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Tariff Hikes, Importer Costs, and Tariff Avoidance: A Firm-Level Analysis

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Abstract

I examine the effects of tariff increases on the acquisition costs of importing firms and the relationship between importer cost structure and tariff avoidance. Tariffs aim to increase the financial burden on imports, encouraging buyers to focus on the domestic market. However, this approach is debated, as importers can often alleviate the impact of tariffs by shifting their supply chains to countries that are not subject to tariffs. Employing a difference-in-differences design with ordinary least squares estimation models and a logistic estimation model using Compustat North America and Import Genius Database on firm-level trade information from 2016 to 2020, I find that the acquisition costs of tariff-affected importer firms increase significantly after tariff imposition. Importer-trader firms are more likely to absorb the burden of the tariff increase. Furthermore, through an association analysis, I discover that importers with higher cost structures are more likely to avoid tariffs. These findings are crucial for trade policymakers as they provide valuable insights into the varied effects of tariffs on importer costs and how the cost structures of importers influence the likelihood of avoiding tariffs.

Keywords: Tariff, Tax, Cost, International Trade.

JEL: F23, F61, H26

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1. Introduction

In this study, I examine the impact of tariff increases on importer acquisition costs and the association between importer cost structures and tariff avoidance. The debate surrounding tariffs has intensified even further with the tariff increases imposed by the U.S. globally. Its main trading partners, such as the European Union (EU), China, and Japan, received tariff increases of 20%, 34%, and 24%, respectively (New York Times, 2025). The discussion regarding these policies focuses on two main areas. First, it is estimated that there will be a significant pass-through of tariffs to U.S. consumers. An additional 40 billion USD in costs will be passed on to consumers, which could notably impact inflation (Tax Foundation, 2025). Second, these tariff increases may provoke retaliation and a renewed trade war. China has already introduced a 15% tariff increase on American coal and liquefied natural gas and a 10% tariff increase on crude oil (Forbes, 2025), which is likely to cause significant disruptions to supply chains (PIIE, 2025).

I contribute to this debate by empirically studying the effects of a tariff hike on the cost structures of importer firms and their cost structures to avoid these tariffs. Tariffs are import taxes that increase the transaction costs of imported goods. Consequently, an effective trade policy that raises tariffs imposes an additional cost burden on importers sourcing from countries affected by the tariffs. This situation makes domestic supplies more affordable, prompting buyers to favor the domestic market (Johnson, 1965). However, global interconnectedness and the growing demand for imported goods lead importers to pivot toward countries unaffected by these tariffs, thereby quickly mitigating the impact of the tariffs. For instance, the tariffs imposed by the U.S. on China in 2018 and 2019 impacted around $250 billion in trade volume, with $183 billion redirected annually to other countries (Amiti et al., 2019).

Liang and Parkhe (1997) find that importer-driven decision-making, primarily

motivated by cost considerations, significantly influences trade transactions. While the supplier's product quality and proximity can influence firms' decisions regarding their supply base, sourcing costs remain critical in the decision-making process. Globally integrated networks allow for rapid access to alternative supply sources that are not subject to tariffs. This flexibility could potentially undermine the intended effects of tariff increases. On the other hand, business models that involve mid-term sourcing contracts may cause importers to hesitate before changing their supply sources immediately (Cannon et al., 2001; Grossman et al., 2024). Furthermore, the trade sensitivity to tariffs rises with the proportion of foreign value added, which pertains to the use of imported intermediate goods. This factor can also impact decision-making, as upstream industries are generally more susceptible to higher tariffs (Meinen, 2019). However, anecdotal evidence suggests that responses to tariffs can differ significantly among businesses.

Another way importers avoid tariffs is when exporters bear the burden of the tariffs imposed on their country. In this case, exporters lower their export prices. The more an exporting firm lowers its export prices, the more it bears the burden of the tariff cost out of its profit, and the more the tariff incidence falls on the exporter. Exporters may do this to sustain importer relations and keep their market share. They may also engage in entrepot trade, where goods are imported for re-export, utilizing unaffected countries as intermediaries to adjust the reported country of origin. Alternatively, they may perform minor processing that changes the classification of the exported goods to avoid tariffs (Hanson et al., 2001). Thus, the actual impact of tariffs on acquisition costs and tariff avoidance remains unclear.

In this study, I focus on the U.S. as an open and developed economy, using the 25% tariff increase imposed on the steel industry on March 23, 2018, as a case study to examine the effects of tariff increases on costs and tariff avoidance. Research indicates that during the 2018-2019 tariffs, there was nearly complete pass-through to the total cost of imports,

suggesting that the burden was borne by the U.S. importer rather than the exporter (Cavallo et al., 2021). However, they do not indicate how much the burden falls on the importing firm. I focus on two research questions: How does a tariff increase impact importers' acquisition costs at the firm level? Moreover, is the importer's cost structure associated with importers' tariff avoidance? These questions are essential for understanding the financial repercussions of tariff increases on importer firm behavior.

Addressing the first research question, I employ a difference-in-differences (DID) design with an ordinary least squares (OLS) estimation model to assess the impact of a tariff increase on firms' acquisition costs. The treatment group comprises US importer firms in the steel industry that import from tariff-affected countries. The control group comprises US importer firms in the steel industry importing from tariff-unaffected countries. I address the second question with an association analysis. I use a logistic model to test the association between importer cost structures and tariff avoidance through importers' supply base change. I use the same sample as for the first research question.

In additional tests, I examine how tariff increases affect acquisition quantities to isolate the price effect from the quantity effect. I also analyze the impact of tariff increases on importer acquisition costs and the association between the cost and tariff avoidance during an isolated short-term period after a specific adjustment time has passed, when a second wave of tariff increases occurs. In both analyses, I focus on importer heterogeneity, distinguishing between importers who are traders and importers who are producers. I utilize Standard & Poor's Compustat North America Database for financial data of importer firms and the Import Genius Database for importer firm-level information, including firm ID, transaction-based imported product descriptions, product codes (HS), and the relevant countries of origin.

Through this analysis, I contribute to the discussion on the effectiveness of trade policies through tariff increases in two aspects. First, I provide empirical evidence that the

price increase due to tariffs is heterogeneously reflected in the cost structure of firms that import from tariff-affected countries and only in the short term. I extend previous findings that importer firms bear the tariff burden (Ludema & Lu, 2016; Amiti et al., 2019; Cavallo et al., 2021) by empirically showing that only in the short term importer trader firms are more likely to bear the entire burden of tariffs compared to importer producer firms, while the significant difference in acquisition cost disappears after a certain time has passed. Second, tariff-affected importer firms with higher cost structures are more likely to avoid tariffs, regardless of their business model. These findings are gaining importance for trade policymakers as they offer valuable insights into the impact of tariffs on the acquisition cost of heterogeneous importers and the association between the cost structure and tariff avoidance during the ongoing debate on the firm-level consequences of tariff increases.

1.1 Literature Review

Tariff increases impact both macroeconomic and microeconomic factors and have important distributional consequences. They may affect output, productivity, employment (Furceri et al., 2019), supply chain management, and firm behavior (Benguria, 2023; Chea et al., 2019). This study contributes to two main strands of the literature: the international economics literature on the impact of tariff increases on microeconomic indicators and the supply chain management literature on importers' tariff avoidance through international sourcing behavior.

The first strand of literature mainly focuses on tariff pass-through effects on import prices and their aggregate impact on imports. Prior literature has found that tariffs can create an additional burden on importers, which is passed through to consumers through increased consumer prices. This creates inefficiency in the market through shifting supply from the efficient to the relatively inefficient supplier. The competitiveness of domestic producers is enhanced. However, international competitiveness may suffer due to price increases and

lower competitive pressure (Amiti et al., 2019; Benguria, 2023; Cavallo et al., 2019, 2021; Fajgelbaum, 2019).

Benguria (2023) empirically analyzes the behavior of firms after the increase in tariffs in the US and China. He finds that after a tariff increase, firms with export exposure to China experience a decline in their revenue, profits, and capital stocks, while firms having export exposure to the US benefit from the tariff increase. He also finds a reduction in Chinese demand for goods that form part of US firms' supply chains. He concludes that other supply chains are substituting for Chinese supply to the US, while reactions are highly heterogeneous across geographic regions and firms of different sizes. With my findings, I extend the results in the literature by comparing the impact of tariffs on the acquisition cost of importer firms from tariff-affected countries with those from unaffected countries.

The supply chain management literature within business administration is under-researched regarding tariffs. Chae et al. (2019) establish a theoretical framework for explaining the behavior of importers following a tariff increase. They argue that tariff increases are essential to firms' behavior concerning supply management decisions. Importers have certain motives that accelerate or curb a change in their behavior towards an established supply base. The motivation has several grounds. Tariff increases in international supply chains may impact supply base complexity (diversity) depending on the severity and uncertainty of the expected tariff increase, the number of suppliers, the relationships among these suppliers, and their geographical scope. These factors are moderated by the geographical scope of the tariff increase, the importer's dependency on the affected product (as measured by relative purchasing spend), and the product's supply risk. The more significant these characteristics are, the quicker firms adapt.

Similarly, Dong and Kouvelis (2020) emphasize that identifying new qualifying suppliers for many industries, such as the automotive industry, is time-intensive. Uncertain

tariff increases, especially, cause importers to be reluctant to change their supply base. On the other hand, Handley et al. (2024) find that tariff increases push importers out of the international supply chain network. Importers discontinue their relationship with existing suppliers unless the number of suppliers is limited. I contribute to this literature by demonstrating that importer firms with high pre-treatment cost structures are more likely to shift their supply bases towards tariff-unaffected countries, thereby avoiding the tariff increases imposed on their initial supply base. Overall, I address the relevance of microeconomic policy through importer acquisition cost at the firm level, as an outcome of the tariff increase, and the relevance of importer firm cost structures in tariff avoidance behavior.

2. Institutional Setting

2.1 Tariffs and the Tariff Incidence

Tariffs are collected at the customs, where the importer is responsible for payment. They can be imposed in three ways: (1) ad valorem, which is a percentage of the imported goods' value; (2) specific, which is a fixed amount per unit regardless of value; or (3) a combination of both methods. Generally, tariffs are applied at the 6-digit product level according to the Harmonized System (HS), but they can also be assessed at the 4-digit or 8-digit levels.

Globally, tariff rates are relatively low, especially in developed economies. For example, the Most Favored Nation (MFN) tariff rates in the European Union, Canada, Mexico, China, and Japan are 5.1%, 3.9%, 7.1%, 7.6%, and 4.3%, respectively (WTO, 2020). Tariffs can create burdens for exporting and importing firms in a trade relationship. The impact of tariffs depends on who bears the burden of the incidence (Fajgelbaum et al., 2019). If exporter firms lower their export prices, the incidence falls mainly on the exporter,

reducing the tariff increase that the importer faces. Conversely, if the export prices remain unchanged, the incidence falls on the importer, who bears the burden of the tariffs. Studies indicate that the tariff increases implemented in 2018 primarily affected importers (Amiti et al., 2019; Cavallo et al., 2021; Fajgelbaum, 2019). This impact persists even after a year (Amiti et al., 2020). Additionally, fluctuations in foreign exchange rates have had a minimal effect in offsetting the consequences of increased tariffs (Cavallo et al., 2021).

2.2 Severity and Uncertainty of the Tariff Increase

I focus on the 25% tariff increase in the steel industry, effective March 23, 2018. Historically, this is considered a high magnitude for tariff levels in the U.S. The countries initially affected by this tariff increase include Canada, Mexico, the European Union, Brazil, Argentina, Turkey, and Australia, all of which are major steel trading partners of the U.S. On May 17, 2019, the NAFTA countries — Canada and Mexico — were granted permanent exemptions from these tariff increases. Argentina, Brazil, and South Korea negotiated quantitative restrictions through quotas. These quantitative restrictions are not included in this study as they do not fall under the category of tariffs (Bown et al., 2021).

The U.S. steel industry is crucial for national economic development and security (Department of Commerce, 2018). The U.S. also relies heavily on steel intermediate goods in its manufacturing sector (ITC, 2021). The tariff increase was imposed under Section 232 of the U.S. Trade Expansion Act of 1962 to protect the industry, considering current and future national economic security requirements. The Department of Commerce (DoC) based its tariff increase on four main findings: (1) “imports in such quantities, as are presently found, adversely impact the economic welfare of the U.S. steel industry”; (2) “the displacement of domestic steel by excessive quantities of imports seriously weakens our [U.S.] internal economy”; and (3) “global excess steel capacity contributes to the weakening of the domestic economy” (DoC, 2018).

After a period of consistent trade policies, the increase in tariffs surprised firms that had established connections with suppliers in the countries affected by these tariffs. (Grossman et al., 2024). Furthermore, anecdotal evidence suggests that the tariff increase was unexpected and poorly justified (The Atlantic, 2018; BCG, 2019). In response, the Department of Defense (DoD) recommended refining these tariff increases, expressing concerns about the implications for bilateral relations with key allies that have been targeted (Department of Defense, 2018). Additionally, significant lobbyists raised concerns about potential retaliatory effects. For example, the Business Roundtable (2018) stated, "We urge the President not to take Section 232 action and, instead, develop a different approach to address global overcapacity of steel and aluminum that does not put the U.S. economy at such high risk." The debate over the justification for the tariff increases in the steel industry has generated considerable uncertainty regarding the timing and duration of the policy. Further uncertainties have arisen due to announced exemptions and the subsequent re-imposition of duties.

3. Hypothesis Development

3.1 Increase in Acquisition Cost after a Tariff Increase

Higher tariffs are associated with higher input costs for firms relying on international supply (CRS, 2020b). However, the actual severity of a tariff increase for an importing firm is associated with the amount spent on it, as it is part of the total cost of ownership of internationally acquired goods. The more the tariff incidence falls on the importer, accompanied by a large import value, the greater the absolute amount spent on tariffs, and the higher the total cost of ownership (Chea et al., 2019).

The total cost of ownership for acquiring international goods includes the purchase price, transportation, handling, and any applicable import duties and taxes necessary for

further processing the goods. Tariffs are an integral part of the transaction costs associated with international acquisitions, contributing to the overall cost of ownership when acquiring a product (CRS, 2020b). Import prices reflect tariffs because sectors that do not experience tariff increases maintain their price levels, while those subjected to tariffs see price changes (Amiti et al., 2019). Also, unanticipated tariffs can disrupt global supply chains, leading to renegotiation with initial suppliers or the search for replacements. This disruption can result in welfare losses due to changes in input sourcing and increased search costs (Grossman et al., 2024).

I hypothesize that as the severity of tariffs increases, the impact on acquisition costs for importers will become more significant. Consequently, I expect importers from tariff-affected countries to incur higher acquisition costs for goods than those from unaffected countries. Therefore, *Hypothesis 1 (H1)* is formulated as follows:

H1: The acquisition cost of firms importing from tariff-affected countries increases more than those importing from tariff-unaffected countries.

3.2 Tariff Avoidance

Following *H1*, I elaborate on the probability of tariff avoidance for importer firms importing from countries affected by tariffs. In this study, I refer to tariff avoidance achieved through supply base change from tariff-affected to tariff-unaffected countries. To address this, I briefly discuss the theoretical framework regarding the impact of tariff increases on the supply base complexity of importer firms developed by Chae et al. (2019).

According to this framework, the expected tariff increase affects the supply base complexity through certain moderating factors. The impact of the tariff increase on supply base complexity comes in the form of the adaptation speed to the new environment of

increased tariffs and new tie formation with new suppliers or old tie deletion. The significance of an expected tariff increase is influenced by its severity and the uncertainty surrounding its timing. The severity of the tariff increase is determined by two factors: the magnitude of the tariff and the dependence of importing firms on these imports. A higher tariff and greater dependency on imports signify a more severe impact. Timing uncertainty encompasses both the timing of the tariff imposition and its duration. Supply base complexity, on the other hand, refers to the number of suppliers, the relationships among these suppliers, and their geographical distribution. As the number of suppliers and the geographical spread increase, the complexity of an importer's supply base also grows. Moderating factors influencing the impact of a tariff increase on the supply base complexity are the geographical scope, the relative purchasing spent on the imported goods, and the supply risk. These factors affect importers' adaptation speed to the new tariff environment and thus their tie formation with new suppliers and tie deletion with old ones.

I extend this framework by incorporating two relevant components that are likely to influence the behavior of importer firms after a tariff increase. The first component is the tariff incidence, which influences the significance of the tariff increase. When the tariff incident primarily falls on the importer, the significance of the tariff increase is enhanced compared to the tariff incident when it mainly falls on the exporting firm. Therefore, within a trade transaction, this is likely to influence how a firm reacts to the tariff increase. The importer firm's cost structure is the second component I incorporate into the framework. Firms with high-cost structures are more likely to increase the complexity of their supply base after a tariff increase. I assume that, prior to a tariff increase, the supply base is optimally designed following the firm's cost structure. The decision-making agent, in this case, the importing firm, employs a rational purchasing strategy to minimize the total cost of ownership. The extended framework is depicted in *Figure 1*.

<Insert Figure 1 about here>

Chae et al. (2019) further introduce a matrix explaining how firms adjust their supply strategies when introducing a tariff increase. This matrix considers the severity and certainty of the tariff change as the main drivers of four scenarios of importer behavior in response to increased tariffs. The Tariff Severity and Timing Uncertainty Matrix on Supply Base Complexity is presented in *Table 1*.

<Insert Table 1 about here>

The theoretical framework outlines four scenarios of importer behavior in response to increased tariffs. The first scenario involves a "swift response," likely when the tariff increase is severe, and timing uncertainty is low. In this case, importers adapt quickly, abandoning old connections and forming new ones, thereby increasing the complexity of their supply base. The second scenario is referred to as "securing alternatives." This occurs under severe tariff increases with high timing uncertainty. Here, the adaptation speed is moderate; importers tend to keep their existing relationships while forming new connections, possibly including reshoring activities to their home country. This also increases supply base complexity. The third scenario describes a "deliberate response" under less severe tariff increases with low timing uncertainty. Supply base complexity decreases in this situation as importers make more cautious and strategic decisions. The fourth scenario is characterized by a "wait and see" approach, occurring with less severe tariff increases and high timing uncertainty (New York Times, 2019). In this instance, supply base complexity remains constant as importers opt to postpone significant changes.

The severity and uncertainty of the U.S. tariff increase in this study align with the "securing alternatives" scenario, indicating a moderate adaptation speed among importers. They are likely to maintain old relationships while forming new ones. However, the matrix

overlooks the relevance of the cost structure of importer firms. High-cost firms would be more likely to increase their supply base complexity to diversify the acquisition cost of ownership. I also introduce the term "supply base change," referring to a tariff avoidance strategy that involves switching from countries affected by tariffs to those unaffected by tariffs following a tariff increase. Therefore, *Hypothesis 2 (H2)* is formulated as follows:

H2: In an environment of severe and uncertain tariffs, tariff-affected importer firms with higher cost structures are more likely to be associated with tariff avoidance.

4. Data

The analysis utilizes financial and international trade data of U.S. importers in the steel industry from 2016 to 2020. This data is employed to empirically assess the effects of tariff increases on the acquisition costs faced by importers and examine how the high importer cost structure relates to tariff avoidance.

4.1 Collecting and Identifying Data

I collect quarterly financial data for U.S. firms from the S&P Compustat North America Database for the years 2016-2020. I narrow the dataset to include only U.S. firms operating in the steel industry, as defined by the 4-digit Standard Industrial Classification (SIC) codes. By focusing on publicly listed firms, I ensure data consistency and availability. Additionally, I gather information on importer firms, the countries they import from, and the products they import, categorized by 6-digit Harmonized System (HS) codes from the Import Genius Database. I also collect import quantity data from the ITC Trademap database. After matching all datasets, I compile a database containing 28,434 firm-year-quarter observations. Within this dataset, 1,266 firm-year-quarter observations pertain to importer firms, while 890 observations belong to treated firm-year-quarter observations. *Table 2* displays the number

of firm-year observations for importer firms, while *Table 3* provides a list of tariff-affected and tariff-unaffected countries.

<Insert Table 2 and Table 3 about here>

I use quarterly financial data at the firm level. The following variables are quarterly data in millions of USD from the Compustat Database: *Total Assets, Cash, Cost of Goods Sold, Total Inventory, Finished Goods Inventory, Raw Materials Inventory, Total Liabilities, Pre-Tax Income, and Sales*. I calculate the change in raw material inventory costs as the difference between the ending raw material inventory and the beginning raw material inventory (i.e., the ending raw material inventory of the same quarter in the previous year).

Raw materials account for approximately 75% of the production cost, energy costs comprise around 8%, and labor costs account for 7.5% of the total production cost in the steel industry (Constantine et al., 2016). Therefore, I estimate the raw material cost of sales to be 75% of the firm's cost of goods sold (*COGS*) value (*Raw Material Cost of Sales)*. Furthermore, to ensure comparability among analyzed firms, adjustments to their cost structures have been made according to whether their core business activity is 100% steel or involves other activities, as determined through publicly available information on the *COGS* value. I calculate *Acquisition Cost* as the difference between the *Raw Material Cost of Sales* and the change in *Raw Material Inventory*. I scale *Acquisition Cost* by total assets to make the variable comparable across firms. Total assets provide a reasonable estimate of firm size and show a smoother change across firms of varied sizes compared to total sales values. I winsorize the variable at a 99% level to adjust for outliers. Furthermore, I adjust each firm according to the intensity of steel raw material and intermediate goods production in their business activity. I calculate the *Acquisition Quantity* for each *Importer* by allocating the total quantity of product *h* in year-quarter *t* based on the share of each *Importer's Acquisition Cost*

in the total Acquisition Cost of product *h* in year-quarter *t*.

I identify *Importers* in the Compustat North America Database as importer firms according to the Import Genius Database for the year 2017. I calculate a producer ratio through a median split to differentiate between producers and traders. The split results in a ratio of at least 66% raw material and work-in-process inventory cost availability in the total inventory cost. Accordingly, I define *Producer* as an importer-producer firm that has at least 66% raw material and work-in-process inventory cost in total inventory cost. This approach enables me to analyze importer heterogeneity in cost and whether business structures influence supply chain management following a tariff increase.

HIT is the treatment variable, indicating an importer importing from a tariff-affected country, as shown in *Table 3*. *HIT2* is also a treatment variable, indicating an importer importing from a tariff-affected country, except for Canada and Mexico. *Tariff* is a time variable for the treatment and is set to the period after 2018Q2. *Tariff2* is a time variable for the treatment and is set to the period after 2020Q1. Variable definitions are provided in *Table 4*.

<Insert Table 4 about here>

Descriptive statistics concerning the employed variables in firm-year-quarter observations are provided in *Table 5*. Amiti et al. (2019) state that the relative price increase in the domestic market was the same magnitude as the tariff increases (10-30%), indicating a significant tariff pass-through to consumers and an overall increase in steel prices in the US market. Furthermore, despite the increase in importation costs, the evidence regarding its impact on domestic retail price increases is unclear, suggesting that domestic retailers have reduced their profit margins on selling the affected goods (Amiti et al., 2021). Therefore, I do not make inflation adjustments to steel prices.

<Insert Table 5 about here>

Figure 2 shows *Acquisition Cost* during the analysis period for importer firms that import goods from tariff-affected countries (treatment group) and the acquisition cost for importer firms that import from tariff-unaffected countries (control group). The solid reference line indicates when the tariff increase was enacted in March 2018. The dashed reference line indicates the end of the short-run period in the analysis. The spike immediately before the tariff increase is visible for importer firms that import from tariff-affected and tariff-unaffected countries. They likely increased their inventories before tariffs took effect, regardless of the country of origin, signaling uncertainty about the tariffs. They also began diversifying their supply chains away from affected countries, decreasing the portion of imports, especially from China, from 80-90% to 60-70% (Cavallo et al., 2021). A short-lived divergence in the acquisition cost of tariff-affected and tariff-unaffected importer firms is visible in 2019.

Figure 3 illustrates the Acquisition Cost of tariff-affected importer-producer firms (treatment group) and tariff-unaffected importer-producer firms (control group). The first solid reference line indicates the start of the treatment; the second dashed reference line marks the end of the short-run period. A similar trend is also visible here. There is a spike in acquisition costs immediately before introducing the tariffs for both groups. Tariff-affected importer-producer firms have a lower acquisition cost compared to tariff-unaffected importer-producers. There is a slight divergence in acquisition costs for importer-producers from tariff-affected and unaffected countries. However, it is less pronounced than importers in general in *Figure 2*.

<Insert Figure 2 and Figure 3 about here>

4.2 Limitations of the Data

The data provides two main limitations to the analysis. First, the sample size is small. It is the outcome of the clean matching of separate datasets. The second main limitation is the proxy for importers' international acquisition cost, which is the outcome variable for the first hypothesis test and the main variable of interest for the second hypothesis test. This variable is derived from the overall *COGS* of firms without being able to separate between domestic and international acquisitions. However, since a firm is likely to have a combination of domestic and international acquisitions, the variable is still a good proxy for a cost analysis affected by international tariff increases.

5. Empirical Analysis and Results

5.1 Impact of Tariff Increase on Importer Acquisition Cost

To test whether the increase in tariffs is reflected in importer firms' acquisition cost, *H1*, I use an ordinary least squares (OLS) difference-in-differences (DID) fixed-effects model.

$$AcqCost_{it} = \beta_0 + \beta_1 HIT_{ijht} + \beta_2 Tariff_t + \beta_3 HIT_{ijht} * Tariff_t + \sum Controls + \alpha + \lambda + \varepsilon_{it} \quad (1)$$

$AcqCost_{it}$ is the outcome variable that proxies for the firm-level acquisition cost. For firm *i,* it is the difference between the cost of sales of firm *i* and the change in firm *i's* inventory cost at time *t*. It is scaled by total assets. I take the logarithm of $AcqCost_{it}$ to account for heteroscedasticity in the data. Firm *i* is a US firm operating in the steel industry according to the 4-digit Standard Industry Code (SIC). The treatment variable is HIT_{ijht}. It is a dummy variable that takes the value of one when firm *i* is an importer and has imported product *h*

from at least one tariff-affected country *j* at time *t*. In all other conditions, it takes the value of zero. $Tariff_t$ is a dummy variable that takes the value of one in the year-quarter when country *j* has received a tariff increase and all subsequent year-quarters after. It takes the value of one starting with the second quarter of 2018 and zero otherwise. HIT_{ijht}*$Tariff_t$ is the interaction term and the variable of interest for the DID design. It receives the value one for importers importing from a tariff-affected country after the first quarter of 2018 and zero otherwise.

I distinguish between importer producers and international traders to account for firm heterogeneity. For that, I conduct a median split of the total sample of firms. The upper part of the sample has at least 66% raw material and work-in-process inventory costs in their total inventory cost, which I define as importer producers. I use a dummy variable, $Producer_i$, that takes the value of one when firm i has more than 66% raw material and work-in-process inventory costs in its total inventory cost, and zero otherwise. The firms that receive a value of zero are assumed to be traders. This differentiation helps to capture firm heterogeneity, the likely relevance of business models, and supplier relations concerning the firm cost structure after tariff increases. I extend model (1) to include *Producer,* which is given below.

$$AcqCost_{it} = \beta_0 + \beta_1 HIT_{ijht} * Producer_i + \beta_2 Tariff_t + \beta_3 HIT_{ijht} * Producer_i * Tariff_t + \sum Controls\ \alpha + \lambda + \varepsilon_{it} \quad (2)$$

The treatment variable in this regression is HIT_{ijht}*$Producer_i$. It takes the value of one if the firm importing from a tariff-affected country is a producer. HIT_{ijht}*$Producer_i$ *$Tariff_t$ is the variable of interest in this DID model. It takes the value of one when the importing firm is a producer and imports from a tariff-affected country after tariffs have been imposed, and zero otherwise.

I use firm control variables (*Cash, Total Sales, and Total Liabilities)* as used in similar literature (Benguria, 2023), eliminating those I have used to calculate the outcome variable ($AcqCost_{it}$). I use group fixed effects at the sub-industry and country levels, denoted α. Since they capture the invariant effects of country and industry, I do not use further industry and country control variables. I cluster at the firm level, denoted γ. The error term ε_{it} captures unobserved variables that might impact firms' acquisition costs after a tariff increase.

Table 6 provides the short-run impact of tariff increases on importer acquisition cost, which is limited to one year (2018Q2-2019Q2). Columns (1) and (2) provide the results for the impact of tariff increases on the acquisition costs of importers in general, first without and then with firm control variables. Column (2) indicates a 28,0% increase in acquisition cost in the short run. Columns (3) and (4) incorporate firm heterogeneity, including importer-producer firms, first with and without control variables. We see that while a tariff increase does not increase the acquisition cost of importer producers, it significantly increases the cost of traders (35,4%). Thus, the positive coefficient in column (2) is driven by the increasing cost of international traders. This indicates that traders are likely to bear the cost burden of a tariff increase in the short run, while producers prefer not to bear this burden. Traders are likely to have a higher inventory turnover than producers, which may explain their willingness to bear the cost in the short run.

<Insert Table 6 about here>

Table 7 provides the same analysis results with an extended post-treatment period covering one and a half years (2018Q2-2020Q4). This is to see whether there is an adjustment to the new tariff environment. During this time, the main trading partners (Canada and Mexico) received an exemption in 2019. Therefore, I replace HIT_{ijh} *with* $HIT2_{ijh}$, excluding Canada and Mexico. My analysis includes regression models first without control variables and then with

control variables. Columns (2) and (4) indicate a positive and significant coefficient. However, the coefficient's magnitude and significance have declined (17,6% and 34,2%). Therefore, I infer that even though there is an adjustment to the tariff increase, the acquisition cost of importer firms affected by tariff increases is significantly higher in the mid-run compared to those unaffected by the tariff increase. I find support for *H1* for importer firms in general. However, the increase in importer acquisition cost is driven by traders; the acquisition cost of importer producers does not increase in the mid-run as well. Thus, *H1* does not hold for importer producers.

<Insert Table 7 about here>

5.2 Association between Importer Cost Structure and Tariff Avoidance

I test the second hypothesis, *H2*, to determine whether there is an association between importer cost structure, proxied by the acquisition cost, and tariff avoidance. I construct the following binary logistic regression model.

$$TariffAvoid_{ijht} = \beta_0 + \beta_1 HIT_{ijht} + \beta_2 AcqCost_{i2017Q4} + \beta_4 HIT_{ijht} * AcqCost_{i2017Q4} + \sum Controls + \varepsilon_{ijht} \quad (3)$$

The model analyzes whether there is a likelihood of attenuation of the trade policy through tariff avoidance of importers with higher pre-treatment acquisition cost levels. The sample is the same as used in previous models. The binary outcome variable is tariff avoidance (*TariffAvoid$_{ijh}$)*. The supply base change of an importing firm from a tariff-affected country to a tariff-unaffected country proxies for tariff avoidance. It is a dummy variable that takes the value of one when there is a switch for importer *i* importing a product at the 6-digit HS code level *h* from a tariff-affected country to a tariff-unaffected country *j* during the entire period

of 2016-2020. When the importer does not switch to a tariff-unaffected country, switches to another tariff-affected country, or stops importation completely, the variable takes a value of zero. As in the previous model, importer *i* is a US importer in the steel industry, according to SIC.

I use $AcqCost_{i2017Q4}$ to capture the pre-treatment acquisition cost of importers. The acquisition cost of an importer firm is fixed at the pre-treatment period (2017Q4) in model (3). Accordingly, $AcqCost_{i2017Q4}$ is the acquisition cost of importer *i* at year 2017, quarter 4 for all subsequent quarter-years. HIT_{ijht} is a dummy variable that takes the value of one when firm *i* is an importer and has imported product *h* from at least one tariff-affected country *j* at time *t*. In all other conditions, it takes the value of zero. The variable of interest is the treatment variable, HIT_{ijht}*$AcqCost_{i2017Q4}$. It is the pre-treatment acquisition cost of the treated importer *i* that imports from a tariff-affected country in the year 2017, quarter 4, fixed for all subsequent quarters.

As in the previous model, I use a median split according to the intensity of raw material and work-in-progress goods in total inventory (66%) for the variable $Producer_i$ to account for importer heterogeneity. The model with the variable $Producer_i$ is provided below.

$$TariffAvoid_{ijht} = \beta_0 + \beta_1 HIT_{ijht} + \beta_2 AcqCost_{i2017Q4} * Producer_i + \beta_4 HIT_{ijht} * AcqCost_{i2017Q4} * Producer_i + \sum Controls + \varepsilon_{ijht} \quad (4)$$

Table 8 presents the results of the logistic regression model for the short-run impact. Columns (1) and (2) incorporate all importers first without control variables and then with them. Columns (3) and (4) present the results for importer producers, both with and without control variables. In the short run, there is a significant association between the acquisition cost of importer firms and tariff avoidance through changes in their supply base, as they shift

away from tariff-affected countries after the imposition of tariffs, both for importers in general and import-producing firms. I then test the same impact in the mid-run. *Table 9* presents the results of the association between the acquisition cost of importer firms and tariff avoidance during the mid-run. Columns (1) and (2) present the association results for general importers, both with and without control variables. Columns (3) and (4) show the association results for importer producers with and without control variables. The results indicate a significant association between importer firms' acquisition cost and tariff avoidance in the mid-run for both importers and importer producers. Overall, I find support for *H2*.

<Insert Table 8 and Table 9 about here>

6. Additional Tests

In additional tests, I first analyze the impact of tariff increases on the acquisition quantity of importers. This isolates the price outcome from the quantity and provides more accurate inferences about the impact of an exogenous tariff increase on cost. I employ equations (1) and (2) with a DID design. The sample is the same as in previous models. The treatment group consists of importers who import goods from countries affected by a tariff increase, and the control group comprises importers who import goods from countries unaffected by a tariff increase. I employ the outcome variable $AcqQuant_{ihj}$. I take the logarithm of the variable to account for heteroskedasticity in the data. Since the Import Genius database does not provide firm-level import quantities, I match the integrated Compustat and Import Genius datasets with the International Trade Center (ITC) Dataset, TradeMap, which provides quarterly import quantity information for 6-digit Harmonized System (HS) product codes. I match the data by product HS codes for the investigated period, 2016Q1-2020Q4. Accordingly, $AcqQuant_{ihjt}$ is the allocated import quantity in tons for importer *i* for product *h* from country *j* in year-quarter *t.* Importer *i* is a US importer firm in the steel industry, according to the 4-digit SIC. Product *h*

is a product with a 6-digit HS code, and country *j* is the country from which product *h* is imported. For the allocation of the import quantity for each importer firm *i*, I calculate the total import quantity of each product h in each year-quarter t and allocate it to importer firm i according to the share of firm i's acquisition cost in the total acquisition cost for product *h* in year-quarter *t*. I allocate the quantities for the year-quarter period from Q12016 to Q42020.

The results are provided in *Table 10.* Columns (1) and (2) provide the coefficients for the impact of tariff increases on importer firms' acquisition quantity, first without control variables and then with. Columns (3) and (4) incorporate importer firm heterogeneity, along with producer and trader differentiation, both without and with control variables. None of the columns indicate a significant change in the acquisition quantity for importers from tariff-affected countries compared to those from unaffected countries in the short term. For importing firms, the increase in acquisition costs is not reflected in the quantities in the short run. However, there is a higher decline in the acquisition quantity for importer producers. This aligns with *H1*. I infer that the insignificant effect of tariff increases on acquisition quantity indicates that the tariff increase is reflected in the acquisition cost, without firm heterogeneity, in the short run. The same results hold for importer producers and international traders.

I conduct the same analysis for the mid-run. Due to the exemption of Canada and Mexico, I again replace HIT_{ijh} *with* $HIT2_{ijh}$, excluding Canada and Mexico. The results are presented in *Table 11*. As in previous tables, Columns (1) and (2) provide the coefficients for the impact of tariff increases in importer firms' acquisition quantity, first without control variables and then with. Columns (3) and (4) incorporate importer firm heterogeneity with producer and trader differentiation, first without control variables and then with. According to the results, we do not observe any significant difference in acquisition quantity or in acquisition cost. However, column (4) shows a significant decrease in the acquisition quantity for importer producers, aligning with *Table 7*, which reflects importer heterogeneity concerning their reaction to a tariff

increase. I infer that the tariff burden is reflected in the acquisition cost of importers without firm heterogeneity in the mid run, as well.

<Insert Table 10 and Table 11 about here>

Due to the heterogeneity in acquisition costs for traders and producers, I test the impact of a high inventory turnover rate on acquisition costs. For that, I make an association analysis between the acquisition cost of importers and a high inventory turnover rate. *Table 12* shows the results. I use $AcqCost_{it}$ and $\%\Delta AcqCost_{it}$ as the dependent variables. I incorporate $\%\Delta AcqCost_{it}$, the percentage change in $AcqCost_{it}$ for firm i at time t, to examine the impact of high inventory turnover on the magnitude of importers' acquisition costs and the change in these costs. In both variables, firm *i* is a U.S. firm operating in the steel industry, as classified by the 4-digit Standard Industrial Classification (SIC). I again replace HIT_{ijh} *with* $HIT2_{ijh}$, excluding Canada and Mexico, because I analyze the mid-run. The variable of interest, $H\_InvTurnover_{it,}$ is the upper part of the median split of importer firms' ratio of the cost of sales of firm *i* divided by the average total inventory of firm *i.* It takes the value of one when importer *i* importing from a tariff-affected country has a high inventory turnover rate and zero otherwise.

Columns (1) and (2) show the results with the dependent variable $AcqCost_{it,}$ without and with control variables; Columns (3) and (4) show the regression results with the dependent variable $\%\Delta AcqCost_{it,}$ without and with control variables. In all four columns, I distinguish between importer producers and international traders. Accordingly, a high inventory turnover ratio is significantly associated with reduced traders' acquisition cost levels and the change in acquisition cost. At the same time, it is significantly associated with an increase in producers' change in acquisition costs. This likely explains the heterogeneity in the impact of tariffs on traders' and producers' acquisition costs. Traders with higher inventory turnover have more ability to bear the burden of the tariff increase.

<Insert Table 12 about here>

I also conduct additional tests on the impact of tariff increases on importer acquisition cost, isolating a short-run period one and a half years after the first wave of a tariff increase to analyze a separate period when a specific adjustment time has passed. This period also includes a second wave of tariff increases in the steel industry, which took effect on February 8, 2020. I employ equations (1) and (2). I replace HIT_{ijht} with $HIT2_{ijht}$ and $Tariff_t$ with $Tariff2_t$. $Tariff2_t$ takes the value of one beginning in the first quarter of 2020 and zero during the previous period.

The results are provided in *Table 13.* According to the results, there is no significant difference in the acquisition cost of importers from tariff-affected countries compared to importers from tariff-unaffected countries after the implementation of increased tariffs. These results diverge from the first wave of tariff increases, where a significant increase in acquisition costs is observed in the short run. Similar results are tabulated in *Table 14*. Here, I examine the short-run impact of second-wave tariff increases on importer acquisition quantity, isolating the price effect from the overall value. The table shows no significant difference between importer firms importing from tariff-affected countries and those importing from tariff-unaffected countries. There is no importer heterogeneity, either. This implies that importer firm heterogeneity becomes apparent only immediately after tariff increases occur.

<Insert Table 13 and Table 14 about here>

Lastly, I test for the association between importer acquisition cost and tariff avoidance for the isolated post-treatment period, one and a half years after the tariff increase. As mentioned, this period also includes a second wave of tariff increases. For that, I employ the logistic regression model (3) and (4). I replace $HIT1_{ijht}$ with $HIT2_{ijht}$, which excludes Canada and Mexico, and $Tariff_t$ with $Tariff2_{t,}$ which takes the value of one in the first quarter of 2020 and all subsequent years, zero otherwise. The results are provided in *Table 15.* They indicate a positive and significant association between pre-treatment importer acquisition cost and tariff avoidance, even after one and a half years of post-tariff increases, for both importers in general and importer producers. Importers with higher pre-treatment acquisition costs continue to change their supply base even after a specific adjustment time has passed.

<Insert Table 15 about here>

7. Conclusion

In this analysis, I examine the impact of tariff hikes on importer acquisition costs and the association between importer cost structure and tariff avoidance. The effects of tariffs on integrated supply networks are a topic of considerable debate. Importing firms can easily switch to countries unaffected by tariffs rather than relying on the domestic market, effectively mitigating the impact of tariff increases. I focus on two hypotheses: (1) that a tariff increase will likely result in higher acquisition costs for importers, and (2) that the higher cost structure of importers is associated with tariff avoidance. This switch to a tariff-unaffected country, rather than relying on the domestic market, mitigates the impact of the trade policy that involves a tariff increase.

To test the hypotheses, I utilize two different databases: Compustat North America and Import Genius Database, which provides firm-level trade data. This allows me to create a unique dataset incorporating firm financial data and international trade information at the

firm level. The observation level is at the firm-year-quarter level from 2016 to 2020. I employ the ordinary OLS fixed effects regression model for a DID design to test the first hypothesis, *H1*, which examines the impact of tariff increases on importer acquisition costs. Results indicate that, in the short run, severe and uncertain tariff increases lead to a rise in the acquisition costs for importing firms at the tariff level. The elevation is lower in the mid-run. Traders bear the burden of severe and uncertain tariff increases. Importer-producer firms are less affected. Overall, I find support for *H1*.

I use a logistic regression model to test *H2*, whether the higher cost structure of firms importing from tariff-affected countries is associated with tariff avoidance in an environment of severe and uncertain tariff increases. Results indicate a significant association between importer firms with higher cost structures and tariff avoidance. This finding holds for importer firms in general and importer-producer firms specifically. Finding support for *H2.*

In additional tests, isolating acquisition quantity from cost, I find no significant increase in the acquisition quantity for importers. However, there is a significant decrease in the acquisition quantity of importer-producer firms. The results for acquisition cost and quantity indicate that the rise in acquisition costs is due to the tariff burden reflected in the price and borne by the importer. Moreover, a higher inventory turnover ratio is associated with lower acquisition costs for international traders, providing greater flexibility to absorb the burden of tariffs. Conversely, this does not apply to importer-producer firms.

In further tests, I separate a one-year period, one and a half years after introducing the tariff, to isolate the impact of tariff increases after sufficient time for adjustment has passed. This period also covers the introduction of a second wave of tariffs. During this period, importers have primarily adjusted their supply bases, with no significant increase in acquisition costs and no heterogeneity among importers. However, the association between importer cost structure and tariff avoidance continues during the isolated short-run period.

Overall, I provide evidence that severe and uncertain tariffs are reflected in importers' cost structures. In the short run, the tariff incidence falls entirely on importer firms. I also demonstrate that tariffs affect the acquisition costs of international traders and import-producing firms differently, highlighting the importance of distinct supplier relationships. Furthermore, I provide evidence that importers with higher cost structures are more likely to avoid tariffs. These findings provide policymakers with significant insights, revealing that the success of tariff increases depends not only on tariff levels and the countries to which they are applied but also on the importer's business model and cost structure, as reflected in their acquisition costs.

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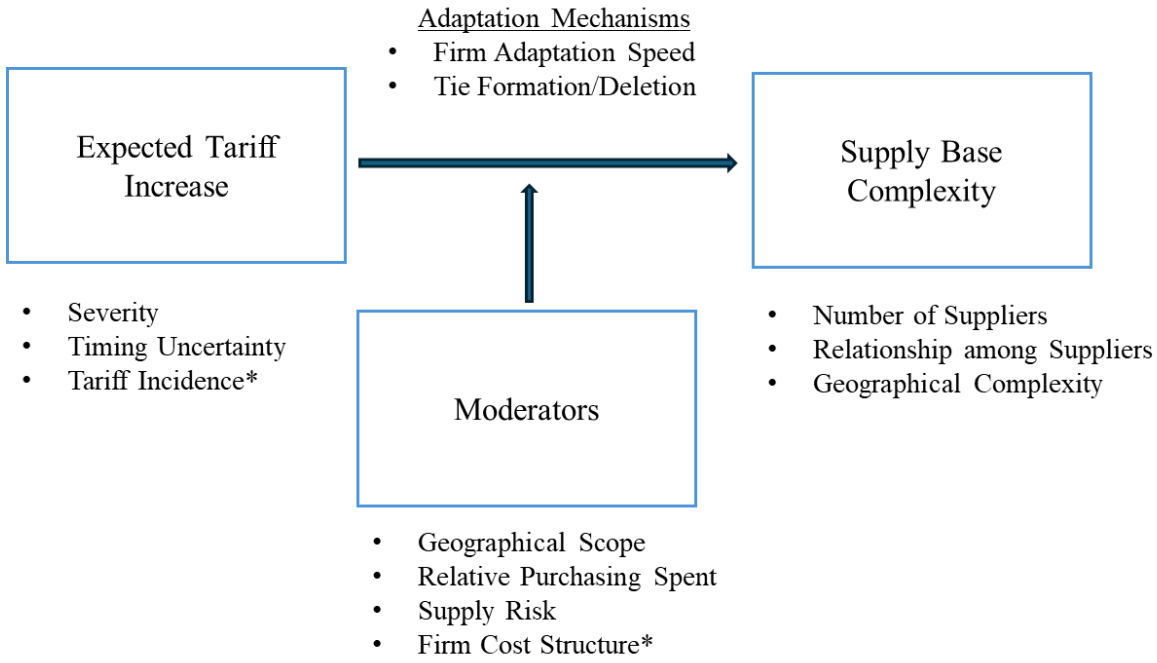
9. Appendix A

Figure 1

Theoretical Framework for Supply Base Change After a Tariff Increase

This figure illustrates the extended theoretical framework proposed by Chae et al. (2019), which the author of this study builds upon. The framework identifies the relationship between the aspects of a tariff increase (severity, timing uncertainty, and tariff pass-through) and the aspects of a supply base complexity (number of suppliers, the relationship among suppliers, and geographical complexity) with moderating factors (geographical scope, relative purchasing spend, and supply risk) that affect importer reaction to the tariff increase.



Chae et al., 2019.
*Extended

Figure 2

Acquisition Cost for Importer Firms

This graph depicts the acquisition costs of tariff-affected importer firms and those of tariff-unaffected importer firms. The acquisition cost is scaled by total assets, and the logarithm is taken. The first reference line indicates the time of introducing the tariff increase at the end of the first quarter of 2018. The second dashed reference line indicates the end of the short-run period analyzed in this study.

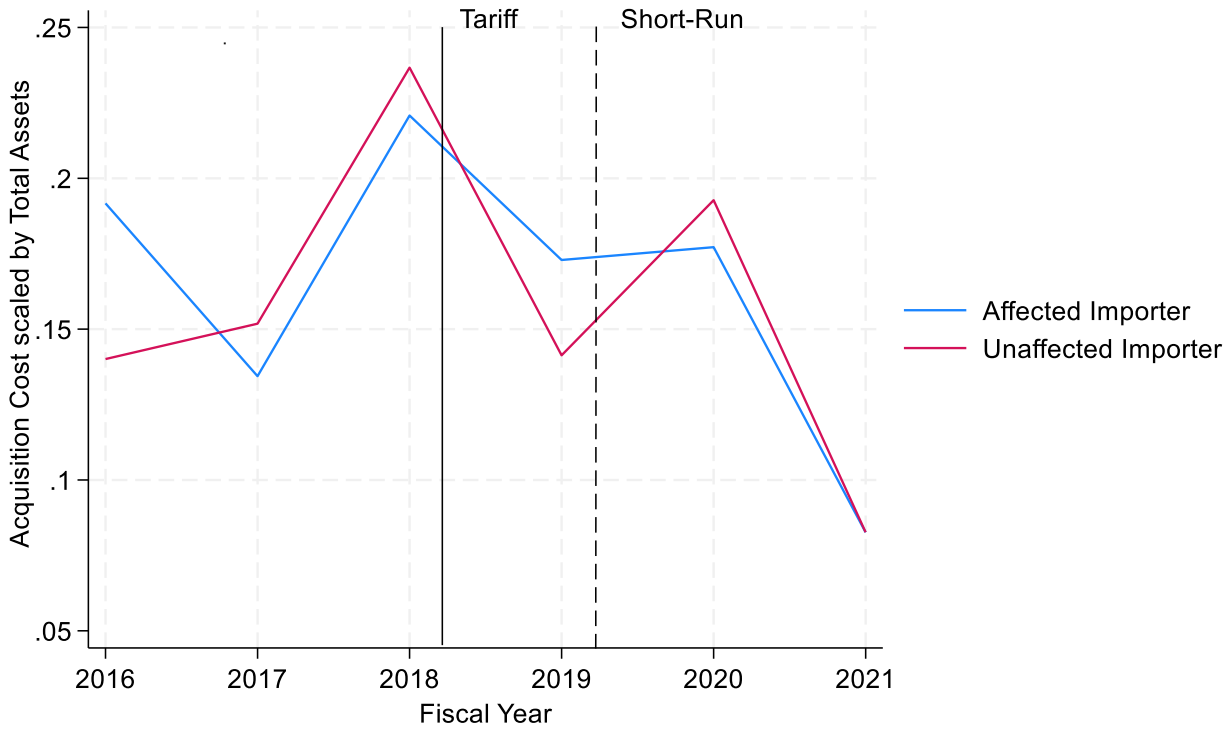
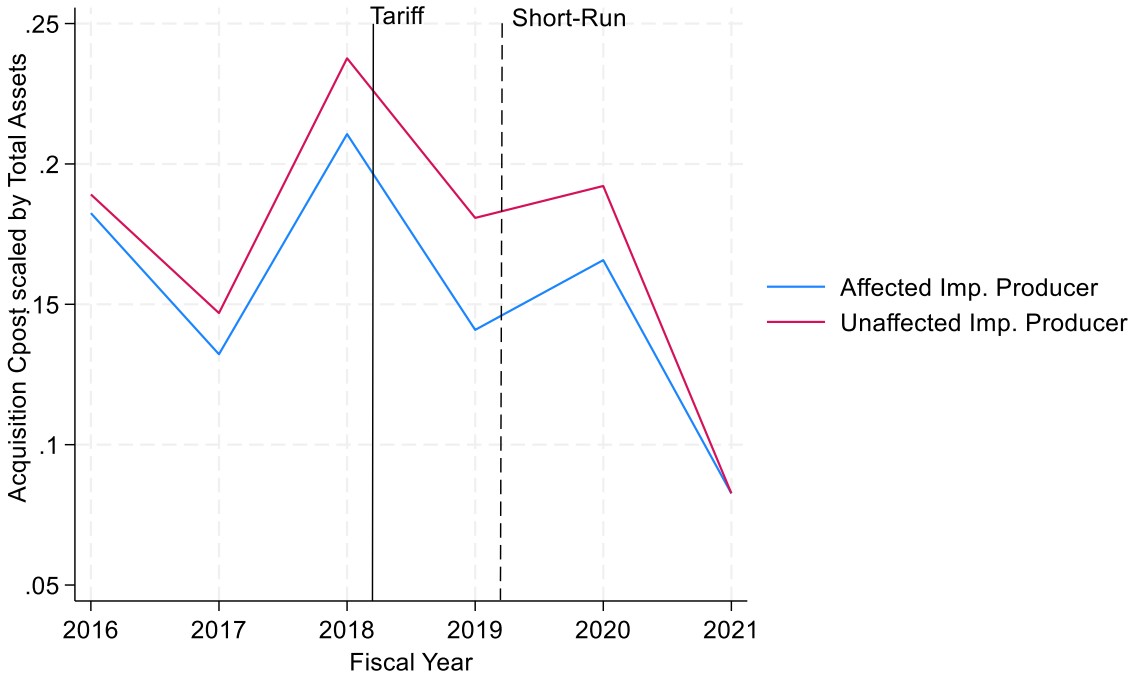


Figure 3:

Acquisition Cost for Importer Producer Firms

This graph depicts tariff-affected importer-producer firms' acquisition costs and tariff-unaffected importer-producer firms' acquisition costs. The acquisition cost is scaled by total assets, and the logarithm is taken. The first reference line indicates the time of introducing the tariff increase at the end of the first quarter of 2018. The second dashed reference line indicates the end of the short-run period analyzed in this study.



10. Appendix B

Table 1

Tariff Severity and Timing Uncertainty Matrix on Supply Base Complexity

This table illustrates importers' responses to anticipated tariff increases, which may lead to adjustments in the complexity of their supply base, as explained in Figure 1. The reaction to form or change importer supply base complexity depends on whether the expected tariff increase is severe or mild and has high or low timing uncertainty.

		TIMING UNCERTAINTY (of the expected tariff increase)	
		LOW	HIGH
SEVERITY (of the expected tariff increase)	HIGH	**"Swift Response" Scenario** **Adaptation mechanisms:** **a) Adaptation speed:** high **b) Tie deletion/formation:** old ties deleted; new ties formed **Supply base complexity:** increases	**"Securing Alternatives" Scenario** **Adaptation mechanisms:** **a) Adaptation speed:** moderate **b) Tie deletion/formation:** old ties maintained; some new ties formed (new domestic ties possible) **Supply base complexity:** increases
	LOW	**"Deliberate Response" Scenario** **Adaptation mechanisms:** **a) Adaptation speed:** moderate **b) Tie deletion/formation:** some old ties deleted; some new ties formed with domestic suppliers and suppliers in unaffected countries **Supply base complexity:** decreases	**"Wait-and-See" Scenario** **Adaptation mechanisms:** **a) Adaptation speed:** low **b) Tie deletion/formation:** few old ties deleted; few new ties formed **Supply base complexity:** constant

Chae et al., 2019.

Table 2
Observations per Year for Importer Firms

This table shows the number of (1) importer firms, (2) importer-producer firms, and (3) HIT, the number of importer firms that are treated per year.

	Calendar Year					
	2016	**2017**	**2018**	**2019**	**2020**	**Total**
Importer	193	113	381	209	342	1,266
Importer- Producer	41	89	213	124	180	661
HIT (Affected importer)	179	97	249	155	189	890

Table 3
Import Countries

This table shows the countries in the database affected by a tariff increase and those unaffected by a tariff increase. The trade policy encompassing countries to which tariffs are imposed is broader in range. These countries are the only countries included in the dataset.

Tariff-Affected Countries	**Tariff-Unaffected Countries**
Belgium	Bahamas
Canada*	Brazil**
China	Hong Kong
France	India
Germany	Oman
Italy	South Korea**
Netherlands	
Portugal	
Mexico*	
Spain	
Sweden	
Japan	
UK	

*Received exemption by the first quarter of 2019.
** Negotiated quotas.

Table 4
Variable Definitions

This table shows variables, their definitions, and the source of variable information for all the variables used in this study.

Variable	Definition	Source
Year Quarter	Quarter years	S&P Compustat North America Database
Total Assets	Quarterly total assets in millions of USD	S&P Compustat North America Database
Cash	Quarterly cash in millions of USD	S&P Compustat North America Database
COGS	Quarterly cost of goods sold in million USD	S&P Compustat North America Database
Total Inventory	Quarterly total inventory cost in millions of USD	S&P Compustat North America Database
Inventory Finished Goods	Quarterly finished goods inventory cost in millions of USD.	S&P Compustat North America Database
Inventory Raw Materials	Quarterly raw materials inventory cost in millions of USD	S&P Compustat North America Database
Total Liabilities	Quarterly total liabilities in millions of USD	S&P Compustat North America Database
Pre-Tax Income	Quarterly pre-tax income in millions of USD	S&P Compustat North America Database
Sales	Quarterly sales in a million USD	S&P Compustat North America Database
Importer	The firm is identified as an importer.	Import Genius Database
Producer	Binary variable takes the value of one if the importer has at least 66% raw material costs and work-in-progress goods costs in total inventory costs, zero otherwise.	S&P Compustat North America Database
Acquisition Cost	Raw Material COGS – change in raw material inventory cost	S&P Compustat North America Database
%Δ Acquisition Cost	COGS – change in raw material inventory cost at t_1 minus at t_0	S&P Compustat North America Database
Acquisition Quantity	Import quantities allocated to importer firms. The total import quantity of each product h in each year-quarter t is allocated to the importer firm according to their share of acquisition cost in total acquisition costs for product *h* in year-quarter *t*.	ITC Trademap
HIT	Binary variable takes the value of one if	Import Genius Database

	importer is importing from a tariff-affected country: Belgium, Canada, China, Germany, France, Japan, Italy, India, Mexico, Netherlands, Poland, Portugal, Romania, Spain, Sweden, and Taiwan, zero otherwise.	
HIT2	Binary variable takes the value of one if importer is importing from a tariff-affected country: *HIT,* except for Canada and Mexico	Import Genius Database
Tariff	Binary variable takes the value of one with the first quarter of the tariff increase, 2018Q2, and all subsequent year-quarters, zero otherwise.	US International Trade Commission's official website
Tariff2	Binary variable takes the value of one with the first quarter of the tariff increase, 2020Q1, and all subsequent year-quarters, zero otherwise.	Adjusted time definition. 1,5 years after the tariff increase.
Tariff Avoidance (HIT1, HIT2)	Binary variable takes the value of one when *HIT1 or HIT2* switches to a tariff-unaffected country *j*.	Import Genius Database

Table 5
Descriptive Statistics

This table shows the number of firm-year-quarter observations, the mean values, the standard deviations, and the minimum and maximum values of all the variables used in this study.

Variable	Obs.	Mean	Std. Dev.	Min	Max
Year Quarter	1266	20184.135	15.204	20154	20204
Total Assets	1266	6474.741	15464.2	178.427	74746.241
Cash	1266	379.038	746.394	1.604	6399
COGS	1266	1200.143	2512.852	33.245	13749.669
Total Inventory	1266	1028.082	2061.646	58.029	10916.826
Inventory Finished Goods	1159	347.687	540.989	31	2710.46
Inventory Raw Materials	1266	429.945	1062.442	0	5350.623
Total Liabilities	1266	3233.589	6447.606	91.229	30561.868
Pre-Tax Income	1266	109.259	249.477	-1022.368	1307.372
Sales	1266	1460.853	2986.576	48.913	16949.971
Importer	1266	1	0	1	1
Producer	1266	.525	.5	0	1
Acquisition Cost	1266	.19	.073	.039	.352
Acquisition Quantity	1033	1596.883	7380.796	0	128724
HIT	1266	.706	.456	0	1
HIT2	1266	.649	.477	0	1
Tariff	1266	.671	.47	0	1
Tariff2	1266	.288	.453	0	1
Tariff Avoidance (HIT)	1266	.238	.426	0	1
Tariff Avoidance(HIT) Producer	1266	.295	.456	0	1
Tariff Avoidance(HIT2)	1266	.168	.374	0	1
Tariff Avoidance(HIT2) Producer	1266	.225	.418	0	1

Table 6

Short-Run Impact of Tariff Increases on Importer Acquisition Cost

(Post-Treatment Period: 2018Q2-2019Q2)

This table reports the results of the main OLS regression equation $Log(AcqCost_{it}) = \beta_0 + \beta_1 HIT_{ijht} + \beta_2 Tariff_t + \beta_3 HIT_{ijht} * Tariff_t + Controls + Group\ FE + \varepsilon_{it}$. $Log(AcqCost_i)$ for firm i is the difference between the cost of sales of firm i and the change of firm i's inventory cost at time t. It is scaled by total assets and logarithms taken. Columns (3) and (4) include the explanatory variable $Producer_{it}$ and the relevant interaction terms. $Tariff_t$ indicates tariff imposition time, end of first quarter 2018. The post-treatment period is limited to the second quarter of 2019. HIT_{ijht} indicates being an importer importing from a tariff-affected country. *Controls* are firm control variables *(Cash, Sales,* and *Total Liabilities).* Columns (2) and (4) include control variables. The regression equations include country fixed effects. The treatment groups are (1) importer firms and (2) importer-producer firms importing from tariff-affected countries. The Control groups are (1) importer firms and (2) importer-producer firms importing from tariff-unaffected countries. Columns (2) and (4) show positive and significant coefficients for importers in general and importer traders. Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) AcqCost	(2) AcqCost	(3) AcqCost	(4) AcqCost
Tariff	0.138***	-0.159**	0.175***	-0.319**
	(0.0104)	(0.0690)	(0.00963)	(0.145)
HIT1#Tariff	**-0.0456**	**0.280*** **	**-0.254*** **	**0.354** **
	(0.0660)	**(0.0939)**	**(0.0821)**	**(0.155)**
Producer			0.0135*	-0.0708*
			(0.00683)	(0.0360)
Producer#Tariff			-0.0492***	0.234*
			(0.0121)	(0.116)
HIT1#Producer			0.267	0.231*
			(0.179)	(0.132)
HIT1#Producer#Tariff			**0.261** **	**-0.136**
			(0.121)	**(0.147)**
Firm Controls		Yes		Yes
Country FE	Yes	Yes	Yes	Yes
Observations	773	773	773	773
R-squared	0.866	0.939	0.887	0.946

Table 7
Mid-Run Impact of Tariff Increases on Importer Acquisition Cost
(Post-Treatment Period: 2018Q2-2020Q4)

This table reports the results of the OLS regression equations $Log(AcqCost_{it}) = \beta_0 + \beta_1 HIT2_{ijht} + \beta_2 Tariff_t + \beta_3 HIT2_{ijht} * Tariff_t + Controls + Group\ FE + \varepsilon_{it}$. $Log(AcqCost_i)$ for firm *i* is the difference between the cost of sales of firm *i* and the change in firm *i's* inventory cost at time *t*. It is scaled by total assets and logarithms taken. Columns (3) and (4) include the explanatory variable $Producer_{it}$ and the relevant interaction terms. $Tariff_t$ indicates tariff imposition time, end of first quarter 2018. $HIT2_{ijht}$ indicates being an importer importing from a tariff-affected country (Canada and Mexico are excluded). *Controls* are firm control variables *(Cash, Sales,* and *Total Liabilities).* Columns (2) and (4) include control variables. The regression equations include country fixed effects. The treatment groups are (1) importer firms and (2) importer-producer firms importing from tariff-affected countries. The Control groups are (1) importer firms and (2) importer-producer firms importing from tariff-unaffected countries. Columns (2) and (4) show positive and significant coefficients. The acquisition cost of importer firms and importer trader firms, specifically, increases significantly compared to their control groups. Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

	(1)	(2)	(3)	(4)
VARIABLES	AcqCost	AcqCost	AcqCost	AcqCost
Tariff	0.103***	-0.0982*	0.0705	-0.313**
	(0.0319)	(0.0502)	(0.0911)	(0.134)
HIT2#Tariff	**-0.0628**	**0.176****	**-0.138**	**0.342****
	(0.0637)	**(0.0672)**	**(0.132)**	**(0.144)**
Producer			0.0721	-0.0701
			(0.0461)	(0.0679)
Producer#Tariff			0.0132	0.268*
			(0.0991)	(0.132)
HIT2#Producer			0.183	0.193
			(0.186)	(0.138)
HIT2#Producer#Tariff			**0.136**	**-0.203**
			(0.149)	**(0.159)**
Firm Controls		Yes		Yes
Country FE	Yes	Yes	Yes	Yes
Observations	1,266	1,266	1,266	1,266
R-squared	0.825	0.927	0.845	0.933

Table 8
Short-Run Impact of Acquisition Cost on Tariff Avoidance
(Post-Treatment Period: 2018Q2-2019Q2)

This table reports the results of the binary logit regression equations $TariffAvoid_{ijht} = \beta_0 + \beta_1 HIT_{ijht} + \beta_2 AcqCost_{i2017Q4} + \beta_4 HIT_{ijht} * AcqCost_{i2017Q4} + \sum Controls + \varepsilon_{ijht}$ and $TariffAvoid_{ijht} = \beta_0 + \beta_1 HIT_{ijht} + \beta_2 AcqCost_{i2017Q4} * Producer_i + \beta_4 HIT_{ijht} * AcqCost_{i2017Q4} * Producer_i + \sum Controls + \varepsilon_{ijht}$ $TariffAvoid_{ijh}$ takes the value of one when there is a switch for importer *i* importing a product at the 6-digit HS code-level *h* from a tariff-affected country to a tariff-unaffected country *j*. $Log(AcqCost_i)$ for firm *i* is the difference between the cost of sales of firm *i* and the change in firm *i's* inventory cost at time *t*. It is fixed at the pre-treatment period (quarter 4 of 2017) and scaled by total assets and logarithms taken. Columns (3) and (4) include the explanatory variable $Producer_{it}$ and the relevant interaction terms. The post-treatment period is limited to the second quarter of 2019. HIT_{ijht} indicates being an importer importing from a tariff-affected country. *Controls* are firm *(Cash, Sales,* and *Total Liabilities)* and sub-industry control variables. Columns (2) and (4) include control variables. The treatment groups are (1) importer firms and (2) importer-producer firms importing from tariff-affected countries. The control groups are (1) importer firms and (2) importer producer firms importing from tariff-unaffected countries. Columns (2) and (4) show positive and significant coefficients for tariff avoidance. Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) TariffAvoid	(2) TariffAvoid	(3) TariffAvoid	(4) TariffAvoid
Acq. Cost	0.651***	-0.289*		
	(0.0646)	(0.171)		
HIT	-0.671***	-0.512	-0.219***	0.00572
	(0.135)	(21.17)	(0.0416)	(0.0309)
Acq. Cost#HIT	**-0.182*** **	**0.416***		
	(0.0631)	**(0.216)**		
Acq. Cost#Producer			-0.0174	-0.322***
			(0.0382)	(0.0389)
Acq. Cost#HIT#Producer			**-0.0596**	**0.229*** **
			(0.0397)	**(0.0369)**
Controls		Yes		Yes
Observations	499	499	499	499

Table 9
Mid-Run Impact of Acquisition Cost on Tariff Avoidance
(Post-Treatment: 2018Q2-2020Q4)

This table reports the results of the binary logit regression equations $TariffAvoid_{ijht} = \beta_0 + \beta_1 HIT_{ijht} + \beta_2 AcqCost_{i2017Q4} + \beta_4 HIT_{ijht} * AcqCost_{i2017Q4} + \sum Controls + \varepsilon_{ijht}$ and $TariffAvoid_{ijht} = \beta_0 + \beta_1 HIT_{ijht} + \beta_2 AcqCost_{i2017Q4} * Producer_i + \beta_4 HIT_{ijht} * AcqCost_{i2017Q4} * Producer_i + \sum Controls + \varepsilon_{ijht}$ $TariffAvoid_{ijh}$ takes the value of one when there is a switch for importer *i* importing a product at the 6-digit HS code-level *h* from a tariff-affected country to a tariff-unaffected country *j*. $Log(AcqCost_i)$ for firm *i* is the difference between the cost of sales of firm *i* and the change in firm *i's* inventory cost at time *t*. It is fixed at the pre-treatment period (quarter 4 of 2017) and scaled by total assets and logarithms taken. Columns (3) and (4) include the explanatory variable $Producer_{it}$ and the relevant interaction terms. $HIT2_{ijht}$ is an importer importing from a tariff-affected country, excluding Canada and Mexico. *Controls* are firm control variables *(Cash, Sales,* and *Total Liabilities)* and sub-industry control variables. Columns (2) and (4) include control variables. The treatment groups are (1) importer firms and (2) importer-producer firms importing from tariff-affected countries. The Control groups are (1) importer firms and (2) importer-producer firms importing from tariff-unaffected countries. Columns (2) and (4) show positive and significant coefficients for tariff avoidance. Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) TariffAvoid	(2) TariffAvoid	(3) TariffAvoid	(4) TariffAvoid
Acq. Cost	0.936***	-0.171		
	(0.0611)	(0.167)		
HIT2	-0.487***	-0.352***	-0.112***	-0.00519
	(0.0275)	(0.0293)	(0.0279)	(0.0215)
Acq. Cost#HIT2	**0.121*** **	**0.861*** **		
	(0.0215)	**(0.147)**		
Acq. Cost#Producer			-0.133***	-0.564***
			(0.0168)	(0.0460)
Acq. Cost#HIT2#Producer			**0.0706*** **	**0.429*** **
			(0.0176)	**(0.0434)**
Controls		Yes		Yes
Observations	994	994	994	994

Table 10

Short-run Impact of Tariff Increases on Importer Acquisition Quantity

(Post-Treatment Period: 2018Q2-2019Q2)

This table reports the results of the OLS regression equation $Log(AcqQuant_{it}) = \beta_0 + \beta_1 HIT_{ijht} + \beta_2 Tariff_t + \beta_3 HIT_{ijht} * Tariff_t + Controls + Group\ FE + \varepsilon_{it}$. $AcqQuant_{ihjt}$ is the allocated import quantity in tons for importer *i* for product *h* from country *j* in year-quarter *t.* Importer *i* is a US importer firm in the steel industry, according to SIC. Columns (3) and (4) include the explanatory variable $Producer_{it}$ and the relevant interaction terms. $Tariff_t$ indicates tariff imposition time, end of first quarter 2018. The post-treatment period is limited to the second quarter of 2019. HIT_{ijht} indicates being an importer importing from a tariff-affected country. *Controls* are firm control variables *(Cash, Sales,* and *Total Liabilities).* Columns (2) and (4) include control variables. The regression equations include country fixed effects. The treatment groups are (1) importer firms and (2) importer-producer firms importing from tariff-affected countries. The control groups are (1) importer firms and (2) importer-producer firms importing from tariff-unaffected countries. There is no significant difference between tariff-affected importer firms and tariff-unaffected importer firms with respect to import quantities. Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) Acq.Quant	(2) Acq.Quant	(3) Acq.Quant	(4) Acq.Quant
Tariff	1.558	1.963*	-0.953	-0.0471
	(1.038)	(0.970)	(1.239)	(0.333)
HIT#Tariff	**-0.780**	**-1.311**	**1.464**	**0.250**
	(1.148)	**(1.111)**	**(1.209)**	**(0.333)**
Producer			-1.911***	-2.008***
			(0.330)	(0.433)
Producer#Tariff			3.571*	2.789***
			(1.720)	(0.917)
HIT#Producer			1.092	1.381*
			(0.655)	(0.684)
HIT#Producer#Tariff			**-3.176**	**-2.155***
			(1.848)	**(1.215)**
Firm Controls		Yes		Yes
Country FE	Yes	Yes	Yes	Yes
Observations	675	675	675	675
R-squared	0.547	0.576	0.579	0.597

Table 11

Mid-Run Impact of Tariff Increases on Importer Acquisition Quantity

(Post-Treatment Period: 2018Q2-2020Q4)

This table reports the results of the OLS regression equations $Log(AcqQuant_{it}) = \beta_0 + \beta_1 HIT2_{ijht} + \beta_2 Tariff_t + \beta_3 HIT2_{ijht} * Tariff_t + Controls + Group\ FE + \varepsilon_{it}$. $AcqQuant_{ihjt}$ is the allocated import quantity in tons for importer *i* for product *h* from country *j* in year-quarter *t.* Importer *i* is a US importer firm in the steel industry, according to SIC. Columns (3) and (4) include the explanatory variable $Producer_{it}$ and the relevant interaction terms. $Tariff_t$ indicates tariff imposition time, end of first quarter 2018. HIT_{ijht} indicates being an importer importing from a tariff-affected country (Canada and Mexico are excluded). *Controls* are firm control variables *(Cash, Sales,* and *Total Liabilities).* Columns (2) and (4) include control variables. The regression equations include country fixed effects. Columns (2) and (4) include control variables. The treatment groups are (1) importer firms and (2) importer-producer firms importing from tariff-affected countries. The Control groups are (1) importer firms and (2) importer-producer firms importing from tariff-unaffected countries. Column (4) shows a significantly negative coefficient for import quantities for importer producer firms. Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) Acq.Quant	(2) Acq.Quant	(3) Acq.Quant	(4) Acq.Quant
Tariff	1.383	1.527**	-0.320	-0.106
	(0.788)	(0.689)	(0.621)	(0.286)
HIT2#Tariff	**-0.995**	**-1.216**	**0.538**	**0.188**
	(0.854)	**(0.767)**	**(0.653)**	**(0.516)**
Producer			-2.075***	-2.047***
			(0.586)	(0.612)
Producer#Tariff			2.760**	2.604***
			(1.098)	(0.731)
HIT2#Producer			1.336	1.421*
			(0.796)	(0.786)
HIT2#Producer#Tariff			**-2.502***	**-2.245****
			(1.208)	**(0.990)**
Firm Controls		Yes		Yes
Country FE	Yes	Yes	Yes	Yes
Observations	893	893	893	893
R-squared	0.784	0.789	0.793	0.797

Table 12

Mid-Run Impact of High Inventory Turnover on Importer Acquisition Cost

(Post-Treatment Period: 2018Q2-2020Q4)

This table reports the results of the OLS triple interaction regression equations $Log(AcqCost_{it}) = \beta_0 + \beta_1 HIT2_{ijht} + \beta_2 Producer_{it} + \beta_3 HIT2_{ijht} * Producer_{it} + \beta_4 HIT2_{ijht} * Producer_{it} * H\_InvTurnover_{it} + Controls + Group\ FE + \varepsilon_{it}$ and $Log(\%\Delta AcqCost_{it}) = \beta_0 + \beta_1 HIT2_{ijht} + \beta_2 Producer_{it} + \beta_3 HIT2_{ijht} * Producer_{it} + \beta_4 HIT2_{ijht} * Producer_{it} * H\_InvTurnover_{it} + Controls + Group\ FE + \varepsilon_{it} Log(AcqCost_t)$ for firm *i* is the difference between the cost of sales of firm *i* and the change of firm *i's* inventory cost at time *t*. It is scaled by total assets and logarithms taken. *Log (%Δ AcqCost$_{it}$.)* is the logarithm of the percentage change of $AcqCost_{it}$ for firm *i* at time *t*. $HIT2_{ijht}$ indicates being an importer importing from a tariff-affected country (Canada and Mexico are excluded). $H\_InvTurnover_{it}$ is the ratio of the cost of sales of firm i divided by the average total inventory of firm *i. Controls* are firm control variables *(Cash, Sales,* and *Total Liabilities).* Columns (2) and (4) include control variables. The regression equations include country fixed effects. Columns (2) and (4) include control variables. The treatment groups are (1) importer firms and (2) importer producer firms importing from tariff-affected countries. The control groups are (1) importer firms and (2) importer producer firms importing from tariff-unaffected countries. All columns indicate a decline in acquisition costs for high-turnover importers. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) AcqCost	(2) AcqCost	(3) %Δ AcqCost	(4) %Δ AcqCost
High Inv_Turnover	0.364*	0.330*	0.0833	0.0942
	(0.183)	(0.189)	(0.0604)	(0.0680)
HIT2#High Inv_Turnover	**-0.430****	**-0.387****	**-0.128***	**-0.128***
	(0.203)	**(0.194)**	**(0.0659)**	**(0.0680)**
Producer	-0.153	-0.148	0.0845*	0.0836*
	(0.187)	(0.185)	(0.0500)	(0.0498)
Producer#High Inv_Turnover	-0.0165	-0.00267	-0.0936	-0.0977
	(0.232)	(0.232)	(0.0718)	(0.0742)
HIT2#Producer	0.458*	0.305	-0.131**	-0.154**
	(0.262)	(0.223)	(0.0574)	(0.0684)
HIT2#Producer#High Inv_Turnover	**0.00527**	**0.0334**	**0.140***	**0.154***
	(0.300)	**(0.257)**	**(0.0791)**	**(0.0850)**
Firm Controls		Yes		Yes
Country FE	Yes	Yes	Yes	Yes
Observations	1,266	1,266	1,266	1,266
R-squared	0.974	0.985	0.411	0.441

Table 13

Short-Run Impact of Second Wave Tariff Increases on Importer Acquisition Cost (Post-Treatment: 2020Q1-2020Q4)

This table reports the results of the OLS regression equations $Log(AcqCost_{it}) = \beta_0 + \beta_1 HIT2_{ijht} + \beta_2 Tariff2_t + \beta_3 HIT2_{ijht} * Tariff2_t + Controls + Group\ FE + \varepsilon_{it}$. $Log(AcqCost_i)$ for firm i is the difference between the cost of sales of firm i and the change of firm i's inventory cost at time t. It is scaled by total assets and logarithms taken. $Log\ (\%\Delta\ AcqCost_{it.})$ is the logarithm of the percentage change of $AcqCost_{it}$ for firm i at time t. Columns (3) and (4) include the explanatory variable $Producer_{it}$ and the relevant interaction terms. $Tariff2_t$ indicates tariff imposition time, beginning of the first quarter 2020. The post-treatment period is limited to the fourth quarter of 2020. $HIT2_{ijht}$ indicates being an importer importing from a tariff-affected country (Canada and Mexico are excluded). *Controls* are firm control variables *(Cash, Sales,* and *Total Liabilities)*. Columns (2) and (4) include control variables. The regression equations include industry and country fixed effects. The treatment groups are (1) importer firms, and (2) importer producer firms importing from tariff-affected countries. The Control groups are (1) importer firms, and (2) importer producer firms importing from tariff-unaffected countries. None of the columns shows a significantly different change in importer acquisition cost. Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) AcqCost	(2) AcqCost	(3) AcqCost	(4) AcqCost
Tariff2	-0.0683	-0.0896*	-0.0475	-0.0683
	(0.0536)	(0.0533)	(0.0588)	(0.0595)
HIT2#Tariff2	**0.0611**	**0.165**	**0.0364**	**0.133**
	(0.118)	**(0.120)**	**(0.271)**	**(0.274)**
Producer			-0.115	-0.136
			(0.140)	(0.134)
Producer#Tariff2			-0.0170	-0.0114
			(0.121)	(0.119)
HIT2#Producer			0.733	0.626
			(0.612)	(0.573)
HIT2#Producer#Tariff2			**0.0215**	**0.0238**
			(0.322)	**(0.313)**
Firm Controls		Yes		Yes
Industry FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Observations	1,266	1,266	1,266	1,266
R-squared	0.975	0.985	0.976	0.986

Table 14

Short-Run Impact of Second Wave Tariff Increases on Importer Acquisition Quantity

(Post-Treatment: 2020Q1-2020Q4)

This table reports the results of the OLS regression equations $Log(AcqQuant_{it}) = \beta_0 + \beta_1 HIT2_{ijht} + \beta_2 Tarifft2 + \beta_3 HIT2_{ijht} * Tariff2_t + Controls + Group\ FE + \varepsilon_{it}$. $AcqQuant_{ihjt}$ is the allocated import quantity in tons for importer *i* for product *h* from country *j* in year-quarter *t.* Importer *i* is a US importer firm in the steel industry, according to SIC. Columns (3) and (4) include the explanatory variable $Producer_{it}$ and the relevant interaction terms. $Tariff2_t$ indicates tariff imposition time, beginning in the first quarter of 2020. The post-treatment period is limited to the fourth quarter of 2020. $HIT2_{ijht}$ indicates being an importer importing from a tariff-affected country (Canada and Mexico are excluded). *Controls* are firm control variables *(Cash, Sales,* and *Total Liabilities).* Columns (2) and (4) include control variables. The regression equations include industry and country-fixed effects. The treatment groups are (1) importer firms and (2) importer-producer firms importing from tariff-affected countries. The Control groups are (1) importer firms, and (2) importer producer firms importing from tariff-unaffected countries. None of the columns shows a significantly different change in importer acquisition cost. Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) Acq.Quant	(2) Acq.Quant	(3) Acq.Quant	(4) Acq.Quant
Tariff2	0.0889	-0.0821	0.372	-0.323
	(0.254)	(0.285)	(0.317)	(0.472)
HIT2#Tariff2	**-0.428**	**-0.231**	**-1.326**	**-0.586**
	(0.433)	**(0.445)**	**(1.160)**	**(1.290)**
Producer			0.329	0.167
			(0.263)	(0.245)
Producer#Tariff2			-0.342	0.292
			(0.435)	(0.625)
HIT2#Producer			-0.521	-0.315
			(0.446)	(0.509)
HIT2#Producer#Tariff2			**1.239**	**0.568**
			(1.234)	**(1.367)**
Firm Controls		Yes		Yes
Industry FE	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes
Observations	893	893	893	893
R-squared	0.810	0.812	0.812	0.814

Table 15
Short-Run Impact of Acquisition Cost on
Tariff Avoidance after a Second Wave Tariff Increase
(Post-Treatment Period: 2020Q1-2020Q4)

This table reports the results of the binary logit regression equations $TariffAvoid_{ijht} = \beta_0 + \beta_1 HIT_{ijht} + \beta_2 AcqCost_{i2017Q4} + \beta_4 HIT_{ijht} * AcqCost_{i2017Q4} + \sum Controls + \varepsilon_{ijht}$. And $TariffAvoid_{ijht} = \beta_0 + \beta_1 HIT_{ijht} + \beta_2 AcqCost_{i2017Q4} * Producer_i + \beta_4 HIT_{ijht} * AcqCost_{i2017Q4} * Producer_i + \sum Controls + \varepsilon_{ijht}$ *TariffAvoid*$_{ijh}$ takes the value of one when there is a switch for importer *i* importing a product at the 6-digit HS code-level *h* from a tariff-affected country to a tariff-unaffected country *j*. *Log(AcqCost$_i$)* for firm *i* is the difference between the cost of sales of firm *i* and the change in firm *i's* inventory cost at time *t*. It is fixed at the pre-treatment period (quarter 4 of 2017) and scaled by total assets and logarithms taken. Columns (3) and (4) include the explanatory variable *Producer$_{it}$* and the relevant interaction terms. *HIT2$_{ijht}$* is an importer importing from a tariff-affected country, excluding Canada and Mexico. *Controls* are firm control variables *(Cash, Sales,* and *Total Liabilities).* Columns (2) and (4) include control variables. The treatment groups are (1) importer firms and (2) importer-producer firms importing from tariff-affected countries. The Control groups are (1) importer firms and (2) importer-producer firms importing from tariff-unaffected countries. Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

VARIABLES	(1) TariffAvoid	(2) TariffAvoid	(3) TariffAvoid	(4) TariffAvoid
Acq. Cost	0.330***	-0.0111		
	(0.0703)	(0.0630)		
HIT2	-0.170***	0.00263	-0.0404	0.111*
	(0.0453)	(0.0338)	(0.0417)	(0.0660)
Acq. Cost#HIT2	**0.150*** **	**0.154*** **		
	(0.0146)	**(0.0322)**		
Acq. Cost#Producer			-0.182***	-0.424***
			(0.0202)	(0.160)
Acq. Cost#HIT2#Producer			**0.161*** **	**0.383*** **
			(0.0143)	**(0.147)**
Controls		Yes		Yes
Observations	374	374	374	374