.070]	-0.046 [0.072]	-0.032 [0.082]	-0.037 [0.083]
List * Aug2022		0.043 [0.062]		0.057 [0.062]		0.023 [0.070]
ln Total imports					0.032*** [0.003]	0.032*** [0.003]
Exclude China	X	X				
Control COVID			X	X		
Number of obs.	3,827,512	3,827,512	3,856,242	3,856,242	2,367,874	2,367,874
Adj. R-squared	0.568	0.568	0.564	0.564	0.534	0.534

*Notes:* Estimation results were obtained using the OLS method. \*\*\*, \*\*, and \* denote statistical significance at 1%, 5%, and 10% levels, respectively. Standard errors, clustered by country and product (at a six-digit level of HS 2017) are shown in brackets. In all specifications, we control for country-time fixed effects, country-product fixed effects, and product-time fixed effects. The product-fixed effects are defined at the six-digit level of HS 2017. In this table, we restrict study products to (i) those where the difference between the minimum and maximum rates of US tariffs against China from January 2018 to December 2019 is greater than 20 percentage points or (ii) US or EU imposed antidumping measures on goods from China from January 2017 to January 2023. In columns (I) and (II), we exclude observations of exports to China. In columns (III) and (IV), we further control for the interaction terms of the degree of lockdown orders' strictness with industry dummy variables (defined at an HS Section classification).

Table 3. OLS Results for Exports: the US versus EU

	(I)	(II)	(III)	(IV)
List (US)	0.541*** [0.204]	0.555*** [0.205]	0.526** [0.217]	0.554** [0.217]
List (US) * Aug2022			0.059 [0.132]	0.006 [0.131]
List (EU)	-0.177*** [0.060]	-0.216*** [0.070]	-0.181*** [0.059]	-0.216*** [0.069]
List (EU) * Aug2022			0.02 [0.070]	-0.001 [0.081]
ln Total imports		0.032*** [0.003]		0.032*** [0.003]
Number of obs.	3,957,681	2,367,874	3,957,681	2,367,874
Adj. R-squared	0.568	0.534	0.568	0.534

*Notes:* Estimation results were obtained using the OLS method. \*\*\*, \*\*, and \* denote statistical significance at 1%, 5%, and 10% levels, respectively. Standard errors, clustered by country and product (at a six-digit level of HS 2017), are shown in brackets. In all specifications, we control for country-time fixed effects, country-product fixed effects, and product-time fixed effects. The product-fixed effects are defined at the six-digit level of HS 2017. In this table, we restrict study products to (i) those where the difference between the minimum and maximum rates of US tariffs against China from January 2018 to December 2019 is greater than 20 percentage points or (ii) US or EU imposed antidumping measures on goods from China from January 2017 to January 2023.

Table 4. OLS Results for Imports

	(I)	(II)	(III)	(IV)
List * China	0.114	0.107	0.084	0.082
	[0.075]	[0.078]	[0.079]	[0.082]
List * China * Aug2022		0.026		0.009
		[0.076]		[0.079]
Products	All	All	Restricted	Restricted
Number of obs.	5,230,768	5,230,768	3,596,727	3,596,727
Adj. R-squared	0.578	0.578	0.55	0.55

*Notes:* Estimation results were obtained using the OLS method. \*\*\*, \*\*, and \* denote statistical significance at 1%, 5%, and 10% levels, respectively. Standard errors, clustered by country and product (at a six-digit level of HS 2017), are shown in brackets. In all specifications, we control for country-time fixed effects, country-product fixed effects, and product-time fixed effects. The product-fixed effects are defined at the six-digit level of HS 2017. In column “Restricted,” we limit study products to (i) those where the difference between the minimum and maximum rates of US tariffs against China from January 2018 to December 2019 is greater than 20 percentage points or (ii) US or EU imposed antidumping measures on goods from China from January 2017 to January 2023.

Table 5. OLS Results for Imports: Controlling for COVID-19 and Total Exports

	(I)	(II)	(III)	(IV)
List * China	0.076 [0.078]	0.074 [0.081]	0.092 [0.077]	0.085 [0.079]
List * China * Aug2022		0.006 [0.079]		0.027 [0.078]
ln Total exports			0.025*** [0.002]	0.025*** [0.002]
Control COVID	X	X		
Number of obs.	3,563,946	3,563,946	2,951,430	2,951,430
Adj. R-squared	0.549	0.549	0.524	0.524

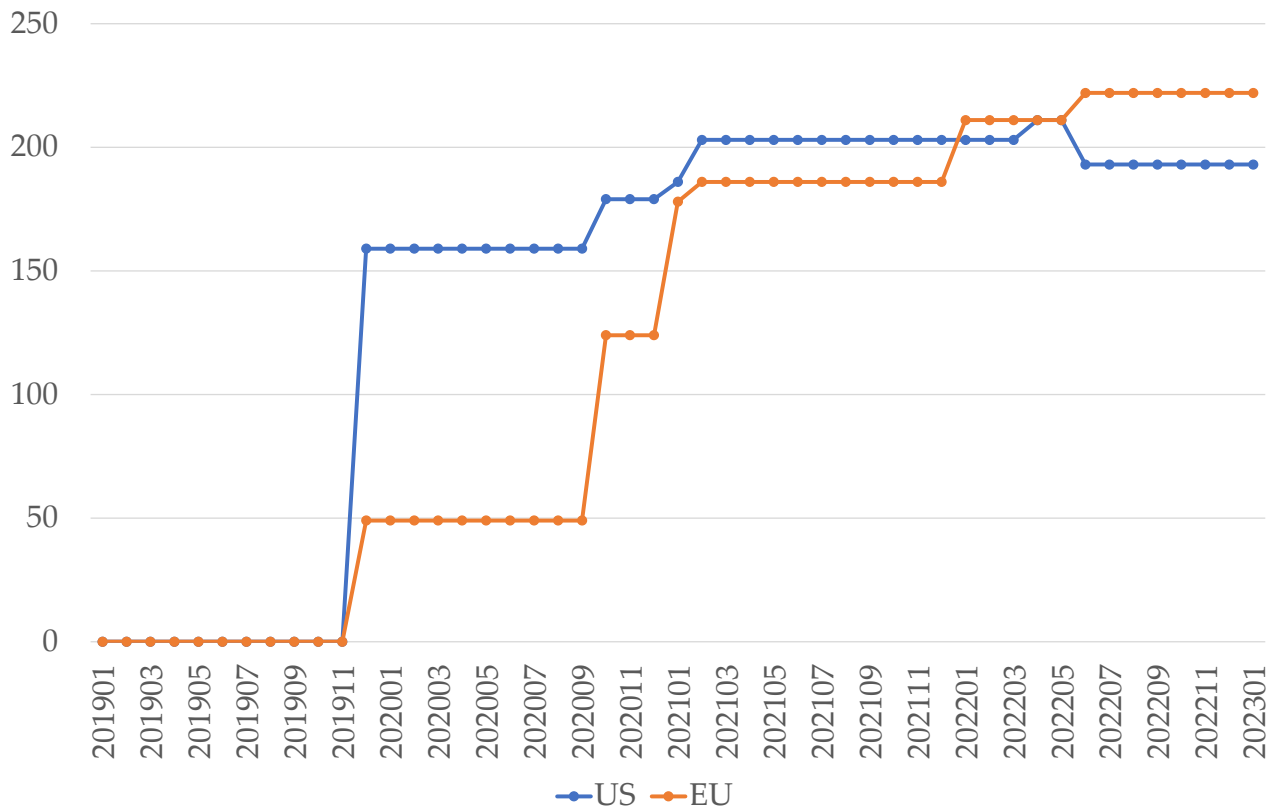
*Notes:* Estimation results were obtained using the OLS method. \*\*\*, \*\*, and \* denote statistical significance at 1%, 5%, and 10% levels, respectively. Standard errors, clustered by country and product (at a six-digit level of HS 2017), are shown in brackets. In all specifications, we control for country-time fixed effects, country-product fixed effects, and product-time fixed effects. The product-fixed effects are defined at the six-digit level of HS 2017. In this table, we limit study products to (i) those where the difference between the minimum and maximum rates of US tariffs against China from January 2018 to December 2019 is greater than 20 percentage points or (ii) US or EU imposed antidumping measures on goods from China from January 2017 to January 2023. In columns (I) and (II), we further introduce the interaction term of the degree of lockdown orders' strictness with industry (tariff section) dummy variables.

Table 6. OLS Results for Imports: the US versus EU

	(I)	(II)	(III)	(IV)
List (US) * China	0.107 [0.109]	0.112 [0.106]	0.082 [0.116]	0.083 [0.112]
List (US) * China * Aug2022			0.096 [0.092]	0.107 [0.090]
List (EU) * China	0.023 [0.071]	0.043 [0.072]	0.032 [0.073]	0.051 [0.073]
List (EU) * China * Aug2022			-0.043 [0.099]	-0.037 [0.097]
In Total imports		0.025*** [0.002]		0.025*** [0.002]
Number of obs.	3,596,727	2,951,430	3,596,727	2,951,430
Adj. R-squared	0.55	0.524	0.55	0.524

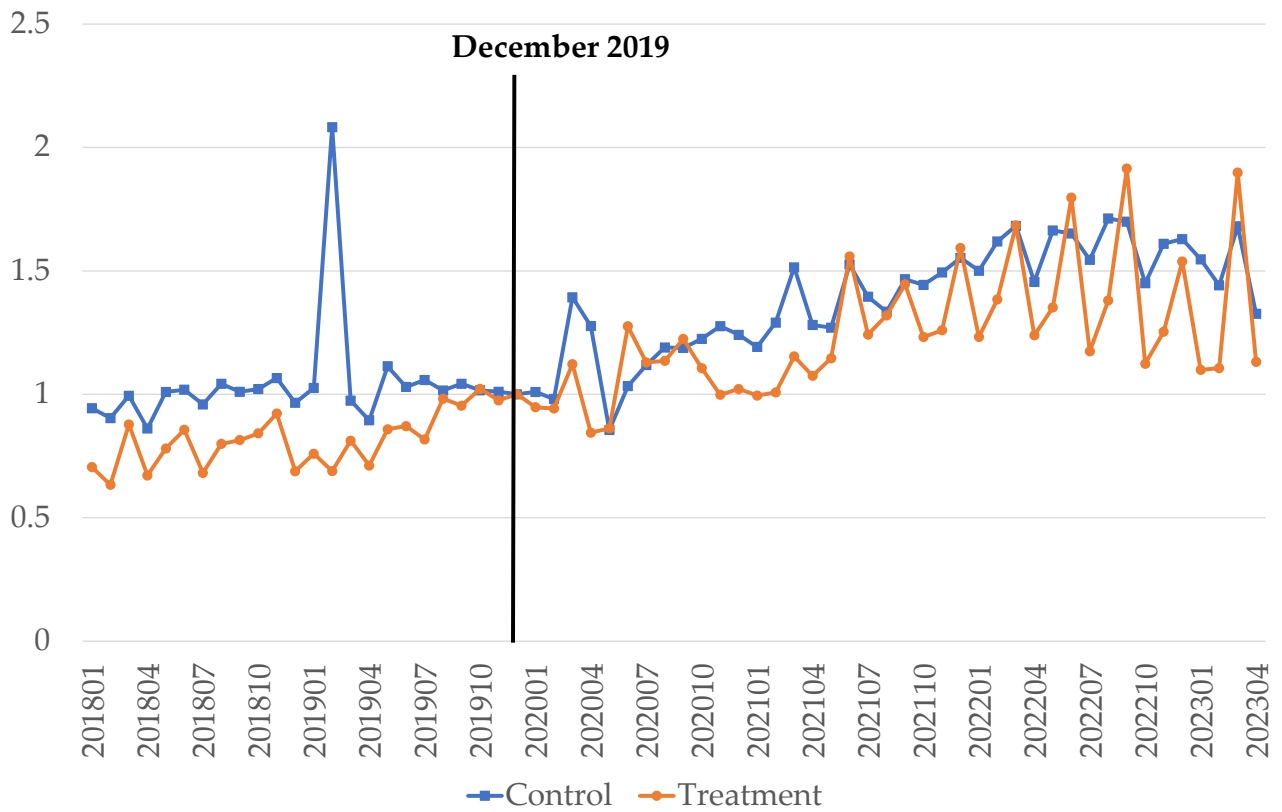
*Notes:* Estimation results were obtained using the OLS method. \*\*\*, \*\*, and \* denote statistical significance at 1%, 5%, and 10% levels, respectively. Standard errors, clustered by country and product (at a six-digit level of HS 2017), are shown in brackets. In all specifications, we control for country-time fixed effects, country-product fixed effects, and product-time fixed effects. The product-fixed effects are defined at the six-digit level of HS 2017. In this table, we restrict study products only to (i) those where the difference between the minimum and maximum rates of US tariffs against China from January 2018 to December 2019 is greater than 20 percentage points or (ii) US or EU imposed antidumping measures on goods from China from January 2017 to January 2023.

Figure 1. Number of Listed Products for the US and EU (HS 8-digit Level)



Source: Ministry of Commerce, Thailand

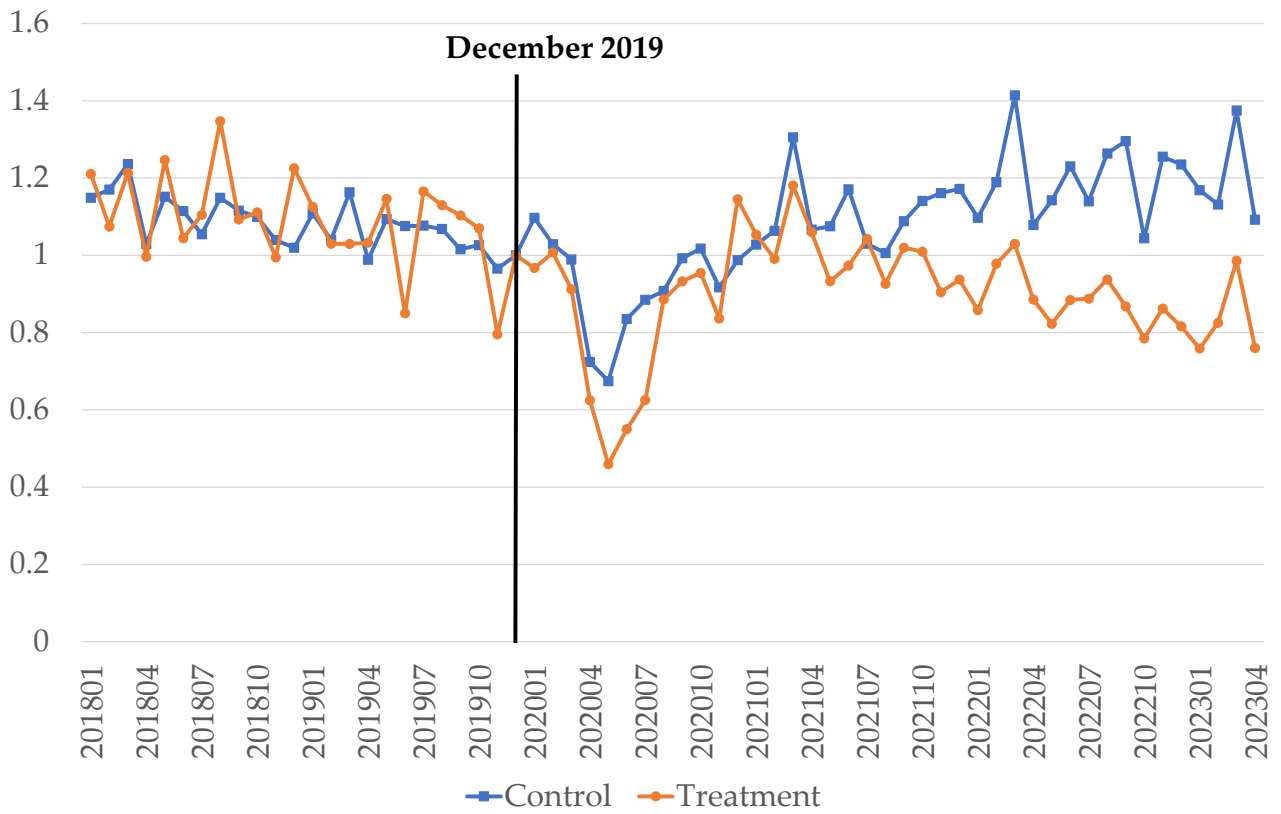
Figure 2. Exports from Thailand to the US (1 = December 2019)



Source: Authors' compilation using the Global Trade Atlas

Notes: Treatment includes products that were listed for the US at least once during our study period. The other products are included in "Control."

Figure 3. Exports from Thailand to EU Countries (1 = December 2019)

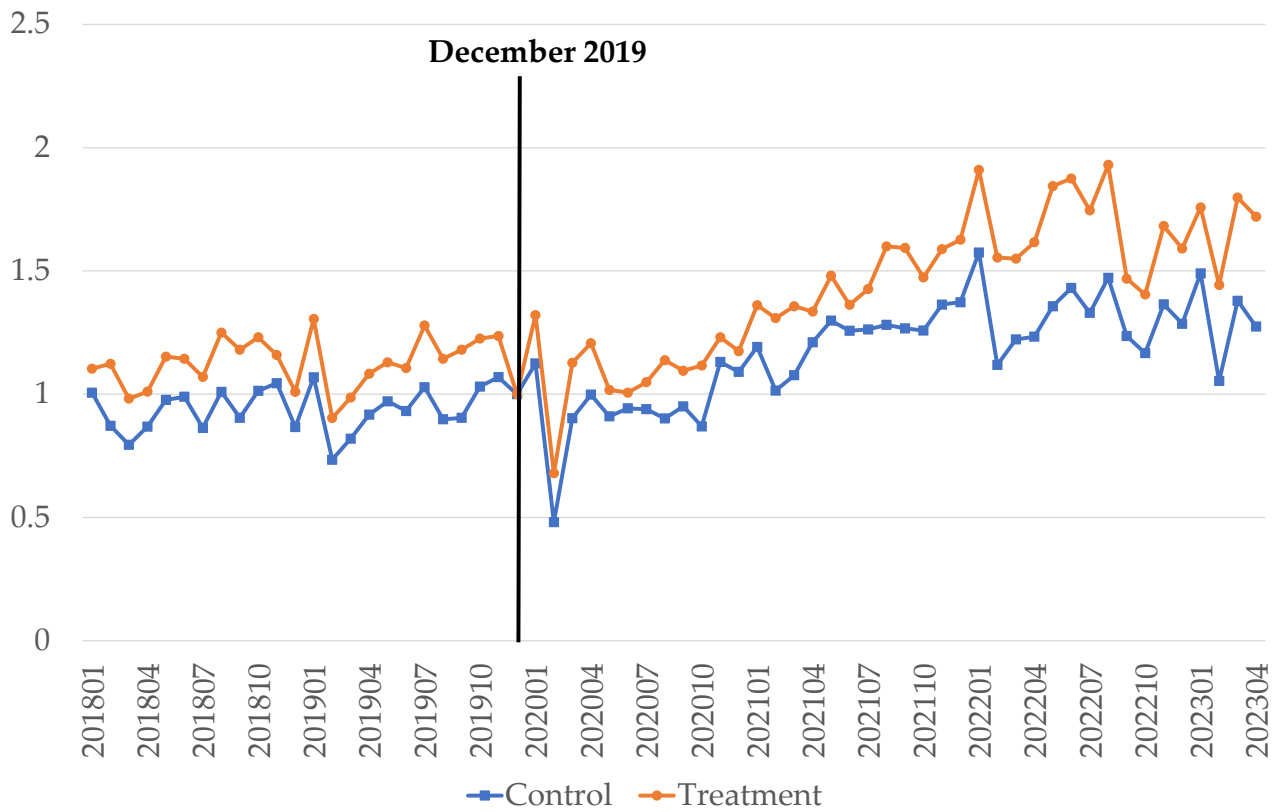


Source: Authors' compilation using the Global Trade Atlas

Notes: Treatment includes products that were in the EU list at least once during our study period. The other products are included in "Control."



Figure 4. Imports from China in Thailand (1 = December 2019)



Source: Authors' compilation using the Global Trade Atlas

Notes: Treatment includes products that were in the lists for the US or EU at least once during our study period. The other products are included in "Control."

## Appendix. Selection of Products in the Lists

In this Appendix, we provide empirical evidence illustrating that the products classified as “restricted” (i.e., those subjected to antidumping measures or additional tariffs by the US or the EU during the Trump administration) in our analysis are likely to be included in the lists. For this purpose, we estimate the following model separately for the cases of the US and the EU:

$$\begin{aligned} \text{US: } \Pr(\text{List}_p = 1 | \text{Change}_p, \text{Antidumping}_p) \\ = \gamma_1 \text{Change}_p + \gamma_2 \text{Antidumping}_p + \varepsilon_p \end{aligned} \quad (\text{A1})$$

$$\text{EU: } \Pr(\text{List}_p = 1 | \text{Antidumping}_p) = \delta \text{Antidumping}_p + \varepsilon_p \quad (\text{A2})$$

$\text{List}_p$  takes a value of 1 if product  $p$  is listed at least once during the study period, defined at the HS six-digit level. Thus, if any eight-digit codes are listed,  $\text{List}$  takes a value of 1 in the corresponding six-digit code.

The independent variables are as follows:  $\text{Change}_p$  is included only in the equation for the US and represents the difference between the minimum and maximum rates of US tariffs for product  $p$  imported from China from January 2018 to December 2019. The US tariffs against China are constructed using World Integrated Trade Solution data and the replication files of Fajgelbaum et al. (2020) for specific US tariffs.  $\text{Antidumping}_p$  takes a value of 1 if the US or EU imposed antidumping measures on goods from China from January 2017 to January 2023. The data on dumping are obtained from the I-TIP database developed by the World Trade Organization.<sup>13</sup> We estimate these equations using the Probit method.

The estimation results are detailed in Table A1, where columns (I) and (III) present findings for the US and EU, respectively. The coefficients for the  $\text{Antidumping}$  dummy are consistently and significantly positive in both columns. This suggests that products are more likely to be listed when the US or the EU imposes antidumping measures on those specific products from China. In column (I), the coefficient for  $\text{Change}$  is also significantly positive. Thus, the lists tend to include products with higher additional tariffs by the US against China. In column (II), we introduce a dummy variable that takes a value of 1 if  $\text{Change}$  is greater than 0.2, which is the average value of  $\text{Change}$ . This dummy also has a significantly positive coefficient. In sum, products are likely to be included in the list when the US or the EU enforces antidumping measures against China and/or imposes additional tariffs during the Trump administration.

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<sup>13</sup> <http://i-tip.wto.org/goods/Default.aspx>

Table A1. Selection of Listed Products: Probit Estimation

	(I)	(II)	(III)
	US	US	EU
Change	0.098*** [0.024]		
1 if Change > 0.2		0.013*** [0.003]	
Antidumping	0.146*** [0.028]	0.153*** [0.029]	0.174*** [0.046]
Number of obs.	5,387	5,387	5,387
Pseudo R-squared	0.107	0.103	0.079

*Notes:* Estimation results were derived using the Probit method, and the corresponding marginal effects are presented in this table. \*\*\*, \*\*, and \* indicate statistical significance at 1%, 5%, and 10% levels, respectively. Robust standard errors are enclosed in brackets. The dependent variable is an indicator variable focusing on listed products for the US in the column labeled “US” and for the EU in the column labeled “EU.” The variable “Change” represents the difference between the minimum and maximum rates of US tariffs against China from January 2018 to December 2019 (e.g., 0.2 for a 20-percentage point difference). The variable “Antidumping” is a dummy variable, taking a value of one if the US or EU imposed antidumping measures on goods from China from January 2017 to January 2023.