

U.S. Import Tariffs and Domestic Corporate Performance*

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ABSTRACT. We examine how imposing import tariffs by the U.S. government affects the accounting performance, investment activities, and valuation of U.S. firms. We first examine overall tariff effects on U.S. firms and document that, after the U.S. imposes tariffs, U.S. firms experience improved profitability and valuation, and increased capital expenditure and total investment. Although imposing tariffs leads to both higher revenue and cost, the increased revenue outweighs the increased cost stemming from the imposed tariffs, resulting in a net positive effect on profitability. Importantly, we predict and find cross-sectional differences in the effect of tariffs on U.S. firms. Specifically, our cross-sectional analyses reveal that this improvement is greater for firms that are small, have high profit margins, operate in highly competitive markets, have low growth rates, are less innovative, more financially distressed, or recently experience major/sequential losses. Collectively, we show that U.S. firms benefit from import tariffs, on average, but also that there is heterogeneity across firms in an economically predictable manner.

JEL Classification: M41; F14; F38; G32.

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1. Introduction

How do U.S.-imposed tariffs affect the accounting performance, investment activities, and valuation of U.S.-based firms? Are there factors that lead to cross-sectional variation in how U.S.-imposed tariffs differentially impact U.S. firms? Tariffs are taxes levied on goods or services imported into the U.S. from abroad. This form of taxation is important for firms, product and labor markets, international trade patterns and the overall economy, and has been a topic of substantial interest among academics, policy makers, and practitioners for decades. In recent years, economists have recognized that the impact of trade barriers, with tariffs as an important form, on domestic firms is often less obvious than it appears, despite these firms being the intended beneficiaries (Caselli, Fracasso, Schiavo, 2021). Our study provides input into these policy discussions by examining the aggregate effect of multiple economic forces of imposing tariffs. That is, we take a reduced form approach to examine the overall effect on U.S.-based firms' performance, investment, and valuation, and then dig deeper to explain the heterogeneity across firms.

A necessary precursor to changes in taxation affecting a firm is that the change must either directly affect the firm through a change to its cost structure or indirectly affect the firm by changing its competitive position (Donohoe et al. 2022; Gaertner et al., 2020). Whether and how U.S.-imposed tariffs affect the performance, investment, and valuation of U.S. firms is not clear. Tariffs are linked to various economic forces, such as product market competition, uncertainty, changes in production, and retaliatory actions, and these forces operate in different directions.¹ For example, absent price changes by foreign firms, imposing tariffs affects the cost of raw materials and imported goods, thereby increasing overall costs for U.S. based firms (e.g., Dixit and Norman, 1980; Anderson and

¹ The economics literature has examined the effect of tariffs on international trade, politics, economic activity, and welfare, it provides various predictions that may often be opposing (e.g., Helpman and Razin, 1978a, 1978b; Krugman, 1983; Darrough and Stoughton, 1990; Grossman and Helpman, 1995; Cavallo et al., 2021).

Van Wincoop, 2004). However, U.S. firms may also respond by changing their supply-chains – e.g., moving their production to cheaper countries or changing suppliers, which might possibly reduce costs, especially for long-time horizons.² Additionally, imposing tariffs increases the entry barriers for foreign firms, which might lead to lower foreign competition and higher market power of U.S. firms (e.g., Dixit and Stiglitz, 1977; Katics and Petersen, 1994). Relatedly, higher market power may reduce production costs, as production process becomes more efficient and U.S. firms enjoy from economies of scale (e.g., Bernard et al., 2006). Also, lower competition and higher market power may help U.S. firms to improve their business strategy models (e.g., Bowen and Wiersema, 2005; Bloom et al., 2010). Finally, tariff increases may lead to retaliatory tariffs in foreign countries, which may reduce the sales of U.S. firms in foreign countries (e.g., Johnson, 1953; Syropoulos, 2002).

We also consider the importance of studying tariff increases separately from reductions. The economics literature has found evidence of asymmetric effects of tax changes. Ljungqvist and Smolyansky (2014) documents that increases in corporate tax rates lead to significant reductions in employment and income, while decreases in corporate tax rates have little effect. Hussain and Malik (2014) finds that aggregate economic output responds to income tax decreases but not to increases and that this asymmetric effect is detected in changes in individual tax rates but not corporate rates. Moreover, they find that consumption has an asymmetric response whereas investment does not. Benzarti et al. (2020) finds that prices respond significantly more to increases than decreases in value-added taxes, on average, and that certain firms are more likely to respond asymmetrically. Therefore, it is difficult to infer the full consequences of imposing tariffs from much of the prior literature examining the effects of tariff reductions, limiting the relevance of the evidence for tax policy discussions about imposing tariffs.³ With respect to tariffs, the political process surrounding tariff

² See: <https://www.forbes.com/sites/kenrapoza/2020/08/14/is-apple-slowly-moving-out-of-china-its-supplier-is/?sh=4b5bb5f9ff96>.

³ Indeed, we also find asymmetric effects of changes in tariff taxation on the profitability of U.S. firms which confirms

changes are consistent with tariff increases being easier to impose than tariff decreases.⁴ Therefore, tariff increases may have a greater impact because they are viewed as more permanent in nature.

In this paper, we first focus on the effects of imposing tariffs by analyzing the overall effect of U.S.-imposed tariffs on the bottom-line performance of U.S.-based firms (“U.S. firms” or “U.S.-based firms”). Our overarching framework first identifies historical episodes of material tariff increases imposed by the U.S. government and a large cross-section of U.S. firms over about four decades. We employ difference-in-difference analyses to examine whether and how U.S.-imposed tariffs impact the accounting performance, investment activities, and valuation of U.S. firms. We also analyze the effect on revenue and cost to shed light on the profitability effect. Importantly, we then complement our analysis by hypothesizing and investigating cross-sectional differences in the effect of tariff increases on U.S. firms.

The picture that emerges from the empirical findings is as follows: U.S. firms show improved bottom lines when the U.S. government imposes import tariffs on foreign firms. In response to U.S.-imposed tariffs, the profitability (gross profit), investment (capital expenditures and total investments), and valuation (market value of equity) of U.S. firms are significantly improved. This improvement is not only statistically significant but also economically significant. For instance, U.S. firms experience an average increase in gross profit of 4.6% (as a fraction of average total assets), over the post-tariff-increase period. This is consistent with anecdotal evidence that several U.S. firms actively lobby in the U.S. White House for imposing tariffs to improve their competitive advantage against foreign competitors.⁵

that evidence on tariff reductions does not generalize to imposing tariffs.

⁴ <https://www.cfr.org/background/truth-about-tariffs>

⁵ See, e.g., <https://www.marketwatch.com/story/how-corporate-americas-lobbying-on-tariffs-has-surged-in-one-chart-2018-10-16>.

Our findings also suggest that U.S.-imposed tariffs result in both increased revenue and cost, but the increased revenue outweighs the passed-through costs on importers stemming from the imposed tariffs, resulting in a net positive effect on profitability. More specifically, U.S. firms experience an average increase in revenue of 20.6% and an average increase in cost of 15.8% (as a fraction of average total assets), over the post-tariff-increase period.

Despite our finding that U.S. firms benefit from tariffs, on average, economists have long recognized that the large degree of heterogeneity that characterizes firms within their sector means that impact of trade policy is likely to vary different across firms (Caselli et al. 2021). Our cross-sectional tests search for important differences in the effect of tariffs on U.S. firms. More specifically, consistent with our predictions, while U.S. firms on average experience profitability improvement in response to U.S.-imposed tariffs, our cross-sectional analyses reveal that this improvement is greater for firms that are small, have high profit margins, operate in highly competitive markets, have low growth rates, are less innovative, more financially distressed, or recently experience major/sequential losses.

Our paper contributes to the tax accounting literature that traditionally focuses on corporate income taxes and behavioral actions of firms to avoid them (e.g., Shevlin, 1987; Shevlin, 1990; Maydew, 2001; Shackelford and Shevlin, 2001; Shevlin, 2020). However, Christensen et al. (2001) and Robinson (2012) note that non-income taxes comprise more than half the amount of taxes paid by U.S. firms.⁶ More recently, studies assess the effect on firms induced by non-income based taxes such as import duties on goods (Blouin et al., 2016), environmental taxes (Jacob and Zerwer, 2022), and payroll taxes (Marin, 2021). Other studies have looked at non-income tax relief using disclosures on tax subsidies (Aobdia et al., 2021; De Simone et al., 2021; Raghunandan, 2021; Drake et al., 2022). These studies address the real effects associated with non-income tax relief and the capital market's

⁶ We recognize that this overstates the true tax burden on these firms of non-income taxes, an issue that we discuss in Section 2.

ability to observe and understand the implications to firms. Our study contributes to this growing literature and responds to the call by Robinson (2012) and Dyreng and Maydew (2018) for more research on non-income taxes. Our study also contributes to the tax accounting literature that studies externalities associated with changes in taxation, similar to Gaertner et al. (2020), Boumans et al. (2020) and Donohoe et al. (2022). These studies recognize that the recent U.S. tax reform in 2017 affects both U.S. and non-U.S. firms through changes in their relative tax costs of doing business. Our study examines the externalities on U.S. firms of U.S.-imposed tariffs, which also change the relative tax costs of U.S. and non-U.S. firms. A tax increase on foreign firms in the form of a tariff could have instead been a tax decrease for domestic firms in the form of a subsidy.

Viewed as a whole, this paper first documents that U.S.-imposed tariffs improve the accounting profitability, capital expenditures, total investment, and equity valuation of U.S. firms. It then predicts and finds key drivers for how the effects of U.S.-imposed tariffs vary across firms. Our reduced-form approach focusing on the bottom-line tariff effects on U.S. firms is especially notable today, when trade protections in general and tariffs specifically are frequently mentioned by politicians, regulators, and the media. With the intensification of global trade tensions and supply-chain problems, among other reasons due to COVID-19 pandemic and the Russia-Ukraine war, it is important to understand the effects of imposing tariffs on firms' bottom-line performance. Our paper takes a focused approach examining only quantifiable financial aspects of U.S. firms and has immediate applicability. While our findings suggest that U.S. firms benefit from the U.S.-imposed tariffs, our findings do not suggest that U.S. tariffs have a net positive outcome for the United States as a whole.

2. Background and Related Literature

A tariff is a tax levied on an imported good or service. The origin of tariffs can be traced to the eighteenth century, specifically to the Tariff Act of 1789. The Tariff Act of 1789 introduced the

first tariff imposed by the U.S. government to pay off debt incurred during the Revolutionary War. There were no income taxes at that time, and the main way the government could generate revenue was by imposing tariffs.

The economic logic of imposing a tariff is simple, though the effects may be quite nuanced. Tariffs can be used to limit imports, protect domestic employment, reduce competition among domestic industries, and increase government revenue. However, the logic of tariffs was challenged by several economists, such as Adam Smith and David Ricard, who established the theory of comparative advantage. The economic theory of comparative advantage suggests that each country should devote its resources to the activity at which it excels, and then conduct international trade. Under this theory, countries should not impose barriers forcing them to allocate resources toward activities in which they do not excel. Accordingly, based on this theory, imposing tariffs impedes economic growth, even if tariffs are imposed temporarily, under some circumstances, and only on certain industries.

In economics research, the topic of tariffs has attracted high interest for decades, dealing with questions such as how tariffs relate to international trade, overall economic activity, inequality, cross-country production, politics, welfare, and protections in developed and developing countries (e.g., Balassa, 1965a, b; Helpman and Razin, 1978a, b; Grossman and Helpman, 1994; Cavallo et al., 2021). Various economic theories, such as those of firms' competition, barriers to entry and threats, politics, trading, substitution, sticky prices, and pass-throughs at borders and stores, provide insightful predictions for the effects of tariffs (e.g., Krugman, 1983; Darrrough and Stoughton, 1990; Grossman and Helpman, 1995). Prior literature on product market competition further suggests differential tariff effects on firms, depending on firm characteristics such as predation risk (e.g., Dasgupta et al., 2018).

We note that a large empirical literature in economics has established that increases in import competition leads to significant reductions in domestic profitability. Our study is distinct from this

literature because changes in competition are only one of many *potential* economic effects of imposing tariffs. Moreover, imposing tariffs may in fact either increase or decrease competition and therefore our study is not the same as those studies examining the link between competition and profitability.

Consider the following passage (Obstfeld, 2016):

“There is another big drawback of tariffs: while they may give some relief to industries and workers that directly compete with the affected imports, they will be broadly contractionary, reducing output, investment, and employment in the whole economy...This prediction may seem surprising: after all, by shifting demand toward domestically-produced goods and raising the prices of competing imports, wouldn't a tariff both raise output and employment and deliver welcome upward pressure on inflation? That the answer is “no” was pointed out more than a half century ago by Robert Mundell, winner of the 1999 Nobel Memorial Prize in Economic Sciences (and, incidentally, a staff member in the IMF's Research Department during the early 1960s).”

Another popular argument suggesting that tariffs need not decrease competition in the domestic market is that they may largely be absorbed through a decline in foreign markups rather than passed on to consumers – e.g., the foreigner pays the tariff (Helpman and Krugman, 1989; Arkolakis et al., 2015). Yet another example is where exports from other countries fill the gap, as was the case of U.S. tariffs imposed on olives coming from Spain. The domestic olive industry struggled as Greece increased its export of olives into the U.S. to fill the gap. Again, domestic competition would not necessary decrease in this case it would just change the location of the foreign competitors.

In accounting research, the past decades of traditional tax research have enriched our understanding of the implications of income-based taxes (e.g., Maydew, 2001; Shackelford and Shevlin, 2001; Graham, 2015; Dyreng and Maydew, 2018; Shevlin, 2020). However, little is known about non-income based taxes or how changes in non-income based taxes affects firms' key metrics such as performance, investment or valuation. Blouin et al. (2016) find evidence that import duties affect the profit-shifting behavior of U.S. firms. Jacob and Zerwer (2022) document that environmental taxes reduce corporate investment for firms that are more likely to bear the tax burden. The lack of accounting research on tariffs is surprising given the importance, prevalence, magnitude,

and their relevance for firms' key metrics such as performance, investment and valuation. Tariffs are also repeatedly at the epicenter of economic policies, global trade wars, and the news coverage, so a better understanding of the economic implications for firms from imposing tariffs is valuable for a wide array of decision makers, especially after the COVID-19 pandemic shock.

The accounting research has more recently begun to examine the externalities associated with changes in taxation. Gaertner et al. (2020) and Boumans et al. (2020) examine the effect of the Tax Cuts and Jobs Act of 2017, which changed the corporate income tax rate for U.S. firms, on the valuation of foreign firms. The idea is that a U.S. tax cut not only changes the tax burden of firms but also changes the competitive landscape. More recently, Donohoe et al. (2022) examine how tax cuts that benefit some firms are related to the economic performance of their direct competitors. In a non-income tax setting, our study examines the effect on U.S. firms of U.S. imposed tariffs, which may arise either directly from changes in U.S. firms' cost structure or indirectly from changes in competition among U.S. firms with different characteristics.

In addition, we note that prior literature, overwhelmingly outside accounting, examines how increases in import competition lead to reductions in domestic profitability (Pagoulatos and Sorensen, 1976; Pugel 1980; Katics and Petersen, 1994; Xu 2012; Valta 2012). While titles of prior papers may appear to look at questions related to ours, a close examination reveals significant differences. First, prior studies usually focus on competition effects. Importantly, however, increased competition is not the same as increased tariffs. Specifically, import tariffs lead to various economic forces that operate in different ways when examining competition, e.g., imposing tariffs may both reduce foreign competition and increase domestic competition because domestic production is likely to be more profitable. Accordingly, we do not focus on competition, but rather on the overall resulting effects on corporate accounting performance.⁷ For example, Pagoulatos and Sorensen (1976) look at country-

⁷ While it is possible that domestic competition effects related to tariffs play a role, our analysis is different from testing

level analysis, of European companies, and it does not examine links between accounting data and tariffs. It focuses on competition, measured based on imports as a percentage of domestic shipments obtained from the European Economic Community. As another example, consider Xu (2012), who focuses on import penetration and answers a completely different question (capital structure and leverage) from ours. Another paper is Pugel (1980), which has a title that resembles ours. But that paper does not examine tariffs. It has tariffs in the model, but empirically it looks at a different measure of foreign trade. In terms of performance, it again does not look at cross-section of firms, but rather at aggregate data from the Annual Survey of Manufactures, Census of Manufactures, and U.S. Commodity Exports and Imports.⁸

3. Data

We obtain all datasets from public sources identified in the text, as of June 2021. First, our sample covers U.S. firms over the period 1989 to 2017 because, as of June 2021, the data available on Peter Schott's website covers this period. As customary in research dealing with tariffs, especially in the economics literature, we rely on Peter Schott's tariff data (e.g., Valta, 2012; Fresard and Valta,

the link between competition and profitability. In other words, related papers *assume* increased competition and analyze some effects. However, imposing tariffs is likely to trigger many forces (even a decrease in competition for some industries/markets). Therefore, we focus on a different question: What is the *bottom line effect* on the accounting performance of U.S. firms when tariffs are imposed. In fact, in various media coverage and political discussions, the answer still remains unclear how imposing tariffs affects U.S. firms. This is because of the various forces such as those related to competition. Hence, our work overcomes the effects of the different factors by being the first to take a reduced form approach focusing on the effects on accounting performance in response to imposing important tariffs, where we provide the following message: If the U.S. imposes tariffs, then the accounting performance of U.S. firms---as reflected in operating, investing, and valuation metrics---is improved. In contrast, prior related papers can only answer (again, in a limited way) what happens when competition increases. But imposing tariffs is not equal to increasing competition.

⁸ There are additional unique features in our analysis. First, our paper is the first to focus on various accounting performance effects from U.S.-imposed tariffs, not only in terms of accounting operating performance but also investment, valuation, and cross-sectional effects. Also, we use a (i) large sample of (ii) U.S. (iii) major firms, including building on (iv) cross-sectional effects and (v) actual performance data from firms' accounting financial statements. That is, our sample includes the entire Compustat population and not just a small number of firms. Second, our data is not based on country-level performance of international/European countries, and we do not rely on small firms only that may behave differently (e.g., low liquidity; behavioral biases). Third, we analyze cross-sectional effects on U.S. tariffs, including showing a greater improvement for firms in highly competitive markets, low-growth firms, less innovative firms, financially distressed firms, and small firms. Fourth, most of the prior literature related to tariffs deals with tariff decreases, even though the questions are not similar to ours. As we explain in Sections 1 and 5, because of asymmetries in tariff increases vs. decreases, the effects of imposing tariffs cannot be inferred from research on tariff decreases.

2016).⁹ Next, we extract financial data from the Wharton Research Data Services (WRDS), and we use Compustat North America Fundamental Annual file (WRDS: FUNDA). All continuous variables are winsorized at the 1 and 99 percentiles to mitigate the influence of outliers. *Revenue* is sales [Compustat: SALE] scaled by the average of total assets [Compustat: AT], where the average refers to averaging total assets over two successive periods; *Cost* is cost of goods sold [Compustat: COGS] scaled by average total assets; *GrossProfit* is the difference between *Revenue* and *Cost*, scaled by average total asset; *CAPEX* is capital expenditures [Compustat: CAPX] scaled by average total assets; *RD* is research and development expense [Compustat: XRD] scaled by average total assets; *ACQ* is acquisitions [Compustat: AQC] scaled by average total assets; *INVEST* is investing activities [Compustat: -IVNCF] scaled by average total assets; *MarketValue* is the product of fiscal year-end price and the number of common shares outstanding in billion dollars [Compustat: CSHO*PRCC_F]; *TOBINS_Q* is the market value of assets divided by the book value of assets and captures investment opportunities [Compustat: AT-CEQ+(CSHO*PRCC_F)/AT]; *SIZE* is the logarithm of total assets [Compustat: AT]; *CF-to-ASSETS* is income before extraordinary items scaled by total assets [Compustat: IBC]; *CASH-to-ASSETS* is cash and cash equivalents scaled by total assets [Compustat: CHE]; *LEV* is measured as long-term debt scaled by average total assets [Compustat: DLT].

To identify U.S. tariff increases (decreases), we follow the identification strategy employed in prior literature (e.g., Valta, 2012). First, we use U.S. import data from Peter Schott's website, as of June 2021, and compute the tariff rate for each industry-year, at the three-digit SIC level, as the duties collected at U.S. Customs divided by the Free-On-Board custom value of imports. Second, we identify as our events all industry-years for which the increase (decrease) in tariff is more than three times the

⁹ Using this data overcomes several obstacles and measurement errors. Briefly, Peter Schott's data is clean, high quality, and it has been widely tested in prior research. Among other merits of using this data, Peter Schott purchases detailed international trade data from the U.S. Census Bureau and takes several steps to convert this data from U.S. HS codes to U.S. SIC codes. Surprisingly, even though Peter Schott's data is publicly available at no cost and widely used in economics research, this data has been rarely used in the accounting literature that can benefit from analyses of tariffs. Our paper highlights the relevance of this data in accounting research.

median tariff rate increase (decrease), relative to the previous year, during our sample period, consistent with prior literature (e.g., Valta, 2012; Fresard and Valta, 2016).¹⁰ Third, to ensure that these large tariff rates increases (decreases) reflect only non-transitory changes, we exclude increases (decreases) that are preceded or followed by a tariff decrease (increase) greater than 80 percent of the tariff increase (decrease). Fourth, we include only the largest tariff increase (decrease) over the sample period for each industry.¹¹ Although we follow a similar process for increases and decreases, the resulting number of observations is different as different observations are dropped in the process.

Table 1 presents descriptive statistics. The sample is distributed over a wide array of industries, where the industries that contribute the largest number of observations are motor vehicles, equipment, and petroleum refining. The table shows that the sample includes 105,004 firm-year observations.¹² The table also shows that the average *GrossProfit* is 26.45%, *Revenue* is 84.56%, *Cost* is 58.38%, and *MarketValue* is 2.1493 billion.

4. Overall Effects of U.S.-Imposed Tariffs on U.S. Firms

We first examine whether and how imposing import tariffs by the U.S. government has an overall effect on the accounting performance, investment, and valuation of U.S. firms. We employ almost four decades of episodes when material tariffs were imposed by the U.S. to shed light on the effects of such tariff episodes on the profitability, revenue, cost, investment, and valuation of U.S. firms.

¹⁰ Our results are not sensitive to defining a large tariff increase based on two times the mean or median tariff increase, or three times the mean tariff increase.

¹¹ As of June 2021, the data available on Peter Schott's website covers the period 1989-2017. See: <https://faculty.som.yale.edu/peterschott/international-trade-data>.

¹² The number of observations slightly varies across different tests due to missing variables.

In terms of the econometrics of our research design, we use a staggered difference-in-difference research design, specifically the staggered variations in U.S tariff increases over our sample period. A key merit of our research design is that it mitigates possible confounding factors driven by other possible concurrent events when tariffs are imposed, as it is unlikely that the timing of imposing each tariff systematically coincides with changes in unobservable firm characteristics. Our research design follows the research design often used in prior research to examine the effects of tariff changes in different settings (e.g., Valta, 2012; Fresard and Valta, 2016).¹³

To estimate the change in performance (i.e., profitability, revenue, cost, investment, and valuation) for the treatment firms relative to the control firms, after imposing a tariff, we estimate the following staggered difference-in-difference model:

$$DV_{i,t} = \beta_0 + \beta_1 POST_{i,t} + \beta_2 TREAT_{i,t} + \beta_3 INTERACTION_{i,t} + \delta CONTROLS_{i,t} + \varepsilon_{i,t}, \quad (1)$$

where the subscripts i and t refer to firm i and year t , respectively; $DV_{i,t}$ denotes the dependent variable, which represents a set of performance measures including gross profit, revenue, cost, investment (i.e., capital expenditures; research and development; acquisitions; and investing activities), and valuation, as defined in the data section; $POST_{i,t}$ is an indicator variable that is equal to 1 for periods after the treatment year, and 0 for periods before the treatment year; $TREAT_{i,t}$ is an indicator variable for treatment firms (added in the estimation and subsumed by the firm fixed effects); $INTERACTION_{i,t}$ is the interaction of $POST_{i,t}$ and $TREAT_{i,t}$; $CONTROLS_{i,t}$ is a vector of variables that are added as controls for various factors that may relate to firms' performance (i.e., $SIZE$, $TOBINS_Q$, $CF\text{-}to\text{-}ASSETS$, $CASH\text{-}to\text{-}ASSETS$, and LEV), consistent with prior literature (e.g. Fresard and Valta, 2016).¹⁴ We also include firm fixed effects to control for time-invariant firm heterogeneity, and year

¹³ In our robustness tests (Table 5), we use a matched sample and ensure that firms receiving treatment are not compared to firms that already received treatment in recent past, and thus, our staggered difference-in-difference estimates are unbiased (e.g., Barrios, 2021; Baker, Larcker, and Wang, 2022).

¹⁴ All variables are defined in our data section.

fixed effects to control for the time trend. Finally, we correct standard errors by clustering on both firm and year (Petersen, 2009).¹⁵

Our main coefficient of interest in Equation (1) is β_3 , the coefficient of $INTERACTION_{i,t}$, which captures the change in performance for treatment firms after a large tariff increase (first difference), relative to contemporaneous changes in the performance of control firms (second difference). Under the assumption that treatment and control firms share parallel trends in profitability absent changes in tariff, β_3 captures the causal effect of tariff increases on firms' performance (e.g., Angrist and Pischke, 2009). Figure 1 validates the parallel trends assumption.

4.1. Findings: Does Imposing Import Tariffs by the U.S. Government Impact the Profitability of U.S. Firms?

We now turn to reporting this section's findings. We begin by focusing on the overall tariff effects on profitability. In particular, the first column of Table 2 reports results from our first set of tests examining whether imposing tariffs affects the profitability of U.S. firms. The key variable of interest in this analysis is $INTERACTION$, where its estimated coefficient captures the incremental change in the profitability of U.S. treatment firms in response to a shock of imposed import tariffs by the United States. The table reveals a significant positive impact on profitability. More specifically, the estimated coefficient on the interaction variable is 0.046 (t-statistic = 4.151) when analyzing the effect on gross profit. The table also shows that this positive effect of imposed tariffs on the profitability of U.S. firms is not only statistically but also economically significant. Specifically, U.S. firms experience an average increase in gross profit of 4.6% (as a fraction of average total assets), over the post-tariff-increase period. These results suggest that the bottom lines of U.S. firms are improved when the U.S. government imposes import tariffs on foreign firms.

¹⁵ Our results are similar when we cluster by industry.

In the second column of Table 2, we examine the effect on the profitability of U.S. firms of tariff reductions using the same empirical procedure as we do for tariff impositions. This is motivated by prior literature in economics that finds asymmetric effects of tax changes in multiple tax settings (e.g., Benzarti et al., 2020; Hussain and Malik, 2014; Ljungqvist and Smolyansky 2014). Although we focus on the effects of imposing tariffs, we conduct this additional analysis to provide support for the asymmetric effects of tariffs and to facilitate high-level comparison. We have eight tariff increase years and eleven tariff decrease years during our sample period from 1989 – 2017. The estimated coefficient on the interaction variable for tariff reductions is -0.028 (t-statistic = -2.932) suggesting that the effect on the profitability of U.S. firms is larger when tariffs are imposed relative to when tariffs are reduced. Thus, it is important to understand tariff increases separately as evidence on tariff reductions will understate the anticipated effects of imposing tariffs if we assume that the responses are symmetric. Hence, our study focuses on understanding the effect of imposing tariffs.

4.2. *Findings: Effects of Imposing Import Tariffs on the Revenue and Cost of U.S. Firms*

Next we turn to the last two columns of Table 2 that report findings from our second set of tests examining how imposing tariffs affect the revenue and cost of U.S. firms. In this analysis, the key variable of interest is *INTERACTION*, where its estimated coefficient captures the incremental change in revenue and cost of U.S. treatment firms in response to a shock of imposed tariffs by the United States. The results reveal a significant increase in both revenue and cost. More specifically, the estimated coefficients on the interaction variable are 0.206 (t-statistic = 3.966), and 0.158 (t-statistic = 3.726) when analyzing the effects on revenue and cost, respectively.¹⁶ The table also shows that the effect of U.S. imposed tariffs on the revenue and cost of U.S. firms is not only statistically but also economically significant. Specifically, U.S. firms experience an average increase in revenue of 20.6%

¹⁶ In untabulated tests, we also document asymmetric effects of U.S.-imposed tariffs on revenue and costs, further motivating our focus on the effects of imposing tariffs specifically rather than the effects of changes in tariff taxation.

and an average increase in cost of 15.8% (as a fraction of average total assets), over the post-tariff-increase period. These results suggest that U.S.-imposed tariffs result in both increased revenue and cost, but the increased revenue outweighs the passed-through costs on importers stemming from the imposed tariffs, resulting in a net positive effect on profitability.

4.3. *Findings: Effects of Imposing Import Tariffs on the Investing Activities by U.S. Firms*

The first four columns of Table 3 report results from our third set of tests examining whether imposing import tariffs by the U.S. government affects the investing activities of U.S. firms. In this analysis, the key variable of interest is *INTERACTION*, where its estimated coefficient captures the incremental change in investing activities of U.S. treatment firms in response to a shock of imposed import tariffs by the United States. The table reveals a significant increase in investing activities. More specifically, the estimated coefficients on the interaction variable are 0.010 (t-statistic = 3.012), -0.001 (t-statistic = -0.367), 0.001 (t-statistic = 0.185), and 0.023 (t-statistic = 3.151) when analyzing the effects on capital expenditures, research and development, acquisitions, and investing activities, respectively. The results also show that the effect of imposed tariffs on the investing activity of U.S. firms is not only statistically but also economically significant. Specifically, U.S. firms experience an average increase in investing activities of 2.3% (as a fraction of average total assets), over the post-tariff-increase period. These results suggest that U.S. firms experience an increase in capital expenditures and total investments in response to imposed tariffs.

4.4. *Findings: Imposing Import Tariffs and the Valuation of U.S. Firms*

The last column of Table 3 reports results from our fourth set of tests examining whether imposing tariffs by the U.S. government affects U.S. firms' valuations. Our key variable of interest again is *INTERACTION*, where its estimated coefficient captures the incremental change in treatment firms' valuation in response to a shock of imposed tariffs by the United States. The table reveals a significant increase in valuation. More specifically, the estimated coefficients on the interaction

variable are 4.450 (t-statistic = 3.570) when analyzing the effects on firms' valuations, respectively. The table also shows that the effect of the U.S. imposed tariffs on the valuation of U.S. firms is not only statistically but also economically significant. This evidence is consistent with the increase in firms' profitability, as documented in Table 2. These results suggest that U.S. firms experience an increase in their valuation in response to imposed tariffs.

Overall, to summarize our findings from all our analyses of overall tariff effects, the evidence findings thus far reveals that U.S. firms benefit from U.S.-imposed tariffs. Although the imposed tariffs lead to higher trading costs, and thus, to higher cost of goods sold, our evidence suggests that the net effect of imposed tariffs on U.S. firms is positive, on average. Specifically, U.S. firms experience an average increase in profitability, revenue, cost, investment, and valuation, over the post-tariff-increase period.

Indeed, the key takeaways are summarized as follows. The first set of analyses (first column of Table 2), which focuses on examining the effects on profitability, reveals that U.S. firms enjoy an increase in profitability in response to imposed tariffs. This improvement in the profitability of U.S. firms is both statistically and economically significant. Specifically, U.S. firms experience an average increase in gross profit of 4.6% (as a fraction of average total assets), over the post-tariff-increase period. The second set of analyses (the last two columns of Table 2) focuses on breaking down the imposed tariff effects on profitability into revenue and cost. The evidence reveals that U.S. firms experience an increase in both revenue and cost in response to imposed tariffs, with U.S. firms experiencing an average increase in revenue of 20.6% and an average increase in cost of 15.8% (as a fraction of average total assets), over the post-tariff-increase period. These increases in revenue and cost are both statistically and economically significant. The evidence also reveals that the increase in revenue subsumes the increase in cost, resulting in a positive net effect. These results shed light on the improvement in firms' profitability.

The third set of analyses (the first four columns of Table 3) focuses on whether investments by U.S. firms change in response to imposed tariffs. The evidence reveals that U.S. firms experience an increase in investing activities in response to imposed tariffs. Specifically, U.S. firms experience an average increase in investing activities of 2.3% (as a fraction of average total assets), over the post-tariff-increase period. The results also suggest there is a slight increase in capital expenditures and there is no change in acquisitions, and research and development expenses. The fourth set of analyses (the last column of Table 3) focuses on whether U.S. firms' valuations changes in response to imposed tariffs. The evidence reveals that U.S. firms experience an increase in their valuation in response to imposed tariffs. This improvement in U.S. firms' valuations is both statistically and economically significant and it is consistent with the increase in firms' profitability, as documented in Table 2.

5. Cross-Sectional Effects on U.S. Firms from U.S.-Imposed Tariffs

In this section, we complement our previous analyses of overall effects in response to imposing tariffs by examining cross-sectional tariff effects on the profitability of U.S. firms. We build on economic theories and anecdotal evidence to form various cross-sectional predictions that we then empirically test. Figure 2 summarizes our cross-sectional variable definitions, predictions, and reasons for anticipating a differential effect on U.S. firm performance arising from tariff increases. We describe the details of each cross-sectional analysis below.

We begin by investigating whether firms in highly competitive markets benefit more from the imposed tariffs by the U.S. government, where we use the Herfindahl-Hirschman Index (*HHI*) to proxy for the level of competition in the market. Building on economic theory, we posit that competition is likely to play a role in how U.S. firms are affected by imposing tariffs. Specifically, consider the two extreme markets of a monopolistic firm and perfect competition. In the monopolistic case, imposing tariffs on foreign firms does not change the monopolistic nature of the domestic market, leading to no incremental change in the financial performance of the domestic firm.

In contrast, when the market is perfectly competitive, economic theory dictates a shrinking profitability such that the sale price equal to the marginal cost. In such a case, firms are likely to benefit from the reduced competition coming from foreign countries as a result of imposing the tariffs. In between these corner cases, we predict a higher profitability benefit for firms operating in more competitive markets. Therefore, the higher the competition, the higher the profits of U.S. firms. To operationalize our prediction, we interact the *INTERACTION* variable from Equation (1) with *HHI* (i.e., *INTERACTION*HHI*) to assess the incremental effect of the level of competition on the treatment effect. Low values of *HHI* indicate a highly competitive market, while high values of *HHI* indicate a monopolized market. Table 4, Model A, reveals a significant increase in gross profit for firms in highly competitive markets. The estimated coefficient on the interaction with *HHI* is -0.116 (t-statistic = -2.430), suggesting that firms benefit more from imposed tariffs as the level of competition in the market increases.

Second, we examine whether high-growth firms benefit more from U.S.-imposed tariffs, using profitability growth to proxy for the degree of growth. Growth is likely to play a role in how U.S. companies are affected by U.S.-imposed tariffs because high-growth firms tend to have an advantage over other firms. Indeed, high-growth firms often have superior products or services (e.g., Apple Inc., Tesla Inc.) and they are less affected by foreign competition. However, low-growth firms tend to have more traditional products or services that are more affected by foreign production. High (low) values of *GROWTH* indicate high (low) growth firms. We interact our *INTERACTION* variable with *GROWTH* to assess the incremental effect of the degree of growth on the treatment effect. Table 4, Model B, reveals a significant increase in gross profit for relatively low-growth firms. The estimated coefficient on the interaction with *GROWTH* is -0.022 (t-statistic = -2.227), suggesting that as the degree of growth decreases, firms benefit more from tariffs.

The third cross-sectional variable that we examine is innovation, where we investigate whether innovative firms benefit more from the imposed tariffs by the U.S. government. We conjecture that innovation may play a role in how tariffs affect U.S. firms. More innovative firms tend to have a unique local hedge and they often hold more patents and trademarks. Therefore, more innovative firms are less affected by foreign competition. In contrast, less innovative firms tend to be more traditional, manufacturing firms that are more affected by foreign firms which can produce the same products (and often cheaper). We use research and development expenditures (*RD*) to proxy for the level of innovation, where high (low) values of *RD* indicate more (less) innovative firms. We interact the *INTERACTION* variable with the variable *RD* to assess the incremental effect of the level of innovation on the treatment effect. Table 4, Model C, reveals a significant increase in gross profit for less innovative firms. The estimated coefficient on the interaction with *RD* is -3.796 (t-statistic = -6.739), suggesting that as the level of innovation decreases, firms benefit more from tariffs.

The fourth cross-sectional analysis focuses on financial health. We examine whether financially distressed firms benefit more from imposing domestic tariffs. Financial distress is likely to play a role in how domestic firms are affected by imposing tariffs. The logic is that more financially distressed firms are more exposed to higher predation risk, making them more likely to aggressively reduce prices to survive (e.g., Chen et al. 2019). Therefore, we conjecture that financially distressed firms will benefit more from the imposed tariffs, as it reduces their predation risk coming from foreign firms. We use the Altman Z-Score Bankruptcy Likelihood Score (*ALTMAN*) to proxy for the level of financial distress. High (low) values of *ALTMAN* indicate less (more) financially distressed firms. Again, the interaction between *INTERACTION* and *ALTMAN* allows assessing the incremental effect of the level of financial distress on the treatment effect. Table 4, Model D, reveals a significant increase in gross profit for more financially distressed firms, where the estimated coefficient on the interaction

with *ALTMAN* is -0.022 (t-statistic = -2.227) indicating that as the level of financial distress increases, firms benefit more from the imposed tariffs.

The next cross-sectional analysis focuses on size, where we examine whether small firms benefit more from tariffs imposed by the U.S. government. We conjecture that firms' size is likely to play a role in how U.S. firms are affected by U.S.-imposed tariffs, due to varying levels of barriers to entry. In particular, imposing tariffs increases the barrier to entry facing foreign firms. Because barriers to entry imposed on foreign firms protect U.S. firms, especially the small ones, against foreign predators, smaller firms are likely to benefit more from increasing the barriers to entry. We classify firms in the lowest (other) quartile of the *SIZE* distribution as small (not-small). We interact the *INTERACTION* variable with the indicator variable *SMALL* to assess the incremental effect of the size of the firm on the treatment effect. Table 4, Model E, shows a significant increase in gross profit for small firms. The estimated coefficient on the interaction with Small is -0.022 (t-statistic = -2.227), suggesting that as the size of the firm decreases, firms benefit more from the imposed tariffs.

Our next cross-sectional analysis focuses on profit margins, calculated as the percentage of net income out of revenue. We conjecture a differential tariff effect in the cross section of U.S. firms depending on firms' profit margins because high profit margins are likely to capture product market power. Indeed, a firm's margins capture an estimate of the extent to which a firm's selling price exceeds a broad measure of marginal cost. Firms with high margins have product market power because they do not operate in a purely competitive product market where economic profits are zero and prices are driven to marginal costs (e.g., Kubick et al., 2015). Accordingly, we predict that, in response to imposing tariffs, U.S. firms with high/low profit margins, and thus high/low product market power, will have greater/lower power to exploit the tariff increase to their own benefit (e.g., through acquisitions by firms with high product market power). To test this prediction, we interact our *INTERACTION* variable with *NL_MARGIN* to assess the incremental effect of profit margins on

the treatment effect. Table 4, Model F, reveals a significant incremental effect on the interaction variable with margins, with an estimated coefficient on the *INTERACTION*NI_MARGINS* of 0.001 (t-statistic = 11.39), indicating that high-margins U.S. firms enjoy a higher profitability from U.S. imposed tariffs relative to low-margins U.S. firms.

Finally, we form cross-sectional predictions based on U.S. firms that experience losses. The economic intuition is that, whereas imposing tariffs can help U.S. firms on average, they cannot save losing firms that experience major problems beyond the ability of tariffs to solve. In fact, anecdotal evidence suggests that it is not obvious in all cases what the performance effect of imposing tariffs would be.¹⁷ To test our predictions, we define two variables: (a) *BIG_LOSS*, which is equal to one if a firm's loss is greater than the 95th percentile loss in our sample, and zero otherwise; (b) *LOSS_SEQ*, which is equal to one if a firm experiences three consecutive years of losses, and zero otherwise. Similar to the design in the previous cross-sectional analyses, we interact the *INTERACTION* variable with either *BIG_LOSS* or *LOSS_SEQ* to assess the incremental effect of either of these loss-related variables on the treatment effect. We predict that the estimated coefficient on these interaction variables will be negative, given that U.S.-imposed tariffs are less likely to improve the profitability of U.S. loss firms. Table 4, Models G and H, reports the results for the incremental effect on the interaction with *BIG_LOSS* and *LOSS_SEQ*, respectively. The table shows a significant decrease in gross profit for both loss variables (at least at the 10 percent significance level). The estimated coefficient on the interaction with *BIG_LOSS* is -0.111 (t-statistic = -3.381) and with *LOSS_SEQ* is -0.124 (t-statistic = -1.803), suggesting that U.S. firms with substantial or sequential losses benefit less from U.S.-imposed tariffs relative to non-loss firms.

¹⁷ For example, see: https://www.bloomberg.com/news/articles/2023-03-17/california-olive-industry-offers-warning-for-chip-protectionism?utm_campaign=news&utm_medium=bd&utm_source=applenews.

Overall, to summarize our cross-sectional analyses, we predict and find cross-sectional differences in the effect of tariffs on U.S. firms (Table 4). Importantly, while U.S. firms on average experience profitability improvement in response to U.S.-imposed tariffs, our cross-sectional analyses reveal that this improvement is greater for firms that are small, have high profit margins, operate in highly competitive markets, have low growth rates, are less innovative, more financially distressed, or recently experience major/sequential losses.

6. Additional Analyses

We complement our analysis using a number of robustness tests by performing matched sample tests based on the propensity score matching method. To construct our matched sample, we first estimate a logistic model for each year, where the dependent variable is an indicator variable for firms in industries with a large tariff increase during the year and the regressors are the same control variables as in Equation (1) (i.e., *SIZE*, *TOBINS_Q*, *CF-to-ASSETS*, *CASH-to-ASSETS*, and *LEV*). We then match each treatment firm to a control firm based on the closest propensity score measured in the year before the tariff increase.¹⁸

Table 5 reports results from the set of tests examining the effects of imposed tariffs on accounting performance, investment, and valuation of U.S. firms, based on a matched sample. The results reveal similar inferences to those from our earlier analyses without matching. More specifically, the estimated coefficients on the interaction variable are 0.069 (t-statistic = 2.540), 0.247 (t-statistic = 2.939), 0.176 (t-statistic = 2.683), 0.016 (t-statistic = 2.211), 0.025 (t-statistic = 1.872), and 4.856 (t-statistic = 2.569), when analyzing the effects on gross profit, revenue, cost, capital expenditures,

¹⁸ We use the nearest neighbor matching and impose a maximum distance of 0.1. Also, we verify that there is no significant difference between treatment and control firms across all the control variables. Moreover, we ensure that firms receiving treatment are not compared to firms that already received treatment in recent past, to alleviate concerns that our staggered difference-in-difference estimates are biased (e.g., Barrios, 2021; Baker, Larcker, and Wang, 2022).

investing activities, and firms' valuation, respectively. These findings indicate that the main findings are unlikely to be driven by differences between our test firms and control firms.

7. Conclusion

This paper provides a systematic inquiry into how imposing import tariffs by the U.S. government affects the accounting performance, investment activities, and valuation of U.S. firms. Using difference-in-differences analyses of material tariffs imposed by the U.S. government over the past four decades, we first document that the bottom lines of U.S. firms improve when the U.S. government imposes import tariffs on foreign firms. Although imposing tariffs leads to both increased revenue and cost, the increased revenue outweighs the passed-through costs on importers stemming from the imposed tariffs, resulting in a net positive effect on profitability.

Importantly, we also predict and find cross-sectional differences in the effect of tariffs on U.S. firms. While U.S. firms on average experience profitability improvement in response to U.S.-imposed tariffs, our cross-sectional analyses reveal that this improvement is greater for firms that are small, have high profit margins, operate in highly competitive markets, have low growth rates, are less innovative, more financially distressed, or recently experience major/sequential losses.

We contribute to accounting research by documenting that U.S.-imposed tariffs improve the accounting profitability, capital expenditures, total investment, and equity valuation of U.S. firms. We also identify major cross-sectional drivers for how U.S.-imposed tariffs affects U.S. firms. As global trade tensions intensify, it is important to understand the effects of imposing tariffs on firms' bottom-line performance. Our paper takes a focused approach examining only quantifiable financial aspects of U.S. firms. While our findings suggest that U.S. firms benefit from the U.S.-imposed tariffs, our findings do not suggest that U.S. tariffs have a net positive outcome for the U.S. economy as a whole.

We also contribute to the tax accounting literature that traditionally focuses on income taxes (e.g., Maydew, 2001; Shevlin, 2020). Our work complements prior literature by looking at an important form of taxes and showing its accounting and valuation effects on domestic firms. Furthermore, our paper has the potential to open a new line of accounting research on import tariffs, involving various research questions on the intersection between tariffs and more traditional accounting settings.

Additionally, we contribute to the literature connecting accounting measures and the real economy by shedding light on how tariff shocks affect firms' accounting and stock performance (e.g., Konchitchki, 2011; Srivastava, 2014; Armstrong et al., 2019; Ball et al., 2022; Kottimukkalur et al. 2022). We also complement prior literature on international trade, competition, and models of threats by showing the overall resulting effect on U.S. firms from U.S.-imposed tariffs (e.g., Darrough and Stoughton, 1990; Darrough, 1993; Grossman and Helpman, 1994).

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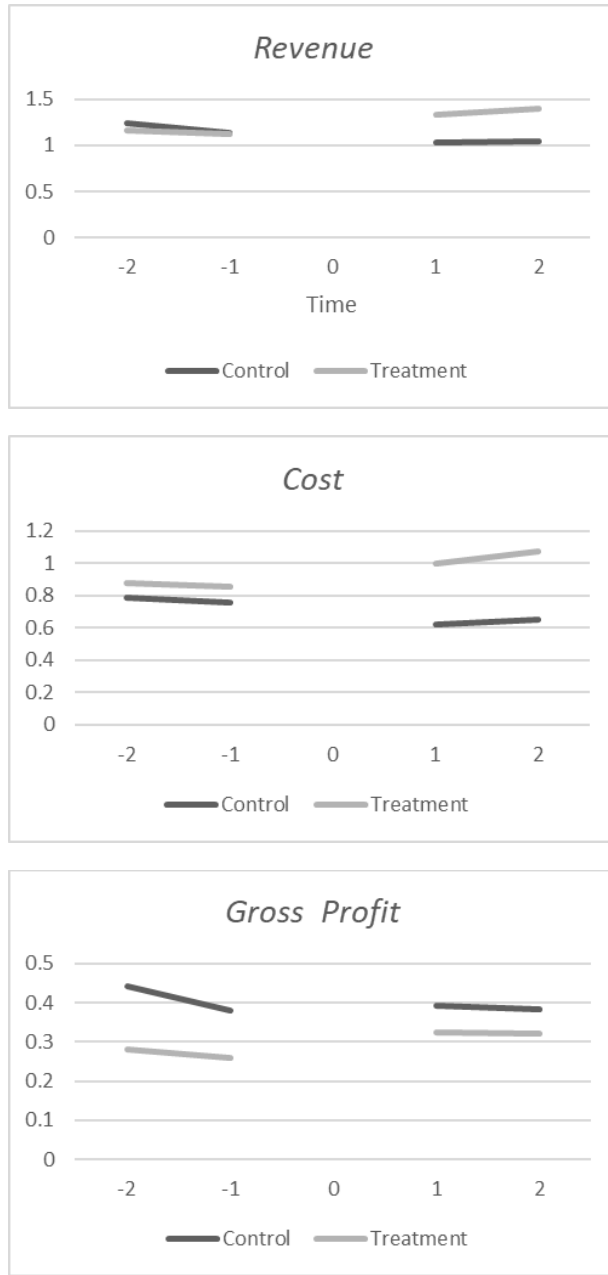
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Figure 1 – Parallel Trends Assumption



This figure provides validation analysis results of the parallel trends assumption. Under the assumption that treatment and control firms share parallel trends in profitability absent changes in tariff, our coefficient of interest on the interaction variable in our Equation (1) models captures the change in performance for treatment firms after a large tariff increase (first difference), relative to contemporaneous changes in the performance of control firms (second difference). If the assumption is valid, then this coefficient captures the causal effect of tariff increases on firms' performance (e.g., Angrist and Pischke, 2009).

Figure 2 – Summary of Cross-Sectional Predictions

Model	Interaction Variable	Variable Definition	Prediction	Explanation
A	HHI	Herfindahl-Hirschman Index. High values indicate a less competitive market.	-	Firms are more likely to benefit from the reduced competition coming from foreign countries as a result of imposing the tariffs.
B	GROWTH	GROWTH is measured as profitability growth. Profitability is measured as operating income (OIADP) scaled by average assets, and profitability growth is measured as the change in profitability.	-	Low-growth firms tend to have more traditional products or services that are more affected by foreign production, so will benefit more from tariffs.
C	RD	R&D / Average assets	-	More innovative firms are less affected by foreign competition, so will benefit less from tariffs.
D	ALTMAN	Altman Z-Score Bankruptcy Likelihood Score. High values indicate a less financially distressed firm.	-	The logic is that more financially distressed firms are more exposed to higher predation risk, making them more likely to aggressively reduce prices to survive. Thus, they will benefit more from tariffs.
E	SMALL	Equal to one if a firm's log of total assets is in the smallest quartile of the distribution in our sample, and zero otherwise.	+	Because barriers to entry imposed on foreign firms protect U.S. firms, especially the small ones, against foreign predators, smaller firms are likely to benefit more from increasing the barriers to entry.
F	NL_MARGIN	Net income / Revenue	+	U.S. firms with high/low profit margins, and thus high/low product market power, will have greater/lower power to exploit the tariff increase to their own benefit. Assumes profit margin is a good proxy for product market power.
G	BIG_LOSS	Equal to one if a firm's loss is greater than the 95th percentile loss in our sample, and zero otherwise.	-	Whereas imposing tariffs can help U.S. firms on average, they cannot save losing firms that experience major problems beyond the ability of tariffs to solve.
H	LOSS_SEQ	Equal to one if a firm experiences three consecutive years of losses, and zero otherwise.	-	Same explanation as above for BIG_LOSS.

Table 1 - Descriptive Statistics

	Mean	Std.Dev	P10	P25	P50	P75	P90	N
Full Subsample								
<i>GrossProfit</i>	0.2645	0.4026	-0.0045	0.0049	0.1606	0.4743	0.8017	105004
<i>Revenue</i>	0.8456	0.9409	0.0001	0.0509	0.5049	1.3858	2.2111	105012
<i>Cost</i>	0.5838	0.6980	0.0009	0.0466	0.3214	0.8903	1.5431	105004
<i>CAPEX</i>	0.0666	0.1082	0.0002	0.0040	0.0269	0.0788	0.1730	103937
<i>RD</i>	0.1222	0.2210	0.0008	0.0074	0.0391	0.1385	0.3231	65508
<i>ACQ</i>	0.0206	0.0737	0.0000	0.0000	0.0000	0.0000	0.0427	101155
<i>INVEST</i>	-0.0845	0.1942	-0.2981	-0.1257	-0.0300	-0.0009	0.0130	102540
<i>MarketValue</i>	2.1493	8.6420	0.0050	0.0200	0.1025	0.6247	3.3719	98542
<i>TOBINS_Q</i>	4.9799	24.3496	0.8583	1.1133	1.5921	2.7668	5.7731	98137
<i>SIZE</i>	4.5191	2.6856	1.2022	2.7549	4.4634	6.3223	8.0408	110780
<i>CF-to-ASSETS</i>	-0.4703	2.4783	-0.8275	-0.2174	0.0050	0.0635	0.1171	109802
<i>CASH-to-ASSETS</i>	0.2225	0.2636	0.0055	0.0255	0.1077	0.3280	0.6753	110691
<i>LEV</i>	0.1735	0.2618	0.0000	0.0000	0.0773	0.2558	0.4493	110574
Treatment Subsample								
<i>GrossProfit</i>	0.3672	0.3941	0.0014	0.0506	0.2873	0.5956	0.9045	33448
<i>Revenue</i>	1.1058	1.0234	0.0189	0.1901	0.8699	1.7651	2.5578	33451
<i>Cost</i>	0.7371	0.7639	0.0135	0.1149	0.5054	1.1264	1.7896	33448
<i>CAPEX</i>	0.0678	0.0962	0.0006	0.0067	0.0349	0.0872	0.1699	32970
<i>RD</i>	0.0859	0.1445	0.0009	0.0080	0.0347	0.1043	0.2239	22205
<i>ACQ</i>	0.0228	0.0750	0.0000	0.0000	0.0000	0.0007	0.0555	31892
<i>INVEST</i>	-0.0807	0.1656	-0.2629	-0.1269	-0.0367	-0.0019	0.0096	32417
<i>MarketValue</i>	3.4585	11.6502	0.0046	0.0190	0.1136	0.9824	7.0888	33261
<i>TOBINS_Q</i>	2.4920	6.6340	0.8705	1.0881	1.4587	2.2106	3.8450	33194
<i>SIZE</i>	4.8948	2.7598	1.4757	2.9286	4.7241	6.7726	8.7530	35659
<i>CF-to-ASSETS</i>	-0.1321	1.0748	-0.3399	-0.0516	0.0322	0.0775	0.1256	35459
<i>CASH-to-ASSETS</i>	0.1624	0.2016	0.0061	0.0221	0.0814	0.2259	0.4409	35631
<i>LEV</i>	0.1741	0.2160	0.0000	0.0047	0.1163	0.2632	0.4182	35617
Control Subsample								
<i>GrossProfit</i>	0.2164	0.3974	-0.0273	0.0000	0.1063	0.4039	0.7342	71556
<i>Revenue</i>	0.7240	0.8737	0.0000	0.0227	0.3663	1.1805	1.9921	71561
<i>Cost</i>	0.5121	0.6528	0.0000	0.0276	0.2516	0.7670	1.4010	71556
<i>CAPEX</i>	0.0660	0.1133	0.0001	0.0031	0.0233	0.0744	0.1752	70967
<i>RD</i>	0.1407	0.2493	0.0007	0.0070	0.0427	0.1607	0.3897	43303
<i>ACQ</i>	0.0197	0.0731	0.0000	0.0000	0.0000	0.0000	0.0366	69263
<i>INVEST</i>	-0.0863	0.2061	-0.3178	-0.1249	-0.0270	-0.0006	0.0148	70123
<i>MarketValue</i>	1.4822	6.5012	0.0053	0.0207	0.0983	0.5206	2.2890	65281
<i>TOBINS_Q</i>	6.2515	29.4734	0.8497	1.1297	1.6949	3.1461	6.9977	64943
<i>SIZE</i>	4.3408	2.6309	1.0613	2.6696	4.3570	6.1210	7.7240	75121
<i>CF-to-ASSETS</i>	-0.6317	2.9052	-1.0816	-0.3246	-0.0218	0.0540	0.1112	74343
<i>CASH-to-ASSETS</i>	0.2510	0.2839	0.0053	0.0280	0.1263	0.3955	0.7502	75060
<i>LEV</i>	0.1733	0.2810	0.0000	0.0000	0.0542	0.2515	0.4662	74957

This table provides descriptive statistics for key variables used in the analyses. The sample includes 105,004 firm-year observations, with broken down samples presenting the treatment and controls subsamples. *GrossProfit* is the difference between revenue and cost scaled by average asset; *Revenue* is sales [Compustat: SALE] scaled by the average (over two successive periods) of total assets [Compustat: AT]; *Cost* is cost of goods sold [Compustat: COGS] scaled by average total assets; *CAPEX* is capital expenditures [Compustat: CAPX] scaled by average assets; *RD* is research and development expense [Compustat: XRD] scaled by average assets; *ACQ* is acquisitions [Compustat: AQC] scaled by average assets; *INVEST* is measured as investing activities scaled by average assets [Compustat: -IVNCF]; *MarketValue* is fiscal year-end price multiplied by the number of common shares outstanding in billion dollars [Compustat: CSHO*PRCC_F]; *TOBINS_Q* is market value of assets divided by book value of assets, capturing investment opportunities [Compustat: AT-CEQ+(CSHO*PRCC_F)/AT]; *SIZE* is the logarithm of total assets; *CF-to-ASSETS* is income before extraordinary items [Compustat: IBC] scaled by total assets; *CASH-to-ASSETS* is cash and cash equivalents [Compustat: CHE] scaled by total assets; *LEV* is long-term debt [Compustat: DLT] scaled by total assets.

Table 2 - Does Imposing Import Tariffs by the U.S. Government Impact the Profitability of U.S. Firms?

	INCREASE	DECREASE	INCREASE	DECREASE
	<i>GrossProfit</i>	<i>GrossProfit</i>	<i>Revenue</i>	<i>Cost</i>
<i>INTERACTION</i>	0.046***	-0.028***	0.206***	0.158***
<i>t-stat</i>	4.151	(-2.932)	3.966	3.726
<i>TOBINS_Q</i>	0.001***	0.001***	0.001**	-0.001***
<i>t-stat</i>	4.816	(5.617)	2.493	-3.752
<i>SIZE</i>	0.017***	0.016***	0.030***	0.011**
<i>t-stat</i>	5.749	(5.742)	4.936	2.578
<i>CF-to-ASSETS</i>	0.010***	0.011***	0.002	-0.013***
<i>t-stat</i>	6.102	(7.635)	0.904	-6.233
<i>CASH-to-ASSETS</i>	-0.144***	-0.138***	-0.404***	-0.264***
<i>t-stat</i>	-11.176	(-11.695)	-13.120	-11.770
<i>LEV</i>	-0.040***	-0.037***	-0.043**	-0.000
<i>t-stat</i>	-4.526	(-4.662)	-2.445	-0.015
<i>INTERCEPT</i>	0.216***	0.235***	0.749***	0.543***
<i>t-stat</i>	15.700	(18.801)	24.917	23.105
<i>INCREASE=DECREASE</i>				
<i>Mean Difference</i>		0.263		
<i>P-value</i>		0.00		
Firm Fixed Effects	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
N	91,867	91,721	91,867	91,867
<i>Adj. R²</i>	0.588	0.591	0.561	0.531

This table reports results from difference-in-differences analysis examining the effects of imposing import tariffs on the profitability of U.S. firms. The sample includes 91,867 and 91,721 firm-year observations for the increase and decrease samples, respectively. Although we follow a similar process for increases and decreases, the resulting number of observations is different as different observations are dropped in the process. *GrossProfit* is the difference between revenue and cost, scaled by average total assets; *Revenue* is sales scaled by the average of total assets; *Cost* is cost of goods sold scaled by average total assets. *TREAT* is an indicator for treatment firms, which are firms that experience an increase in tariff. *POST* is an indicator for firm-year observations after the treatment year. *INTERACTION* is the interaction of *POST* and *TREAT*. Coefficient estimates for *TREAT* are suppressed because of firm fixed effects. Table 1 provides more detailed variable definitions including on the control variables. The t-statistics are calculated based on standard errors obtained by clustering by firm and year. *, **, *** Denote statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

Table 3 - Imposing Tariffs: Effects on the Investing Activities and Valuation of U.S. Firms

	<i>Measures of Investing Activities</i>				<i>Valuation</i>
	<i>CAPEX</i>	<i>RD</i>	<i>ACQ</i>	<i>INVEST</i>	<i>MarketValue</i>
<i>INTERACTION</i>	0.010***	-0.001	0.001	0.023***	4.450***
<i>t-stat</i>	3.012	-0.367	0.185	3.151	3.570
<i>TOBINS_Q</i>	0.000*	-0.000***	0.000***	0.000***	0.008***
<i>t-stat</i>	1.999	-3.927	4.113	3.277	3.427
<i>SIZE</i>	0.013***	-0.004**	0.011***	0.036***	0.882***
<i>t-stat</i>	14.317	-2.164	11.892	16.250	8.103
<i>CF-to-ASSETS</i>	-0.001***	-0.008***	-0.001***	-0.002**	-0.058***
<i>t-stat</i>	-5.755	-4.699	-6.446	-2.547	-4.543
<i>CASH-to-ASSETS</i>	-0.037***	-0.026***	-0.032***	-0.006	0.237
<i>t-stat</i>	-11.127	-3.227	-13.723	-0.494	1.237
<i>LEV</i>	-0.004**	0.004	0.018***	0.008	-0.266*
<i>t-stat</i>	-2.190	0.543	5.317	1.313	-1.970
<i>INTERCEPT</i>	0.014***	0.142***	-0.024***	-0.094***	-3.463***
<i>t-stat</i>	3.374	13.771	-5.100	-7.209	-4.976
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
N	91,176	57,482	88,627	89,921	96,709
Adj. R ²	0.521	0.480	0.218	0.258	0.762

This table reports results from difference-in-differences analyses examining the effects of imposing import tariffs on the investing activities and the valuation of U.S. firms. The sample includes 91,176 firm-year observations. *CAPEX* is capital expenditures scaled by average total assets, *RD* is research and development expenses scaled by average total assets, *ACQ* is acquisitions scaled by average total assets, and *INVEST* is investing activities scaled by average total assets. *MarketValue* is measured as the product of fiscal year-end price and the number of common shares outstanding in billion dollars. *TREAT* is an indicator for treatment firms, which are firms that experience an increase in tariff. *POST* is an indicator for firm-year observations after the treatment year. *INTERACTION* is the interaction of *POST* and *TREAT*. Coefficient estimates for *TREAT* are suppressed because of firm fixed effects. Table 1 provides more detailed variable definitions including on the control variables. The t-statistics are calculated based on standard errors obtained by clustering by firm and year. *, **, *** Denote statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

Table 4 - Cross-Sectional Tariff Effects on U.S. Firms

	Prediction	Model A	Model B	Model C	Model D
<i>INTERACTION</i>	+	0.052***	0.043***	0.134***	0.068***
<i>t-stat</i>		3.761	4.096	6.994	3.458
<i>INTERACTION * HHI</i>	-	-0.116**	.	.	.
<i>t-stat</i>		-2.430	.	.	.
<i>INTERACTION * GROWTH</i>	-	.	-0.864***	.	.
<i>t-stat</i>		.	-15.019	.	.
<i>INTERACTION * RD</i>	-	.	.	-3.796***	.
<i>t-stat</i>		.	.	-6.739	.
<i>INTERACTION * ALTMAN</i>	-	.	.	.	-0.022**
<i>t-stat</i>		.	.	.	-2.227
TOBINS_Q		0.001***	0.001***	0.001***	0.001***
<i>t-stat</i>		5.166	5.324	3.875	5.167
SIZE		0.017***	0.016***	0.020***	0.018***
<i>t-stat</i>		5.820	5.568	4.622	6.021
CF-to-ASSETS		0.009***	0.009***	0.010***	0.009***
<i>t-stat</i>		5.355	5.394	3.766	5.405
CASH-to-ASSETS		-0.132***	-0.131***	-0.195***	-0.134***
<i>t-stat</i>		-11.078	-11.259	-13.288	-11.057
LEV		-0.049***	-0.050***	-0.049***	-0.049***
<i>t-stat</i>		-6.606	-6.871	-5.818	-6.511
HHI		-0.028	.	.	.
<i>t-stat</i>		-1.194	.	.	.
TREAT * HHI		0.190**	.	.	.
<i>t-stat</i>		2.334	.	.	.
GROWTH		.	0.000	.	.
<i>t-stat</i>		.	0.532	.	.
TREAT * GROWTH		.	0.882***	.	.
<i>t-stat</i>		.	15.648	.	.
RD		.	.	-0.044	.
<i>t-stat</i>		.	.	-1.125	.
TREAT * RD		.	.	4.406***	.
<i>t-stat</i>		.	.	7.752	.
ALTMAN		.	.	.	-0.000***
<i>t-stat</i>		.	.	.	-6.099
TREAT * ALTMAN		.	.	.	0.022**
<i>t-stat</i>		.	.	.	2.227
INTERCEPT		0.216***	0.219***	0.218***	0.209***
<i>t-stat</i>		14.040	15.879	9.630	14.244
Firm Fixed Effects		Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes
N		91,695	86,920	57,388	90,246
Adj. R ²		0.592	0.596	0.611	0.593

	Prediction	Model E	Model F	Model G	Model H
<i>INTERACTION</i>	+	0.052***	0.042***	0.042***	0.043***
<i>t-stat</i>		3.057	2.920	2.769	2.934
<i>INTERACTION * SMALL</i>	+	1.061***	.	.	.
<i>t-stat</i>		27.818	.	.	.
<i>INTERACTION * NI_MARGIN</i>	+	.	0.001***	.	.
<i>t-stat</i>		.	11.390	.	.
<i>INTERACTION * BIG_LOSS</i>	-	.	.	-0.111***	.
<i>t-stat</i>		.	.	-3.381	.
<i>INTERACTION * LOSS_SEQ</i>	-	.	.	.	-0.124*
<i>t-stat</i>		.	.	.	-1.803
TOBINS_Q		0.013***	0.002***	0.001***	0.001***
<i>t-stat</i>		4.092	5.058	5.677	5.653
SIZE		0.010**	0.019***	0.020***	0.016***
<i>t-stat</i>		2.493	5.797	7.525	5.688
CF-to-ASSETS		0.243***	0.019***	0.010***	0.011***
<i>t-stat</i>		6.344	6.141	7.490	7.603
CASH-to-ASSETS		-0.243***	-0.183***	-0.140***	-0.139***
<i>t-stat</i>		-12.490	-13.822	-12.045	-11.844
LEV		-0.055***	-0.046***	-0.026***	-0.035***
<i>t-stat</i>		-3.614	-5.221	-3.607	-4.553
SMALL		-0.017*	.	.	.
<i>t-stat</i>		-2.010	.	.	.
NI_MARGIN		.	0.000***	.	.
<i>t-stat</i>		.	3.278	.	.
TREAT * NI_MARGIN		.	-0.001***	.	.
<i>t-stat</i>		.	-11.104	.	.
BIG_LOSS		.	.	-0.147***	.
<i>t-stat</i>		.	.	-10.265	.
TREAT * BIG_LOSS		.	.	0.115***	.
<i>t-stat</i>		.	.	3.994	.
LOSS_SEQ		.	.	.	-0.037***
<i>t-stat</i>		.	.	.	-6.765
TREAT * LOSS_SEQ		.	.	.	0.137*
<i>t-stat</i>		.	.	.	1.929
INTERCEPT		0.303***	0.237***	0.209***	0.227***
<i>t-stat</i>		12.164	14.659	16.866	17.003
Firm Fixed Effects		Yes	Yes	Yes	Yes
Year Fixed Effects		Yes	Yes	Yes	Yes
N		70,314	83,803	91,718	91,718
Adj. R ²		0.622	0.579	0.595	0.591

This table reports results from estimating difference-in-differences models examining cross-sectional effects of imposing import tariffs on the profitability of U.S. firms. *TREAT* is an indicator for treatment firms (firms whose industry experiences an increase in tariffs). *POST* is an indicator for firm-years after the treatment year. *INTERACTION* is *POST*TREAT*. Coefficient estimates for *TREAT* are suppressed because of firm fixed effects. Profitability captures a firm's profitability, operationalized as the firm's gross profit (defined as revenue minus cost, scaled by average total assets). Table 1 provides more detailed variable definitions. The t-statistics are calculated based on standard errors obtained by clustering by firm and year. *, **, *** Denote statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

Table 5 – Robustness Tests

	<i>GrossProfit</i>	<i>Revenue</i>	<i>Cost</i>	<i>CAPEX</i>	<i>RD</i>	<i>ACQ</i>	<i>INVEST</i>	<i>MarketValue</i>
<i>INTERACTION</i>	0.069**	0.247***	0.176**	0.016**	-0.000	-0.002	0.025*	4.856**
<i>t-stat</i>	2.540	2.939	2.683	2.211	-0.040	-0.254	1.872	2.569
<i>TOBINS_Q</i>	0.016**	0.022**	0.006	0.002***	0.000	0.001**	0.004***	0.346**
<i>t-stat</i>	2.675	2.624	1.423	3.109	0.493	2.245	2.834	2.669
<i>SIZE</i>	0.007	0.040	0.030	0.011***	-0.004	0.017***	0.028***	2.984***
<i>t-stat</i>	0.682	1.204	1.106	3.078	-1.333	5.104	4.941	4.134
<i>CF-to-ASSETS</i>	0.084**	0.131**	0.041*	0.007**	0.002	0.002	0.009	0.870
<i>t-stat</i>	2.634	2.692	1.923	2.125	0.914	0.772	1.497	1.469
<i>CASH-to-ASSETS</i>	-0.086	-0.391**	-0.306**	-0.034**	-0.003	-0.038**	1.497	-1.266
<i>t-stat</i>	-1.544	-2.501	-2.669	-2.652	-0.172	-2.670	-1.610	-0.493
<i>LEV</i>	-0.079*	-0.229*	-0.149	-0.002	0.006	0.031***	0.044***	-3.756**
<i>t-stat</i>	-2.007	-1.826	-1.449	-0.261	0.284	3.293	2.976	-2.479
<i>POST</i>	-0.016	-0.016	-0.001	-0.007	0.005	0.003	-0.003	-1.542
<i>t-stat</i>	-0.668	-0.225	-0.012	-0.962	1.124	0.496	-0.270	-1.461
						-		
<i>INTERCEPT</i>	0.284***	0.944***	0.685***	0.001	0.065**	0.095***	-0.115**	-13.285**
<i>t-stat</i>	4.145	4.049	3.599	0.041	2.658	-3.801	-2.753	-2.634
Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	4,234	4,234	4,234	4,180	2,333	3,968	4,089	4,416
Adj. R ²	0.580	0.461	0.488	0.504	0.648	0.190	0.261	0.785

This table reports results from difference-in-differences analysis examining the effects of imposing import tariffs on the accounting performance, investment activities, and valuation of U.S. firm by using a matched sample. The sample includes 4,234 firm-year observations. *GrossProfit* is the difference between revenue and cost scaled by average asset; *Revenue* is sales scaled by the average of total assets; *Cost* is cost of goods sold scaled by average total assets; *CAPEX* is capital expenditures scaled by average total assets, *RD* is research and development expense scaled by average total assets, *ACQ* is acquisitions scaled by average total assets, and *INVEST* is investing activities scaled by average total assets; *MarketValue* is the product of fiscal year-end price and the number of common shares outstanding in billion dollars. *TREAT* is an indicator for treatment firms, which are firms that experience an increase in tariff. *POST* is an indicator for firm-year observations after the treatment year. *INTERACTION* is the interaction of *POST* and *TREAT*. Coefficient estimates for *TREAT* are suppressed because of firm fixed effects. Table 1 provides more detailed variable definitions including on the control variables. The t-statistics are calculated based on standard errors obtained by clustering by firm and year. *, **, *** Denote statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively.