Selling Indulgences: The Political Economy of Tariff Exemption Grants

Veljko Fotak
School of Management, SUNY Buffalo
Sovereign Investment Lab, Baffi CAREFIN, Bocconi University
e-mail: *veljkofo@buffalo.edu*

Hye Seung (Grace) Lee
Gabelli School of Business, Fordham University
e-mail: *hlee126@fordham.edu*

William L. Megginson
Michael F. Price College of Business, The University of Oklahoma
Visiting Professor, University of International Business & Economics (Beijing)
e-mail: *wmegginson@ou.edu*

Jesus M. Salas
Perella Department of Finance, Lehigh University
e-mail: *jsalas@lehigh.edu*

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Abstract

We investigate whether firm-level political connections affect the allocation of exemptions from the tariffs imposed on $550 billion of Chinese goods imported to the United States annually beginning in 2018. Our evidence points to politicians not only rewarding supporters, but also punishing the opposition: past campaign contributions to the party controlling (in opposition to) the executive branch increase (decrease) approval likelihood. Our results are robust to tests accounting for the non-random nature of political connections and point to *quid pro quo* arrangements between politicians and firms, as opposed to the "information" channel linking access to politicians to regulatory outcomes.

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1. He has received salary income in excess of $10,000 over the past three years from the universities and journals listed below.
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The combined value of merchandise trade between China and the United States reached $660 billion in 2018, by far the largest bilateral trading relationship in history. The value of Chinese goods exports to the U.S. grew from about one percent of America's GDP in 2000, the year before China joined the World Trade Organization (WTO), to almost three percent in 2018, and trade between the two nations during this period was largely governed by World Trade Organization (WTO) rules. Donald Trump's election as US president in 2016 foreshadowed a dramatic change in the rules governing Sino-American trade and, starting in July 2018, President Trump's Office of U.S. Trade Representative (USTR) began unilaterally imposing tariffs on an ever-expanding set of Chinese imported goods, which by September 2019 had grown to cover almost all $550 billion worth of merchandise imports. Since the Chinese government unsurprisingly retaliated with tariffs on US merchandise exports to China, and both sets of tariffs remain in place today (Davis and Hayashi, 2021), within three years the USTR tariffs and the Chinese reciprocal tariffs had directly impacted bilateral trade worth about $2 trillion.

Simultaneously with imposing the new tariffs on Chinese imports, the USTR also established a *de novo* process through which American importers could apply for exemptions from tariffs on individual products. Unlike the first-ever exemption granting process established earlier in 2018 for the steel and aluminum tariffs imposed by President Trump (Crooks and Fei (2018)), which were administered by the U.S. Department of Commerce and overseen by an Inspector General, the Chinese tariff exemption grant process was not subject to effective legislative or regulatory oversight (Rice (2019)). We liken the establishment of the USTR's tariff imposition and exemption granting regime to the medieval practice of selling indulgences and examine whether political connections played a significant role in the design of the tariff regime or, especially, the awarding of tariff exemptions. We document that this process worked—at least partly—as a very effective spoils system allowing the administration of the day to reward its political friends and punish its enemies.

Our investigation focuses on the tariff exemption process linked to the four tariff lists imposed by the Trump administration on imported Chinese goods between July 2018 and

September 2019. As noted, this tariff regime ultimately affects imports worth around $550 billion annually under tariff at an average rate of about 20%, theoretically yielding record tariff proceeds of $110 billion annually.[1] With the stated goal "to prevent harm to American interests," US trade authorities initiated a parallel tariff exemption process. As described in Lighthizer (2018), exemption grants would be more likely if (1) implementing the tariff on a product would impose significant harm on American interests; (2) substitute products are not available in the United States or from third countries besides China; or (3) the products are not deemed to be strategically important to China. The USTR identified products as "strategically important" if they were covered under the "Made in China 2025" (henceforth, "China 2025") industrial policy adopted by China in 2013, as described in Liu, Megginson and Xia (2021).[2]

We examine empirically whether actual exemption grants are based on these expressed criteria or on political connections, or both. We manually assemble a unique dataset by merging raw data sources and correcting reporting mistakes whenever possible. We collect data on trade tariff exclusion applications from the website of the USTR and by parsing application forms available in PDF format on Regulations.gov. Companies are defined as being politically connected if they contributed through political action committees (PACs) in the 2016 election cycle, if they reported lobbying expenditures, if they directly contributed to the Trump inaugural committee, or if they hired as lobbyists individuals who, previously or subsequently, worked in the Trump

[1] De Barros and Zumbrun (2019) show that far less than this, about $34 billion, was actually raised in the first year of the tariff regime.

[2] "Made in China 2025" is the Chinese government's ten-year plan to refocus China's manufacturing towards high-tech industries. These are vaguely defined as focusing on electric cars and other new energy vehicles, information technology and telecommunication, robotics and artificial intelligence, agricultural technology, aerospace engineering, new synthetic materials, electrical equipment, biomedicine, rail infrastructure, and maritime engineering. The program encountered increasingly strident international condemnation almost from the date it was adopted, and in 2020 the Chinese authorities changed the program's name to "Dual Currency," though its tools and goals remained largely unchanged (Ip, 2021).

administration. Our data on campaign contributions and lobbying expenditures originate, respectively, from the Center for Responsive Politics and from a proprietary dataset described in Ferris, Houston, and Javakhadze (2016). We use political contributions data and lobbying expenditures linked to the 2016 electoral cycle to minimize endogeneity-related issues and analyze political connections that were in place at least two years prior to the imposition of trade tariffs on Chinese products. This avoids reverse causality between tariffs and political connections or spurious results due to omitted-variable biases.

Univariate analysis reveals patterns consistent with the main hypothesis that political connections affect the likelihood of approval. The 1,022 eventually accepted proposals in our sample originate from firms with greater campaign contributions and with greater lobbying expenditures, compared to the 5,993 eventually rejected applications. Distinguishing between contributions to the party in power (in this case, Republicans) versus the party in opposition, we find that accepted applications are associated with greater campaign contributions to Republican politicians, but with smaller contributions to Democrats. Spending relatively more, as a fraction of firm assets, on lobbying also significantly increases the likelihood of an exemption being granted. On the other hand, we also find that applications meeting the USTR's stated criteria are more likely to receive tariff exemption grants, indicating the system was not completely politicized.

Our main empirical tool is regression analysis. In a first specification, we model the outcome (acceptance or rejection) of each exemption application as a function of the size of campaign contributions and lobbying expenditures of the filing firm, both scaled by the firm's total assets. We find a significant and positive association between lobbying expenditures and the likelihood of approval, suggesting that political connections do indeed increase the chance of approval. This mirrors similar findings in other lobbying studies, including Bertrand, Bombardini, and Trebbi (2014), Akey (2015), Borisov, Goldman, and Gupta (2016), and Kang (2016), but contradicts results presented in Goldberg and Maggi (1999), Ansolabehere, Figueredo, and Snyder (2003), and Ludema, Mauda, and Mishra (2018), who find that lobbying has little or no impact on actual policy-making, particularly trade policy. On the other hand, while we find some evidence of a positive relation between campaign contributions and exemption approval likelihood, the

results are statistically and economically weak, likely reflecting that campaign contributions can be aimed at either the party in power or in opposition. We investigate this distinction next.

While our analysis indicates that political considerations play a role in the adjudication process, we hypothesize that politicians might want to both reward their supports and, potentially, punish the firms supporting their opponents. During the period we study, the executive branch is controlled by a Republican administration. Accordingly, we hypothesize that, while campaign contributions to the Republican party might increase the likelihood of approval, campaign contributions to the Democratic party might have the opposite effect, leading to a lower likelihood of approval. We test these hypotheses by disaggregating contributions according to the political alignment of the recipient. The findings confirm our priors: while contributions to Republican candidates increase the chance of approval, contributions to Democratic candidates reduce approval likelihood. While other studies—including Claessens, Feijen, and Laeven (2008), Cooper, Gulen, Ovtchinnikov (2010), Akey (2015), Babenko, Fedaseyeu, and Zhang (2020)—also document that campaign contributions yield positive stock returns when a favored candidate wins, we are the first (to our knowledge) to document that politicians can and do punish companies for contributing to the opposition. Our results are robust to controls for the stated criteria of the process, namely variables identifying strategic products, products with substitutes available outside of China, and intermediary components (as opposed to finished products). The latter is relevant to the process as the import of intermediary components generally leads to greater job creation, through subsequent processing, than do finished products—accordingly, we expect regulators to be more likely to grant exclusions.[3]

We conduct a battery of additional robustness tests and show that our results are robust to

[3] While the stated policy promises to favor intermediate and capital good imports with tariff exemptions, as predicted theoretically by Grossman and Helpman (1994), the *Economist* (September 20, 2018) reports that more than three-fourths of the products covered under the September 2018 tariff list were intermediate goods—presumably so that U.S. consumers would not immediately notice a tariff-induced rise in final goods prices.

(1) not scaling expenditures by assets, (2) looking only at "concentrated" donors to mitigate collinearity between campaign contributions to different parties, (3) excluding products with applications submitted by multiple firms, and (4) focusing on "inconsistent" decisions when multiple companies submit applications for the same product codes but obtain different outcomes.

Finally, to mitigate the risk of selection biases leading to spurious results, we implement a two-stage Heckman selection model. In the first stage, we predict the probability of a firm sponsoring a PAC to funnel campaign contributions as a function of the state-level voter turnout rate in the 2016 Presidential elections. The second stage results show that our main findings are robust to controlling for this selection effect.

We quantify the value of an accepted tariff exemption application by analyzing the impact a grant announcement has on the valuation of the firm that filed the application. Using event-study methodology, we find that approvals are associated with an abnormal return of approximately fifty-five basis points over the five-day window surrounding the announcement. Back-of-the-envelope estimates indicate that is a USD 51 million increase in median firm market capitalization.

The analysis of abnormal stock price reactions to announcements of tariff exemption decisions allows us to further investigate whether markets correctly "price in" the higher likelihood of approval for firms with the "right" political connections. We construct our empirical test as a two-stage regression analysis. In the first stage, we estimate the *ex-ante* probability of a particular firm receiving approval, considering its campaign contributions and lobbying expenditures as well as whether it meets the stated USTR exemption criteria. In a second stage, we regress the abnormal stock-price returns around the decision date on this fitted probability estimate. We observe a weaker market reaction (smaller abnormal return) for firms with a higher *ex-ante* probability of approval. In other words, the impact of political connections on the probability of approval is partially predictable to market participants.

In additional analysis, we question whether ties to the Trump administration specifically, as opposed to general ties to the Republican party, have an impact on the likelihood of approval. We do so by using two proxies for these connections. First, we identify firms that contributed to President Trump's inaugural committee in 2016. Second, we identify firms that hired lobbyists

who are previously or subsequently employed by the Trump administration in an official government role, in the spirit of the literature on "revolving doors" (Blanes i Vidal, Draca, and Fons-Rosen (2012)). Our evidence is mixed. While we find no support for the hypothesis that firms contributing to the inaugural committee are more likely to receive exemptions, we do find evidence indicating that firms hiring "connected" lobbyists are indeed more likely to obtain exemptions.

Our analysis indicates that political connections, in the form of campaign contributions and lobbying expenditures, have an impact on the likelihood of firms being approved for trade-tariff exemptions. We make two claims of novelty. First, to our knowledge, we conduct the first empirical analysis of this novel process for awarding trade-tariff exemptions. If we take the event-study estimate of $51 million of value accruing to the median firm in our sample as representative, and considering that 1,022 applications in our sample were accepted, this constitutes an increment of approximately $57 billion to the aggregate market capitalization of applying firms.[4] Given the scale of the program, and the novel and opaque nature of its implementation, we believe it is important to document whether it is being used to allocate benefits to connected parties.

Second, we document not only that a supposedly arm's length government adjudication process has been at least partly coopted to reward supporters, but also that this same process is being employed to punish supporters of the opposition. To our knowledge, this evidence of political retaliation is entirely novel—yet, it is increasingly relevant, given the documented rise of political polarization among US firms (Fos, Kempf, and Tsoutsoura (2021)). This finding carries powerful implications for the literature on political connections and firm value. In general, a link between connections and corporate value is consistent with two channels: an "information" channel, wherein firms benefit from better regulatory outcomes because their connections lead to lower information asymmetry, and a "*quid pro quo*" channel, through which firms benefit because

[4] Although other studies also document a rise in stock prices for connected firms after a key personnel appointment (Acemoglu, et al, 2010) or election of a politician with whom a company is connected politically (Knight, 2007; Snowberg, Wolfers, and Zitewitz, 2007; Ferguson and Voth, 2008; and Child et al, 2021), this $57 billion aggregate market value increase is by far the largest yet documented.

politicians reward them with benefits exceeding the cost of the connections they cultivate. While our findings linking lobbying expenditures with a higher probability of approval are consistent with both channels, our findings linking contributions to the party in power to a higher chance of approval, and contributions to the opposition to a lower chance, are strongly indicative of *quid pro quo* arrangements.

We further contribute to the literature on political connections by documenting that the *quid pro quo* arrangement between politicians and firms is not hidden or otherwise disguised. Market participants correctly anticipate the higher probability of approval for firms with the "correct" political connections. Regarding the large literature arguing that transparency is the best weapon against corruption, our evidence shows that the selling of political favors within the US federal government can take place in the open.

Taken together, our evidence suggests that the tariff regime was implemented in a manner akin to the selling of indulgences by the Catholic Church during the late Middle Ages (Cassone and Marchese (1999)). The Trump administration created the "crime" (sin) of importing goods from China without paying a tariff, arrogated unto itself the sole right to adjudicate and penalize guilty behavior and offered a mechanism for offending parties to buy forgiveness (relief from the tariff) by paying a fee. We show empirically that the tariff regime in fact operated at least partly as a spoils system, allowing the administration to favor companies that contributed to Republican campaigns in 2016 and/or spent heavily on lobbying with tariff exemption grants and to punish companies that did neither—or, worse yet, which contributed to Democratic campaigns in 2016. To our knowledge, we are the first commentators to note this aspect of the Chinese tariff regime.

The remainder of this manuscript is constructed as follows. Section I presents the literature review, offers relevant institutional detail, and formulates testable hypotheses. Section II discusses the institutional detail behind tariffs and exemptions. Section III focuses on data and descriptive statistics. Section IV contains our main empirical analysis. Section V concludes.

I. Literature Review

A. Political Connections

While there is scant research on the intersection of corporate finance and trade-tariff exemptions, our work fits within the larger literature on the financial economics of political connections. Corporate executives create political connections principally by making campaign contributions to aspiring or incumbent politicians (Cooper, Gulen, and Ovtchinnikov (2010), Akey (2015), Brogaard, Denes, and Duchin (2021)), by investing in lobbying activities (Yu and Yu (2011), Borisov, Goldman, and Gupta (2016)) and by hiring former government officials or appointing politically connected people to corporate boards (Faccio (2006), Goldman, Rocholl, and So (2009, 2013), Coates (2012), Akey (2015)). Politicians reciprocate by funneling lucrative procurement contracts to connected firms (Borisov, Goldman, and Yuan (2016), Schoenherr (2019), Brown and Huang (2020), Brogaard, Denes, and Duchin (2021), Child, Massoud, Schabus, and Zhou (2021)), by tilting legislation to favor connected firms' interests (Johnson and Mitton (2003), Ovtchinnikov and Pantaleoni (2012)), by channeling capital to connected firms on preferential terms (Khwaja and Mian (2005), Claessens, Feijen, and Laeven (2008), Duchin and Sosyura (2012)), by intervening in regulatory processes to benefit or shield companies from enforcement actions (Yu and Yu (2011), Correia (2014), Akey (2015)), by facilitating bail outs of troubled, favored companies (Faccio, Masulis, and McConnell (2006), Duchin and Sosyura (2012)), and even by directing support of stock prices via state-owned investment vehicles and public pension funds (Bradley, Pantzalis, and Yuan (2016)). Our study is most similar in spirit to Schoenherr (2019), who similarly documents that a newly elected (Korean) president very effectively channeled state resources to politically connected firms by appointing members of his two networks as CEOs of state-owned enterprises, which then proceeded to award contracts to corporate network members on non-commercial terms. He estimates the total costs of the resulting misallocation of contracts to be 0.41% of Korea's GDP.

Recent academic research documents the global pervasiveness and economic significance of political connections, in developed and developing countries alike (Fisman (2001), Faccio (2006), Claessens, Feijen, and Laeven (2008), Cooper, Gulen, and Ovtchinnikov (2010), Schoenherr (2019)). Yet, the channel linking connections to firm valuation remains a point of contention. Political connections can effectively act via two channels. First, connected firms may

be able to lower information asymmetries by sharing information with regulators (Crawford and Sobel (1982); Austen-Smith (1995); Chakraborty and Harbaugh (2010); Bertrand, Bombardini, and Trebbi (2014)). This "information channel" is, after all, the main regulatory rationale for allowing lobbying in the first place. A second channel of impact, dubbed the "political capital hypothesis" by Akey (2015), suggest the presence of a *quid pro quo* between politicians and firms: firm value is enhanced because politicians dispense favors to connected firms in excess of the cost of maintaining such connections. Much of the literature on political connections focuses on these *quid pro quo* arrangements—yet, isolating the information channel is a persistent challenge.

We investigate connections that firms create via two mechanisms: lobbying expenditures and campaign contributions. While lobbying might lead to either greater information or *quid pro quo* arrangements, regulatory outcomes swayed by campaign contributions are generally interpreted as evidence of *quid pro quo* arrangements. Our unique setting allows us to not only test whether politicians reward supporters (by pushing USTR to grant exemption requests), but also to test whether politicians punish supporters of the opposition by withholding approval of tariff exemptions to donors of the opposition party. While a link between lobbying expenditures and the probability of exemption approval is consistent with both channels, it is hard to explain evidence of lower approvals for supporters of the opposition within an information framework. Accordingly, our testing ground offers sharp identification of political favoritism by focusing on the treatment of opposition supporters.

B. Trade-Tariff Exclusions

A common dictum in political science is that "free trade is often preached but rarely practiced." The theoretical work by Grossman and Helpman (1994) offers a model in which special-interest groups make political contributions to obtain protection from foreign competition through trade policies. Goldberg and Maggi (1999) confirm the predictions of this model within the context of nontariff barriers for the United States in 1983. Subsequent related empirical tests have shown this disconnect is largely due to the fact that governments shape trade policy not only on the basis of economic concerns, whether ideological or expressed by the general electorate, but also in reaction to pressure applied by special interest groups. A series of papers focused on the

political determinants of trade protectionism includes Ray (1981), Marvel and Ray (1983), Baldwin (1989), Trefler (1993), Rodrik (1995), and Lee and Swagel (1997).

More closely related to our work, Pinsky and Tower (1995) discuss the Temporary Duty Suspension (TDS) program, which was previously used to provide tax breaks for companies by eliminating specific tariffs on a temporary basis. They point out that the process lacked transparency and lent itself to rent-seeking. Gokcekus and Barth (2007) empirically confirm their predictions. Ludema, Mayda, and Mishra (2019) focus on a legislative bargaining model in which firms influence trade policy by both verbal messages and lobbying expenditures. They document that the probability of tariff suspensions being granted decreases when other firms voice opposition, especially since the Miscellaneous Trade Bills (MTB) currently used by Congress to grant tariff exemptions or reductions for hundreds of individual products must be passed by "unanimous consent" (without a single dissenting vote). They document over 1,400 MTBs being introduced over 1999-2006, covering tariffs worth $1.6 billion.

Our work differs on several dimensions. First, the process we focus on is bespoke and does not involve any legislative votes. The differences in the processes are significant. Under either the old TDS system or the new MTB program, virtually all duty suspension applications were filed by individual firms, which were then grouped into "omnibus bills" and were voted on an aggregate basis. These Congressional votes required some degree of bipartisan support and across-the-aisle bargaining, making explicit dispensation of political favors less likely—or, at least, harder to identify. In contrast, the China tariff exemption process created in 2018 is entirely controlled the executive branch, thus allowing for both rewarding political supporters and punishing opponents. The sheer magnitude and scale of trade-tariff exemptions has also changed. Gokcekus and Barth (2007) report that, over the six years they investigate, potential total tax savings were just over USD 1 billion—that is one-hundred times lower than the potential benefits adjudicated within a year in connection with four rounds of tariffs on imports from China. The process we investigate is not just larger in scope, less transparent, and more prone to partisan manipulation—it also allows for sharper identification. While the MTB group applications are voted on as aggregate packages, the China tariff exemption process is at a firm-product level, leading to sharper inference.

Tariffs and Exemptions

Shortly after assuming office, in August 2017, President Trump officially asked the USTR to open an "Investigation into China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation Under Section 301 of the Trade Act of 1974" to determine whether China's mercantilist trade policies unfairly harmed American business interests (United States Trade Representative (2018)). The investigation's report was delivered on March 22, 2018 and concluded that Chinese policies were harming U.S. interests. This finding legally authorized the president to take retaliatory measures against Chinese companies, which he promptly did.[5] On July 10, 2018, the Trump administration announced plans to impose tariffs on $34 billion of goods imported from China, with an initial average tariff rate of 25%. These "Section 301" tariffs were billed from the start as just the opening phase in what would become a much larger campaign to force China to change its trade policies and even its state-led economic model. Three subsequent expansions of the Chinese tariff regime over the next 14 months brought imports worth $550 billion in 2018 under tariff at an average rate of about 20%, theoretically yielding tariff proceeds of $110 billion annually for as long as they remain in place.

With the stated goal "to prevent harm to American interests," US trade authorities initiated the parallel tariff exemption process described earlier. While allowing firms to apply for trade exclusions is not novel, the process was implemented in a novel manner. Rather than relying on

[5] While we focus specifically on trade-tariff exemptions and the process of allocating those, we note that the US executive branch has increasingly expanded its interpretation of powers delegated to it by Congress regarding trade. The White House has used the Trade Expansion Act of 1972, the Trade Act of 1974, and other "national security" legislation to levy tariffs and to impose non-tariff entry barriers, arguing that such actions are necessary to ensure the country's security. These laws, and the powers they grant to the president, are described in Sharma (2018), Hillman (2019), and Morrison (2019). The *Economist* (March 8, 2018) notes that Article XXI of the WTO treaty explicitly allows a member nation to unilaterally impose tariffs on "national security" grounds, but no country had ever done so (through to judicial conclusion) before 2018.

bills voted on by Congress, as has been the norm in the past, the White House implemented a review under the supervision of the Office of the US Trade Representative (USTR). Individual applications for exclusion are adjudicated solely by the USTR. Companies file requests to exclude products from tariffs. A company must submit a separate request for each product for which it is seeking an exclusion; other companies may also submit requests for the same product. If an exemption is granted, all firms importing the same product are exempt from tariffs. Exemptions are retroactive to the date the tariff was imposed and last for one year, with the possibility of then being renewed.

Despite an official list of criteria for adjudication, suggesting an "arm's length" process, anecdotal evidence of political interference abounds. Brown (2019) notes that Meco, a Tennessee-based manufacturer of grills and furniture, received multiple approvals on its exemption requests after, per public filings, having spent $40,000 lobbying "the USTR on trade matters related to 'domestic charcoal grill manufacturers'." Notably, Meco's requests were approved despite the fact that the parts it was importing qualified under the China 2025 program, in contrast with the stated criteria of the exclusion program. In an opinion piece published on December 28, 2020, the Editorial Board of *The Wall Street Journal* concluded that, "Some of these exclusions were granted, and many weren't. It's difficult to know if lobbying by Congress made a difference, since the Trump Administration's approval process is a black box." [6]

[6] The press also reported interference by politicians lobbying on behalf of specific firms. A non-comprehensive list of interventions on behalf of applicants includes those by Missouri Senator Josh Hawley (on behalf of SM Products, a textile manufacturer), White House Chief of Staff Mark Meadows (Fairfield Chair), Arizona Representative Andy Biggs (Unique Home Designs), Senator Lindsey Graham (multiple firms, including Electrolux and Z-Man), Congressman Bob Latta (Campbell Soup), Kentucky Representative Thomas Massie (Iofina Chemical), Representative Steny Hoyer (on behalf of the Congressional Fire Services Caucus, lobbying for smoke alarm exclusions), North Carolina Senator Thom Tillis (Honda's lawn mower parts), Senator Sheldon Whitehouse (BedJet), Congressman Doug Collins (Home Depot lobbying for light fixture exclusions) and Senator Patty Murray (lobbying for the exclusion of empty coffee K-cup pods).

Investor Reactions to Tariff Announcements

Our empirical investigation is based on the unstated assumptions that the tariffs were material (they had an impact on firms) and not anticipated—so that firms did not build political connections in the prior years (note that our metrics of political contributions and lobbying relate to the 2016 cycle) with the intention of avoiding these tariffs, which could lead to reverse causality in the interpretation of our findings. In order to test the validity of our assumptions, we rely on event-study methodology and test whether the stock prices of firms likely to be affected by the tariffs are affected by various announcements related to the tariff regime. If tariffs are material and unanticipated, they should impact the market value of affected firms; our expectation is that the increase in costs due to import tariffs would reduce profitability and lead to lower valuations. In other words—we expect negative abnormal stock price returns at announcement of tariffs.

The event dates we used for our test cover the announcement of the first set of steel and aluminum tariffs (January 22, 2018); the resignation of Gary Cohn (March 6, 2018) who was the White House's chief economic advisor prior to the resignation and was widely seen as opposing tariffs and whose departure was interpreted in the media as a precursor for a more stringent tariff regime; the announcements of the four lists of tariffs on Chinese goods (respectively on March 3, August 23, September 24, in 2018, and May 20, 2019); the threat to impose additional tariffs on over $500 billion of goods from China (articulated by then President Trump on September 7, 2018), and finally the January 15, 2020 agreement between China and the USA which prohibited further tariff impositions or increases—but did not remove existing tariffs as had been expected.

Defining a sample of companies that would be subject to prospective tariffs before the scale and scope of these were even specified is a challenge. As a rough proxy, we define as "treated" all US publicly traded firms in manufacturing sectors (industry codes 1, 2, 3, and 6 in the Fama-French 12-industry classification); all other US publicly traded firms are part of the control group (with the exclusion of industry code 9). We compute cumulative abnormal returns (CARs) over various short-term event windows (three, seven, and eleven days) around the day of the announcement (day t), using the Fama-French three-factor model for the estimation period (ranging days t-115 to t-15). We compute the difference between CARs for treated and untreated

firms over the different event days and windows; we present our findings in Appendix Table B1.

For brevity, we discuss the results for the longer, eleven-day event window, but results for shorter windows follow similar patterns. For the announcement of steel and aluminum tariffs, the resignation of Gary Cohn, and at the announcement of list 2, 3, and 4 tariffs, we find statistically significant negative abnormal CARs ranging from -1.1% to -1.8%. The announcement of list 4 tariffs and the January 15, 2020 agreement both lead to negative CARs, but the results are not statistically significant. The announcement of list 1 goods is similarly associated with an insignificant market reaction. Given the much smaller aggregate value of goods covered by list 1, compared to subsequent lists, we believe the weaker market reaction is not surprising.

For robustness, we replicate the same analysis using a different set of firms. We use firms that apply for tariff exemptions as our set of "treated" firms and all other US based, publicly traded, non-manufacturing firms as controls. The findings, presented in Appendix Table B2, are largely equivalent, but the estimated abnormal returns are somewhat larger in magnitude. The exception is the announcement of the first list of tariffs, which produces inconsistent results across different event windows.

Overall, our findings indicate that the tariff announcements induced a significant decline in the market capitalization of affected firms. In other words, the tariffs were material and largely unanticipated. Back-of-the envelope estimates indicate that, with the average market capitalization of a US publicly traded firm hovering around $7 billion, a 1% loss of market capitalization (a very conservative estimate of the reaction at the announcement of tariffs on steel and aluminum, and list 2, 3, and 4 tariffs on China) leads to a loss of $70 million for the average company.

II. Data and Descriptive Statistics

We collect data on trade-tariff exclusion applications from the website of the USTR and from Regulations.gov. We collect data from four lists of trade tariff applications:

1. List 1, covering applications filed between 8/23/2018 and 11/23/2018. This lists tariffs covering $34 billion of imported goods. The total number of requests is 10,814.
2. List 2, covering applications filed between 11/8/2018 to 12/26/2018. This lists tariffs

covering $16 billion of imported goods. The total number of requests is 2,869.

3. List 3, covering applications filed between 6/30/2019 to 8/16/2019. This lists tariffs covering $200 billion of imported goods. The total number of requests is 30,283.
4. List 4, covering applications filed between 10/31/2019 to 1/31/2020. This lists tariffs covering $300 billion of imported goods. The total number of requests is 8,781.

For each application, we obtain the ten-digit Harmonized Tariff Schedule (HTS) product code, the name of the filer (virtually always a company), binary variables identifying the availability of substitutes in the US and the availability of substitutes in third-party countries (non-US, non-China), a binary variable identifying finished products (as opposed to raw materials, parts, and components), the date of filing, the date of decision, and the eventual decision ("accept" or "reject"). We further obtain a variable identifying products included in the China 2025 strategic initiative, yet we note that this information is often missing, incorrect, or accompanied by notes indicating that the filer is incapable of determining whether the product falls under this designation. The application forms ask applicants whether the product itself was included in the "China 2025" list. Virtually none of the applicants answered in the affirmative, while a substantial number omitted a reply, especially for list 1 and 2 applications.[7] Given that the "China 2025" list is loosely defined and controversial, we do not find it surprising that many firms were unable to answer. Our concerns are amplified by the fact that a free-text note field (allowing filers to add comments to this item on the form) which we examined for a subset of the data revealed that many of the replies indicated that the filer was not familiar with the China 2025 program list itself, or misunderstood the question. Accordingly, we build our own variable — a binary variable set to one if the product is on the China 2025 list, and zero otherwise. In order to do so, we rely on a list of products that are identified as being included in the China 2025 program, published by *The Guardian*.[8] Given the lack of clarity and the absence of an official list, in untabulated robustness tests we rely on an

[7] In list 1 and 2, the form asked to indicate inclusion in the China 2025 program within an open text field; in lists 3 and 4, the form was redesigned to include a checkbox with a binary choice for this item.

[8] https://www.theguardian.com/world/2018/apr/04/made-in-china-policy-at-centre-of-tariff-war-with-us)

additional list we obtain from *Business Insider* and obtain similar results.[9]

For observations in lists 1 and 2, we obtain the forms filled out by the filers in PDF format, and then extract data manually. For lists 3 and 4, the data is accessed via HTML forms available via the website Regulations.gov. The total number of applications across all four lists is 52,747.

We match filers to data from Compustat. Given that we only have filer names in the USTR data, the matching is manual. In our resulting sample employed for empirical analysis, we only keep applications with complete sponsor-level data; accordingly, our analysis is restricted to applications by publicly traded firms that appear in Compustat.

Our data on lobbying expenditures and campaign contributions originate from Opensecrets.org. We use data related to the latest national electoral cycle preceding the tariff exemption application, to minimize reverse causality between tariffs and political expenditures, so all our metrics of contributions and lobbying expenses are for the 2016 election cycle. Corporations do not directly contribute to the electoral campaigns of politicians; rather, they act as sponsors for political action committees (PACs), which coordinate and channel contributions by their own employees and other affiliates to candidates.[10] We manually match committees to corporations by

[9] https://www.businessinsider.com/trump-china-tariff-full-list-of-goods-products-2018-6

[10] PACs are organized to raise funds both in support of and in opposition to political candidates. Each PAC can give up to $5,000 to a candidate for each election. They can also donate up to $15,000 annually to a party committee and $5,000 to any other PAC. Conversely, a PAC is allowed to receive up to $5,000 for any individual or other committee per year. PACs face a complicated set of disclosure rules; depending on both the nature of the committee itself and the election type faced by the supported candidate, disclosure is required either at a monthly or quarterly interval. Disclosures of contributions are made to the Federal Election Committee, in either paper or electronic filings. For a full discussion of the disclosure requirements, we point interested readers to: https://www.fec.gov/help-candidates-and-committees/filing-pac-reports/ The PACs whose contributions we investigate are legally defined as "separate segregated funds" (SSFs). These types of PACs are established and administered by either a corporation, a labor union, a membership organization, or a trade association. They are allowed to solicit contributions from

name. We also employ a lobbying dataset Professor Reza Houston kindly shared with us.[11]

As reported in Table I, our final sample spans 7,015 applications with complete data. Of those, 14.6% were approved. Applications for "final products" account for 36.8% of the sample. About a fifth of applications (21.0%) indicated that substitute products were available in the USA or in third-party countries (non-China).

***** Insert Table I Here *****

III. Empirical Analysis

We expect that political connections enhance the likelihood of obtaining approval on a trade tariff exemption application, as politicians pressure USTR to approve applications filed by their own supporters, either as a result of greater information sharing (firms being able to communicate the "harm" generated by tariffs), or as a *quid pro quo* arrangement. Our proxies for political connections are lobbying expenditures and campaign contributions by the applying firm. Accordingly, we expect both lobbying expenditures and aggregate campaign contributions to be positively related to the likelihood of obtaining tariff exemptions.

Further, we hypothesize that politicians reward supporters of their party, while penalizing supporters of the opposition. Given that the Republican party controls the executive branch during the period of interest, we expect that campaign contributions to Republican (Democratic) politicians will increase (decrease) the likelihood of obtaining an exemption. We first investigate these hypotheses in simple univariate tests, then move on to regression-based models.

A. Univariate Analysis

Our first set of tests relies on univariate comparisons of means between the subset of applications that were eventually rejected and those that were approved. Sub-sample means for

individuals who are associated with the sponsor. Firms have other means to contribute to the political process, through "super PACs" and dark pools, but transparency and data are lacking.

[11] For more details on Professor Houston's dataset, please refer to Ferris, Houston, and Javakhadze (2016), Ferris and Houston (2019), and Houston, Maslar, and Pukthuanthong (2018).

"Approved" vs. "Rejected" applications and related *p*-values from two sample *t*-tests for differences in means are presented in Table II. Accepted applications are associated with higher levels of lobbying and higher levels of contributions, as per our priors. Yet, when we disaggregate campaign contributions by the party affiliation of the recipient, we find more nuanced results. While contributions to Republicans are higher in the "approved" sub-sample than in the "rejected" one, the opposite is true for contributions to Democrats. This is consistent with our priors and with the hypothesis that supporting the "opposition" leads to retaliatory behavior from the party in charge of the executive branch of the government.

***** Insert Table II Here *****

B. Regression Analysis

B.1. The Impact of Contributions and Lobbying on Approval

Our main empirical analysis relies on regression analysis. Our base regression model is:

$$Approved_i = \beta_0 + \beta_1\, Total\ contributions/AT_j + \beta_2\, Lobbying/AT_j + \beta_3\, Dual\ donor_j + \beta_4\, PAC_j + \beta_5\, Size_j + \beta_6\, ROA_j + \beta_7\, R\&D/AT_j + \beta_8\, Capex/AT_j + \varepsilon_{ij}, \quad (1)$$

The subscripts refer to application *i* filed by firm *j*. The response (*Accept*) is a binary variable, set equal to one for approved applications and to zero for rejected ones. Our two main explanatory variables are the total amount of contributions to electoral campaigns, scaled by total assets (*Total contributions/AT*), and the total lobbying expenditure, also scaled by total assets (*Lobbying/AT*). In addition, we add binary variables identifying firms that donate to both parties (*Dual donor*) and firms with PACs (*PAC*). We control for firm characteristics: *Size* (the natural log of total assets), *ROA* (return on assets), *R&D/AT* (research and development expense scaled by total assets), and *Capex/AT* (capital expenditures scaled by total assets). We also include list (list 1, list 2, list 3, and list 4), product (2-digit HTSUS code), and industry fixed effects. Firm-level characteristics are winsorized at the 1st and 99th percentiles. We estimate models via probit; in untabulated analyses, we confirm our results are qualitatively similar if we estimate ordinary least squares regressions instead of probit regressions. Model estimates (not marginal effects) are reported in the Table III; standard errors are clustered by firm and list.

In a first specification, we only include total contributions as a variable of interest, to avoid

problems of potential multicollinearity with lobbying expenditures. Results are reported in column 1 of Table III. We find that contributions are associated with a positive coefficient, but results are not statistically significant.

***** Insert Table III Here *****

In a second specification, we only include lobbying expenditures, similarly scaled by total assets. Results are presented in column 2. We find that lobbying expenditures are also positively related to the probability of approval. The estimated coefficient is highly statistically significant and indicates that an increase in lobbying expenditures by one dollar for every million dollars of assets leads to an increase in the probability of approval of 0.22 percentage points.

In a third specification, we include both campaign contributions and lobbying expenditures. Results are presented in column 3. While both campaign contributions and lobbying expenditures are associated with positive coefficients, only the coefficient estimate on lobbying expenditures appears statistically significant in this test. We hypothesize that not all campaign contributions have the same impact; we test this conjecture in the following set of tests.

B.2. Contributions to Republicans vs. Contributions to Democrats

As previously discussed, we hypothesize that campaign contributions to the party controlling the executive branch of the government (the Republican party) might have a positive impact on the probability of approval, while contribution to the opposition (the Democratic party) might have the opposite effect. Accordingly, in Table IV we estimate regression models while including only contributions to Republicans (column 1), only contributions to Democrats (column 2), and contributions to both Republican and Democrats, disaggregated (column 3). In all cases, we control for lobbying expenditures.

Contributions to Republican politicians are associated with positive coefficients, while contributions to Democrats are associated with negative coefficients. When both contributions variables are included in the model (column 3), the results are highly statistically significant; yet, results are significant at the 10% level even when contributions are added "one-at-the-time," suggesting multicollinearity is not affecting our significance testing. This is largely consistent with our priors and indicates that not only is the likelihood of approval higher for firms that lobby and

contribute to the electoral campaign of Republicans, but also that the probability of approval is lower for firms that contribute to Democrats.

***** Insert Table IV Here *****

B.3. Controlling for the Stated Criteria

USTR guidelines indicate that the approval process should focus on three criteria: strategic importance to China, likelihood of causing harm to American interests, and availability of substitutes. Accordingly, we add three control variables in an additional set of regression tests.

As a proxy for strategic importance to China, we add a binary variable equal to one if the product is included in the "China 2025" list, and equal to zero otherwise. Our prior is that products that are strategically important to China are less likely to obtain approval for exemptions. To account for the availability of substitutes, we add a binary variable equal to 1 if the application for exclusion indicates that substitutes are available either in the USA or in third-party countries. We expect products with substitutes to be less likely to obtain approval. Finally, to account for the likelihood of causing harm to American interests, we add a binary variable identifying "final products." The rationale behind this inclusion is that parts and otherwise unfinished products require subsequent processing which sustains jobs in the USA. Accordingly, we expect final products to be less likely to receive approval for exemptions.

Our findings, presented in Table V, fully support our hypotheses. Applications for products that are strategically important to China are less likely to obtain approval. Products with substitutes are less likely to obtain approval. Finally, coefficient estimates on a binary variable identifying "final products" are negative, suggesting that final products are less likely to obtain approval, but not statistically significant at conventional levels.

Most importantly, even after controlling for these stated criteria, our core results prove robust. The likelihood of approval is positively related to campaign contributions to Republicans and to lobbying expenditures, and negatively related to campaign contributions to Democrats. Overall, our findings indicate that the process is distorted by the political connections of the applicant; yet, political pressures do not completely over-ride the stated criteria of the process.

***** Insert Table V Here *****

B.4. Contributions to Both Parties, Robustness Tests

Firm political contributions are correlated, as firms are more likely to make contributions in support of politicians affiliated with both parties, rather than just one. We are mindful of this and attempt to test for robustness of the findings by introducing contribution variables both one-at-the-time and simultaneously in the models presented in Tables III, IV, and V. These tests indicate the coefficients are mostly stable, suggesting our findings are not driven by multicollinearity.

For additional robustness, we construct a new variable, measuring the difference between contributions to Republican and contributions to Democratic politicians (scaled by total assets). We use this variable in model (1) of Table VI; our prior is that this variable will directly relate to the probability of subsequent approval. Our findings are consistent: the difference between contributions to Republican and Democratic candidates is associated with a statistically significant and positive coefficient.

As a second robustness test, we focus on firms that tend to donate predominantly to one, or to the other, party. We identify such "concentrated donors" if over 66% of their contributions are to politicians from one specific party. We replicate our analysis in this smaller sample, spanning 1,217 trade tariff exemption applications. We present our findings in model (2) of Table VI. The probability of approval is positively related to the size of the lobbying expenditures, and positively (negatively) related to the size of contributions to Republican (Democratic) politicians. Compared to our baseline analysis, the magnitude of the estimated coefficients is larger. This is not surprising, given that we are effectively identifying the firms with the strongest links to one of the parties.

Finally, to ensure that our results are not driven by the distinction between "politically active" and "politically inactive" firms, in additional tests, we restrict our analysis to firms that make a non-zero campaign contribution. In this smaller sample in model (3) of Table VI, spanning 1,928 trade tariff exemption application, we once more find consistent results. The probability of approval is positively related to the size of the lobbying expenditures, and positively (negatively) related to the size of contributions to Republican (Democrat) politicians.

***** Insert Table VI Here *****

B.5. Unscaled Political Expenditures

In the analysis presented so far, all political expenditures (lobbying and campaign contributions) are scaled by firms' total assets, to negate the risk of firm size leading to spurious findings (large firms tend to be associated with larger political expenditures; if politicians prioritize larger firms, due to their impact on employment markets, we could observe a spurious correlation between political expenditures and likelihood of approval, driven by firm size). Yet, we wish to ensure that our results are robust to this scaling. In additional analyses, we substitute the natural logarithm of the dollar value of political expenditures (Republican contributions, Democratic contributions, and lobbying expenditures) for the scaled variables used in previous analyses. Our findings are presented in models (4)-(6) of Table VI. For brevity, we simply note here that the results indicate that our main inferences are robust, regardless of scaling political expenditures.

B6. Multiple Applications, Same Product Code

In the data it makes publicly available, USTR identifies products on the bases of ten-digit Harmonized Tariff Schedule (HTS) product codes—and applicants are asked to identify the relevant HTS product code on the application forms. In reality, adjudicators might identify products at more granular levels of detail, based on "A comprehensive physical description of the product, including (but not limited to) its form, dimensions, weight, constituent material(s), and any unique physical features that can assist in distinguishing the product."[12] Accordingly, we might see in the sample multiple applications, for different products, carrying the same ten-digit product code. In addition, multiple applications for the same product, or with the same product code, might be submitted by different firms. To ensure that our empirical analysis is robust to multiple applications carrying the same product code, and that our results are not affected by the lack of granular product identifiers, we implement an additional series of robustness tests.

First, we exclude all applications with overlapping product codes. This greatly reduces our usable sample in regression analysis, to 1,746 observations. Our findings are presented in column

[12] For more detail, see the USTR provided "Filing Guidelines for Product-Specific Exclusion Requests": https://ustr.gov/sites/default/files/enforcement/301Investigations/Section%20301%20Exclusion%20Request%20Guidelines.pdf.

1 of Table VII. As in the base analysis, we find that contributions to Republicans are positively related to the likelihood of approval, while contributions to Democrats are negatively related. In this reduced sample, we do not find evidence of a link between lobbying expenditures and likelihood of approval.

Given that this first robustness test greatly reduces the size of the sample, which might be affecting estimation of the relation between lobbying expenditures and likelihood of approval, we attempt a second robustness test. In this second model, we include all applications, but identify those with overlapping product codes with a binary variable, *Multiple applications*, equal to one for all applications with a product code that appears in at least one other application. We present our findings in column 2 of Table VII. As before, we find that contributions to Republicans are positively related to the likelihood of approval, while contributions to Democrats are negatively related. In this specification, we find statistically significant evidence of lobbying expenditures being positively linked to the probability of approval.

We finally recognize that applications with the same product code offer sharp identification—by comparing applications for the same product code, we can effectively construct a difference-in-difference test. We do so in regression format, by keeping only applications for multiple products sharing the same product code, where at least one application has received an approval and at least one application for the same code has received a rejection. Our regression results, including product-code fixed effects, are presented in column 3 of Table VII. Once more, we confirm our main results: contributions to Republicans are positively related to the likelihood of approval, contributions to Democrats are negatively related, and lobbying expenditures are positively linked to the probability of approval (albeit with weak statistical significance).

***** Insert Table VII Here *****

B.5. Two-stage Heckman Selection Model

As outlined above, there are legitimate concerns about the non-random nature of campaign contributions. Firms contributing to political campaigns might share certain characteristics that could lead to spurious findings. For example, large firms are probably more likely to offer political contributions, especially if those entail some fixed search and legal costs. At the same time, large

firms tend to employ more workers. If politicians concerned about re-election concerns are more likely to divert exemptions towards firms with a large number of employees, with a concern towards overall employment levels, we might find a (spurious) correlation between political contributions and tariff exemptions, driven by these omitted variables (size and employment).

To mitigate this issue, we implement a two-stage Heckman selection model. In the first stage, we model the probability of a firm sponsoring a PAC (which is required for a firm to channel contributions to political campaigns) as a function of the same variables we use in the previous model, with the addition of an identifying variable, the *Voter participation rate* (the state-level voter turnout rate from the 2016 Presidential elections). The selection of this variable is based on the rationale that it should be correlated with other levels of political activism at the local level, including the probability of firms contributing to political campaigns. At the same time, we have no reason to expect participation rate to be directly related to the probability of a firm obtaining an exemption. In the second stage, we only include those observations related to firms that do have a PAC and model the probability of exemption approval, as in Table V, but add the "inverse Mill's Ratio" as a control variable.

Our findings are presented in Table VIII. The *Voter participation rate* is a highly significant predictor of the probability of firms having a PAC. Most importantly, the results in the second stage indicate that our core findings are robust to this selection effect—as before, we find that contributions to the Republican (Democratic) party are positively (negatively) related to the probability of exemption approval.

***** Insert Table VIII Here *****

C. Valuation Effects

In this section, we investigate the impact of a tariff exemption grant on firm value. We hypothesize that accepted applications lead to an increase in firm value, as they remove a tariff that effectively inflates the cost of goods sold (for finished products) or the cost of inputs in the production process (for parts and components). These cost savings should reflect into higher future profitability for the affected firms. Assuming that stock markets incorporate this valuation effect at announcement of the trade-tariff application acceptance, we expect the announcement of a trade-

tariff application acceptance to cause positive abnormal stock price returns for the applying firm. We compute the value of an accepted exemption by using event-study techniques. In particular, we estimate the market reaction at the announcement of the decision (approval or rejection). We compute cumulative abnormal returns using a four-factor (Fama-French three factors plus momentum) model estimated over one-hundred trading days ending ten days prior to the event. To account for possible leakage of information or delayed reactions, we test various windows around the decision date (day 0). We present our findings in Table IX, for various windows, ranging from two days (0, +1) to five days (-2,+2). For brevity, we mainly discuss the results for the five-day window and highlight the shorter horizons only when results are inconsistent.

In Panel A, we present overall event study results around the announcement of the decision, noting that some decisions are favorable (acceptances) and some unfavorable (rejections). Given the mixed nature of the news, the estimated mean abnormal returns are close to zero. Nonetheless, the standard deviation of the abnormal reactions is quite large at 3.3%. This suggests that there is significant cross-sectional variation in the reactions to application decisions. This is important because it suggests that the stock market does not fully anticipate eventual approval or rejection.

In Panel B, we compare the market reaction to approved applications to the reaction to rejected applications. For approved applications, we observe positive abnormal returns, equal to 0.51% for the five-day window. In contrast, rejected applications are associated with negative abnormal returns over all event windows, but we note that, over the five-day window, the magnitude of the abnormal return is tiny, at -0.095%. We note that the unconditional probability that an application is approved is low at about 15%. Therefore, the market likely anticipates that most applications are rejected. This could explain why we do not observe very strong negative reactions following rejections of tariff applications—while accepted applications are associated with a positive abnormal return, signifying a true "surprise," rejected applications are associated with much weaker responses, negative in sign, but small in magnitude. The difference between abnormal returns on accepted applications and those on rejected applications is positive and highly statistically significant over all event windows, and equal to 0.61% over the five-day window. Back-of-the-envelope calculations suggest that exemption approval leads to an approximately

USD 51 million increase in market capitalization for the median firm in our sample. The median market capitalization for sample firms is about $10 billion.

Finally, we question whether market participants are able to anticipate the higher likelihood of acceptance for firms with the "right" set of political connections, resulting in lower (higher) abnormal returns at acceptance of a proposal by a firm with high levels of lobbying expenditures and high levels of contributions to the Republican (Democratic) party. We test this in panel C of Table VIII. As many firms contribute to both parties, we subset firms on the basis of the difference between contributions to Republicans and contributions to Democrats—we label as "high probability" ("low probability") firms for which this difference is above (below) median. Over all event windows, the market reactions to low probability approved applications is greater than the market reaction to high probability approved applications—consistent with the hypothesis that markets correctly anticipate the higher probability of approval and incorporate its expected value into the stock price prior to the actual decision. The magnitude of the difference is significant, both economically (at 2.99%) and statistically (at the 0.1% level).

In Panel D of Table IX we replicate the same type of analysis for rejected applications. The logic behind this test is similar to that of the prior test: given a higher probability of approval, firms donating to Republicans should experience a weaker reaction (i.e., a negative reaction of greater magnitude) because that rejection, effectively, constitutes a "bigger surprise." The test is, overall, inconclusive. The difference in abnormal returns is of the predicted sign but is statistically significant only for the shortest, two-day, event window. The other three event windows reveal insignificant differences in abnormal returns. Overall, we interpret these tests as inconclusive.

***** Insert Table IX Here *****

D. Abnormal Return Regressions

In order to more formally investigate whether markets anticipate the higher likelihood of approval for politically connected firms, we attempt a more rigorous test in a multivariate regression framework. First, we estimate the probability of approval, based on the model presented in Table V. We then regress abnormal returns around the decision date on a binary variable identifying approved applications and the fitted probability of approval. If markets correctly

anticipate the higher likelihood of approval of connected firms, we should find a positive market reaction to approvals, but weaker for those firms whose ex-ante probability of approval is higher. We add control variables accounting for firm characteristics to this model, as those are related to abnormal returns.

Our results are presented in Table X. Consistent with our priors, we find that approved applications are associated with positive and statistically significant coefficients, while the predicted probability of approval is associated with a negative and statistically significant coefficient. In other words, the positive market reaction associated with approvals is mitigated by an *ex-ante* higher likelihood of approval.

In a similar untabulated test, we estimate regressions of abnormal returns at approval against variables identifying the magnitude of campaign contributions to Republicans and to Democrats, and against a variable identifying lobbying expenditures by the applicant. We expect abnormal returns to be negatively related to factors that increase the chance of approval (lobbying expenditures and contributions to Republicans) and positively related to factors that lower the chance of approval (contributions to Democrats). We find consistent results for the coefficients associated with campaign contributions, negative for Republicans and positive for Democrats, but statistical significance is inconsistent across event windows.

Overall, our findings indicate that markets react more forcefully to the approval of applications from firms that are, *ex-ante*, less likely to obtain approval. Importantly, this seems to indicate that market participants are aware of the importance of political connections, and of the related distortions in the exclusion approval process.

***** Insert Table X Here *****

E. Links to President Trump's Administration

Most of the extant literature on political connections focuses on connections to the legislative branch of the government. This is largely due to traditional limitations with data—most empirical analysis relies on campaign contributions and lobbying expenditures aimed at politicians either having a seat on the legislative branch or vying for one. In contrast, the process we document is in the hands of the executive branch of the government, even though anecdotal evidence (some

of which we cited in the introductory section) points to strong interference by legislators. We accordingly aim to test whether direct connections to the executive branch of the government have an impact above and beyond what we have so far observed for connections to the two main parties.

We identify two additional sources of political connections to the executive branch. First, we identify firms which have contributed to President Trump's inaugural committee following the 2016 election. Second, we identify firms which hired lobbyists linked to the Trump administration. We note that individuals are barred from lobbying activity while serving as part of the administration, and in some cases even for a period of time following their service. Accordingly, we identify firms that hire lobbyists who subsequently serve in the Trump administration (with the implicit assumption that the "ties" to these lobbyists persist) or after their service has ended. This "revolving door" phenomenon, of lobbyists moving between the executive branch and the private sector, has been identified as an important source of political connections in extant literature (Blanes i Vidal, Draca, and Fons-Rosen (2012)).[13] We test whether such connections increase the likelihood of approval by adding the relevant variables to the models estimated in Table 5. Our findings are presented in Table XI.

***** Insert Table XI Here *****

We find that connected lobbyists are associated with positive, statistically significant coefficients. This finding, consistent with our priors, indicates that firms with connected lobbyists are more likely to obtain tariff exemptions. On the other hand, we find negative, statistically significant coefficients associated with contributions to President Trump's inaugural committee. This last result is puzzling, as it suggests that firms contributing to the inaugural committee are less likely to receive approval, contrary to our priors. We conclude that either the size of contributions to the inaugural campaign is a poor proxy for connections to the Trump administration, or that connections to the administration are not as valuable (in terms of increasing

[13] President Trump initially signed a rule imposing a five-year lobbying ban for administration official and a lifetime ban on lobbying for foreign governments, but subsequently revoked the same rule; anecdotal evidence of violation of lobbying-related restrictions and disclosure rules abounds.

the likelihood of tariff exemption approval) as are connections to the Republican party in a broader sense. We also note that contributions to the inaugural committee are strongly correlated contributions to Republican candidates, perhaps leading to multicollinearity in our estimate.

IV. Discussion and Conclusion

Since the 2010 "Citizen United" decision has greatly increased the ability of firms to contribute to political campaigns, a debate on whether firms' political expenditures increase welfare (via signaling and by reducing information asymmetry between politicians and the business environment) or lead to rent-seeking behavior (by politicians receiving "legal bribes" in exchange for legislation, regulations, and contracts rewarding supporters) has intensified. We contribute to this debate by documenting that the process of allocating exemptions on trade tariffs on Chinese imports worth over USD 550 billion is subject to political distortions. The probability of approval of the exemption application is positively related to past lobbying expenditures of the filing firm, which suggests that lobbying has either a role in conveying information (presumably, about the harm to American interest imposed by the tariffs) or in laying the foundation for *quid pro quo* arrangements between firms and politicians. Yet, the evidence related to campaign contribution points more clearly to the latter channel. Past contributions to the electoral campaigns of politicians affiliated with the party in control of the executive branch and the adjudicating body, the USTR, increase the likelihood of approval, while past contributions to opposition politicians lower the likelihood of approval.

Our evidence on campaign contributions strongly suggests that politicians are effectively using exemptions to reward supporters—and withholding exemptions to punish supporters of their opposition. This points to a perverse incentive—an administration controlling the executive branch of the US government can create roadblocks for firms (in the form of tariff exemptions) and then benefit by strategically removing such roadblocks for their donors, while preventing exemptions from being granted to supporters of the opposition. The evidence we offer of such retaliatory behavior is novel in the literature linking political connections to corporate finance.

In event-study analyses, we quantify the value of an exemption for the median firm in our

sample at approximately USD 51 million. We also find that markets react more forcefully (larger positive abnormal returns) to the acceptance of applications from firms that are less likely to obtain approval. The implications are meaningful: the dispensation of "favors" to connected firms and the "punishment" of firms connected with the opposition is not hidden—the *quid pro quo* is out in the open, for market participants to observe and price into firm valuations.

Our empirical analysis suffers from limitations. First, we are unable to observe all forms of connections between firms and politicians. All parties involved have incentives to keep the existence of such connections secret, so we rely on imperfect proxies: data on campaign contributions and lobbying expenditures. We nevertheless note that our inability to identify all connections likely lowers the power of our tests, leading to conservative estimates of the impact of connections on approvals. Second, our data is specific to a single administration—whether the tendency to reward supporters and punish opponents via strategic allocation of tariff exemptions extends to other parties, to other countries, and whether such effect persists over time, are matters for future extensions.

Appendix Table A1 – Variable Definitions

Appendix Table A1 contains a list of the key variables employed in empirical analysis, their definition, and the source of the raw data used to construct the variables.

Variable	Definition	Source (raw data)
Approved	Binary variable, set equal to one if the trade tariff exemption application is approved, and zero otherwise	Regulations.gov
Rep contributions / AT	Dollar value of campaign contributions to Republican politicians during the 2016 electoral cycle, scaled by total assets measured in USD million	Opensecrets.org
Dem contributions / AT	Dollar value of campaign contributions to Democrat politicians during the 2016 electoral cycle, scaled by total assets measured in USD million	Opensecrets.org
Total contributions / AT	Dollar value of campaign contributions to all politicians during the 2016 electoral cycle, scaled by total assets measured in USD million	Opensecrets.org
Lobbying / AT	Dollar value of lobbying expenditures, scaled by total assets measured in USD million	Opensecrets.org
Dual donor	Binary variable, set equal to one if the firm contributes to both Republican and Democrat politicians during the 2016 electoral cycle	Opensecrets.org
PAC	Binary variable, set equal to one if the firm has a Political Action Committee (PAC)	Opensecrets.org
Final product	Binary variable, set equal to one if the item is a "final product" (as opposed to raw materials, parts, or components), equal to zero otherwise	Regulations.gov
Substitute	Binary variable, set equal to one if substitute products are available outside of China, equal to zero otherwise	Regulations.gov
China 2025	Binary variable, set equal to one if the product is included in the China 2025 list, equal to zero otherwise	Business Insider
Size	The natural log of total assets in USD million	Compustat
ROA	Return on assets	Compustat
R&D/AT	Expenditure on research and development, scaled by total assets	Compustat
Capex/AT	Capital expenditures, scaled by total assets	Compustat

Appendix Table B1: Event study of key announcements

This study presents cumulative abnormal returns (CARs) for treated firms minus CARs for control firms around key trade related announcements. Treated firms are those in manufacturing (industries 1, 2, 3, and 6 in the Fama French-12 industry classification) whereas control firms are the rest. We exclude industry 9 in the Fama French-12 industry classification. The estimation period as t-115 to t-15 where day t is the key event date. We use the Fama French 3-factor model for the estimation period. CARs are presented in Panel A and the key dates are described in Panel B. ***, **, and * represent 1%, 5%, and 10% statistical significance levels (for the hypothesis test that the CARs are equal to zero) respectively.

Panel A.

	Event study windows		
Key Dates	**t-1 to t+1**	**t-3 to t+3**	**t-5 to t+5**
Date 1	-0.8027% ***	-0.192%	0.273%
Date 2	0.0893%	-1.776% **	-2.047% **
Date 3	-0.2698%	0.284%	1.592% ***
Date 4	-0.2496%	-0.132%	-1.475% ***
Date 5	-1.2881% ***	-1.653% ***	-2.522% ***
Date 6	-0.2496%	-1.124% ***	-2.732% ***
Date 7	0.5780% ***	0.106%	-0.029%
Agreement date	-0.4925% ***	-0.225%	-0.824%

Name	**Date**	**Description of announcement**
Date 1	1/22/18	Steel and Aluminum tariffs
Date 2	3/6/18	Resignation of Gary Cohn
Date 3	3/22/18	Tariffs on $34 billion of goods (list 1)
Date 4	8/23/18	Tariffs on $50 billion of goods (list 2)
Date 5	9/24/18	Tariffs on $200 billion of goods (list 3)
Date 6	5/10/19	Tariffs on $250 billion of goods (list 4)
Date 7	9/7/18	President Trump threatens to impose tariffs on up to $517 billion
Agreement date	1/15/20	China and US agreement (without removal of tariffs to products from China)

Appendix Table B2: Event study of key announcements

This study presents cumulative abnormal returns (CARs) for treated firms minus CARs for control firms around key trade related announcements. Treated firms are those that applied for tariff exemptions from China tariffs. Control firms are those not in manufacturing (industries 4, 5, 7, 8, 10, 11, and 12 in the Fama French-12 industry classification. The estimation period as t-115 to t-15 where day t is the key event date. We use the Fama French 3-factor model for the estimation period. CARs are presented in Panel A and the key dates are described in Panel B. ***, **, and * represent 1%, 5%, and 10% statistical significance levels (for the hypothesis test that the CARs are equal to zero) respectively.

Panel A.

	Event study windows		
Key Dates	**t-1 to t+1**	**t-3 to t+3**	**t-5 to t+5**
Date 1	-1.019% ***	-1.063% ***	-1.096% ***
Date 2	0.004%	-1.315% ***	-1.247% ***
Date 3	-0.053%	0.341%	1.037%
Date 4	-0.003%	-0.045%	-1.155% **
Date 5	-0.886% **	-1.461% ***	-1.608% ***
Date 6	-0.366% **	-0.636% ***	-1.832% ***
Date 7	0.376%	-0.210%	-0.088%
Agreement date	0.219%	-0.265%	-0.438%

Name	**Date**	**Description of announcement**
Date 1	1/22/18	Steel and Aluminum tariffs
Date 2	3/6/18	Resignation of Gary Cohn
Date 3	3/22/18	Tariffs on $34 billion of goods (list 1)
Date 4	8/23/18	Tariffs on $50 billion of goods (list 2)
Date 5	9/24/18	Tariffs on $200 billion of goods (list 3)
Date 6	5/10/19	Tariffs on $250 billion of goods (list 4)
Date 7	9/7/18	President Trump threatens to impose tariffs on up to $517 billion
Agreement date	1/15/20	China and US agreement (without removal of tariffs to products from China)

References

Acemoglu, Daron, Simon Johnson, Amir Kermani, James Kwok, and Todd Minton, 2010, The value of connections in turbulent times: Evidence from the United States, *Journal of Financial Economics* 121, 368-391.

Akey, Pat, 2015, Valuing changes in political networks: Evidence from campaign contributions to close congressional races, *Review of Financial Studies* 28, 3188-3223.

Ansolabehere, Stephen, John M. de Figueiedo, and James M. Snyder, Jr., 2003, Why is there so little money in U.S. politics? *Journal of Economic Perspectives* 17, 105-130.

Austen-Smith, David, 1995, Campaign contributions and access, *American Political Science Review* 89, 566-581.

Babenko, Ilona, Viktar Fedaseyeu, and Song Zhang, 2020, Do CEOs affect employees' political choices? *Review of Financial Studies* 33, 1781-1817.

Baldwin, Robert E., 1989, The political economy of trade policy, *Journal of Economic Perspectives* 3, 119-135.

Bertrand, Marianne, Mathilde de Bombardini, and Francesco Rebbi, 2014, Is it whom you know or what you know? An empirical assessment of the lobbying process, *American Economic Review* 104, 3885-3920.

Blanes i Vidal, Jordi, Mirko Draca, and Christian Fons-Rosen, 2012, Revolving door lobbyists, *American Economic Review* 102, 3731-3748.

Borisov, Alexander, Eitan Goldman, and Nandini Gupta, 2016, The corporate value of (corrupt) lobbying, *Review of Financial Studies* 29, 1039-1071.

Bradley, Daniel, Christos Pantzalis, and Xiaojing Yuan, 2016, The influence of political bias in state pension funds, *Journal of Financial Economics* 119, 69-91.

Brown, Courtney, 2019 (November 5), Trump's puzzling tariff exclusion process, Axios.com.

Brogaard, Jonathan, Matthew Denes, and Ran Duchin, 2021, Political influence and the renegotiation of government contracts, *Review of Financial Studies* 34, 3095-3137.

Brown, Jeffrey R. and Jeikun Huang, 2020, All the president's friends: Political access and firm value, *Journal of Financial Economics* 128, 415-431.

Cassone, Alberto and Carla Marchese, 1999, The economics of religious indulgences, Journal of Institutional and theoretical Economics 155, 429-442.

Chakraborty, Archishman and Rick Harbaugh, 2010, Persuasion by cheap talk, *American Economic Review* 100, 2361-82.

Child, Travers Barclay, Nadia Massoud, Mario Schabus, and Yifan Zhou, 2021, Surprise election for Trump connections, *Journal of Financial Economics* 140, 676-697.

Claessens, Stijn, Erik Feijen, and Luc Laeven, 2008, Political connections and preferential access to finance: The role of campaign contributions, *Journal of Financial Economics* 88, 554-580.

Coates, John C., 2012, Corporate politics, governance, and value before and after Citizens United, *Journal of Empirical Legal Studies* 9, 657-696.

Cooper, Michael J., Huseyin Gulen, and Alexei V. Ovtchinnikov, 2010, Corporate political contributions and stock returns, *Journal of Finance* 65, 687-724.

Correia, Maria M., 2014, Political connections and SEC enforcement, *Journal of Accounting and Economics* 57, 241-262.

Crawford, Vincent P. and Joel Sobel, 1982, Strategic information transmission, *Econometrica* 50, 1431-1451.

Crooks, Ed and Fan Fei, 2018 (July 23), Trade winners and losers grapple with Trump trade chaos, *Financial Times* (ft.com).

Davis, Bob and Yuka Hayashi, 2021 (March 28), New Trade Representative says U.S. isn't ready to lift China tariffs, *Wall Street Journal* (wsj.com).

DeBarros, Anthony and Josh Zumbrun, 2019 (October 10), Companies struggle while awaiting rulings on tariff exemptions. *Wall Street Journal* (wsj.com).

Duchin, Ran and Denis Sosyura, 2012, The politics of government investment, *Journal of Financial Economics* 106, 24-48.

Economist, 2016 (April 2), Winners and losers in a China-America trade war.

Economist, 2018 (March 8), The looming trade war.

Economist, 2018 (September 20), America and China are in a proper trade war.

Economist, 2021 (February 10), New data show the failures of Donald Trump's trade strategy.

Faccio, Mara, 2006, Politically connected firms, *American Economic Review* 96, 369-386.

Faccio, Mara, Ronald W. Masulis, and John J. McConnell, 2006, Political connections and corporate bailouts, *Journal of Finance* 61, 2597-2635.

Ferguson, Thomas and Hans-Joachim Voth, 2008, Betting on Hitler—The value of political connections in Nazi Germany, *Quarterly Journal of Economics* 123, 101-137.

Ferris, Stephen P., Reza Houston, and David Javakhadze, 2016, Friends in the right places: The effect of political connections on corporate merger activity, *Journal of Corporate Finance* 41, 81-102.

Ferris, Stephen P. and Reza Houston, 2019, It's a sweetheart of a deal: Political connections and federal contracting, *Financial Review* 54, 57-84.

Fisman, Raymond, 2001, Estimating the value of political connections, *American Economic Review* 91, 1095-1102.

Fos, Vyacheslav, Elisabeth Kempf, and Margarita Tsoutsoura, 2021, The political polarization of US firms, Working Paper, Boston College.

Goldman, Eitan, Jörg Rocholl, and Jongil So, 2009, Do politically connected boards affect firm value? *Review of Financial Studies* 22, 2331-2360.

Goldman, Eitan, Jörg Rocholl, and Jongil So, 2013, Politically connected boards of directors and the allocation of procurement contracts, *Review of Finance* 17, 1617-1648.

Goldberg, Pinelopi Koujianou and Giovanni Maggi, 1999, Protection for sale: An empirical investigation, *American Economic Review* 89, 1135-1155.

Gokcekus, Omer and Amber Barth, 2007, Political economy of the US temporary duty suspension program: An empirical note, *Public Choice* 131, 345-350.

Grossman, Gene M. and Elhanan Helpman, 1994, Protection for Sale, *American Economic Review* 84, 833-850.

Hillman, Jennifer, 2019 (August 11), How to stop Trump's trade war madness, *New York Times* (nytimes.com).

Houston, Reza, David Maslar, and Kuntara Pukthuanthong, 2018, Political connections, government procurement contracts, and the cost of debt. Working paper.

Ip, Greg, 2021 (July 29). 'Industrial policy' is back: The West dusts off old idea to counter China. *Wall Street Journal* (wsj.com).

Johnson, Simon and Todd Minton, 2003, Cronyism and capital controls: Evidence from Malaysia, *Journal of Financial Economics* 67, 351-382.

Kang, Karam, 2016, Policy influence and private returns from lobbying in the energy sector, *Review of Economic Studies* 83, 269-305.

Khwaja, Asim Ijaz and Atif Mian, 2005, Do lenders favor politically connected firms? Rent provision in an emerging financial market, *Quarterly Journal of Economics* 120, 1371-1411.

Knight, Brian, 2007, Are policy platforms capitalized into equity prices? Evidence from the Bush/Gore 2000 presidential election, *Journal of Public Economics* 91, 389-409.

Lee, Jong-Wha and Phillip Swagel, 1997, Trade barriers and trade flows across countries and industries, *Review of Economics and Statistics* 79, 372-382.

Lighthizer, Robert E., 2018. *Procedures to Consider Requests for Exclusion of Particular Products from the Determination of Action Pursuant to Section 301: China's Acts, Policies, and Practices*, Federal Register Document 2018-14280.

Liu, Xia, William Megginson, and Junjie Xia, 2021 Industrial policy and asset prices: Stock market reactions to Made in China 2025 policy announcements, University of Oklahoma working paper.

Ludema, Rodney D., Anna Maria Mayda, and Prachi Mishra, 2018, Information and legislative bargaining: The political economy of US tariff suspensions, *Review of Economics and Statistics* 100, 303-318.

Marvel, Howard P. and Edward J. Ray, 1983, The Kennedy round: Evidence on the regulation of international trade in the United States, *American Economic Review* 73, 190-197.

Morrison, Wayne M., 2019. *Enforcing U.S. Trade Laws: Section 301 and China*, Congressional Research Service Document 7-5700.

United States Trade Representative (USTR), 2018. *Findings of the Investigation into China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation Under Section 301 of the Trade Act of 1974*, Office of United States Trade Representative.

Ovtchinnikov, Alexei and Eva Pantaleoni, 2012, Individual political contributions and firm performance, *Journal of Financial Economics* 105, 367-392.

Pinsky, Laura and Edward Tower, 1995, Temporary duty suspension in the United States, *North American Journal of Economics and Finance* 6, 17-36.

Ray, Edward John, 1981, The determinants of tariff and nontariff trade restrictions in the United States. *Journal of Political Economy* 89, 105-121.

Rice, Carol M., 2019. *Management Alert: Certain Communications by Department Officials Suggest Improper Influence in Section 232 Exclusion Request Review Process*, Office of the Inspector General, United States Department of Commerce.

Rodrik, Dani, 1995, Political economy of trade policy, *Handbook of International Economics* 3, 1457-1494.

Schoenherr, David, 2019, Political connections and allocative distortions, *Journal of Finance* 74, 543-586.

Sharma, Ruchir, 2018 (March 7), Is Trump about to start a trade war? *New York Times* (nytimes.com).

Snowberg, Erik, Justin Wolfers, and Eric Zitzewitz, 2007, Partisan impacts on the economy: Evidence from prediction markets and close elections, *Quarterly Journal of Economics* 122, 807-829.

Trefler, Daniel, 1993, Trade liberalization and the theory of endogenous protection: an econometric study of US import policy, *Journal of Political Economy* 101, 138-160.

Yu, Frank and Xiaoyun Yu, 2011, Corporate lobbying and fraud detection, *Journal of Financial and Quantitative Analysis* 46, 1865-1891.

Table I. Descriptive Statistics

Table I reports mean, median, 10th and 90th percentile, and standard deviation of the key variables of interest in our sample. Variables are defined in Appendix Table A1. Political expenditures (both contributions and lobbying expenditures) are scaled by "millions of total assets."

Variable	N. Obs	Mean	Std. Dev	10th pctile	Median	90th pctile
Approved	7015	0.146	0.353	0	0	1
Rep contributions / AT	7015	2.007	5.966	0	0	5.327
Dem contributions / AT	7015	0.530	1.751	0	0	1.396
Total contributions / AT	7015	2.538	7.141	0	0	6.548
Lobbying / AT	7015	19.490	68.821	0	0	42.905
Log (1 + Rep contributions)	7015	3.266	5.052	0	0	11.651
Log (1 + Dem contributions)	7015	2.353	4.372	0	0	10.342
Log (1 + Lobbying)	7015	2.879	5.625	0	0	13.517
Dual donor	7015	0.230	0.421	0	0	1
PAC	7015	0.372	0.484	0	0	1
Final product	7015	0.368	0.482	0	0	1
Substitute	6716	0.210	0.408	0	0	1
China 2025	7015	0.386	0.487	0	0	1
Size (natural log of AT)	7015	8.898	2.109	6.018	9.077	11.971
ROA	7015	0.049	0.080	-0.041	0.054	0.138
R&D/AT	7015	0.026	0.035	0.000	0.015	0.066
Capex/AT	7015	0.036	0.029	0.011	0.026	0.087

Table II. Univariate Analysis

Table II reports the number of observations and means for the main variables of interest for two sub-samples, including, respectively, only applications that are eventually approved, and only rejected ones. In addition, the table includes differences in means between the sub-samples, and *p*-values from two-sided *t*-tests for differences in means. Variables are defined in Appendix Table A1.

	Approved				Rejected	
Variable	N. Obs	Mean	Mean Diff.	*p*-value	N. Obs	Mean
Rep contributions / AT	1022	3.797	-0.255	<0.001	5993	1.702
Dem contributions / AT	1022	0.312	1.839	<0.001	5993	0.568
Total contributions / AT	1022	4.109	17.938	<0.001	5993	2.270
Lobbying / AT	1022	34.815	0.204	<0.001	5993	16.877
Log (1 + Rep contributions)	1022	3.440	-0.337	0.242	5993	3.236
Log (1 + Dem contributions)	1022	2.065	0.768	0.016	5993	2.402
Log (1 + Total contributions)	1022	3.535	-0.255	0.264	5993	2.767
Log (1 + Lobbying)	1022	3.797	1.839	<0.001	5993	1.702
Dual donor	1022	0.207	-0.026	0.062	5993	0.233
PAC	1022	0.387	0.018	0.287	5993	0.370
Final product	1022	0.163	-0.240	<0.001	5993	0.403
Substitute	964	0.204	-0.007	0.625	5752	0.211
China 2025	1022	0.622	0.276	<0.001	5993	0.346
Size (natural log of AT)	1022	9.036	0.161	0.007	5993	8.875
ROA	1022	0.046	-0.003	0.156	5993	0.050
R&D/ AT	1022	0.027	0.002	0.157	5993	0.026
CAPX / AT	1022	0.031	-0.006	<0.001	5993	0.037

Table III. Total Lobbying Expenditures and Total Campaign Contributions

This table presents results (not marginal coefficients) from probit models to test the effect of lobbying expenditures and campaign contributions on the probability of receiving tariff exemptions. The response variable is *Approved* (a binary variable set equal to one if the exemption application is approved). Complete variable definitions are in Appendix Table A1. Firm-level characteristics are winsorized at the 1st and 99th percentiles. Standard errors are adjusted for firm and list level clustering. Two-sided *z*-statistics are reported in parenthesis. ***, **, and * represent 1%, 5%, and 10% statistical significance levels, respectively.

	(1)	(2)	(3)
VARIABLES	*Approved*	*Approved*	*Approved*
Total contributions / AT	0.0152		0.0108
	(1.46)		(1.08)
Lobbying / AT		0.0161	0.0142
		(3.97)***	(3.43)***
Dual donor	-0.4558	-0.4230	-0.4513
	(-1.91)*	(-1.82)*	(-2.13)**
PAC	0.1245	-0.0045	-0.0382
	(0.41)	(-0.02)	(-0.13)
Size	0.0181	0.0047	0.0141
	(0.89)	(0.24)	(0.70)
ROA	-2.0589	-1.8619	-1.8518
	(-1.17)	(-1.12)	(-1.13)
R&D/AT	-1.8558	-1.7733	-1.8667
	(-2.35)**	(-2.91)***	(-2.55)**
Capex/AT	-5.5686	-6.4705	-6.6642
	(-2.29)**	(-1.97)**	(-2.26)**
Constant	-2.2337	-2.0483	-2.1025
	(-4.45)***	(-4.02)***	(-4.49)***
List fixed effects	YES	YES	YES
Product code fixed effects	YES	YES	YES
Industry fixed effects	YES	YES	YES
Observations	7,015	7,015	7,015
Pseudo R2	0.219	0.221	0.222

Table IV. Campaign Contributions by Party

This table presents results (not marginal effects) from probit models to test the effect of campaign contributions by party on the probability of receiving tariff exemptions. The response variable is *Approved* (a binary variable set equal to one if the exemption application is approved). Complete variable definitions are in Appendix Table A1. Firm-level characteristics are winsorized at the 1st and 99th percentiles. Standard errors are adjusted for firm and list level clustering. Two-sided *z*-statistics are reported in parenthesis. ***, **, and * represent 1%, 5%, and 10% statistical significance levels, respectively.

Variable	(1) *Approved*	(2) *Approved*	(3) *Approved*
Republican contributions / AT	0.0363		0.0576
	(1.94)*		(3.02)***
Democratic contributions / AT		-0.0794	-0.1811
		(-1.93)*	(-5.17)***
Lobbying / AT	0.0105	0.0217	0.0109
	(2.60)***	(1.53)	(2.47)**
Dual donor	-0.4611	-0.2762	0.0043
	(-2.34)**	(-2.62)***	(0.01)
PAC	-0.1827	-0.0692	-0.3551
	(-0.70)	(-0.39)	(-0.96)
Size	0.0549	0.0080	0.0365
	(2.92)***	(0.35)	(1.94)*
ROA	-1.0909	-0.7949	-0.8726
	(-1.26)	(-0.72)	(-0.82)
R&D/AT	0.3570	1.0676	-0.8307
	(0.46)	(1.46)	(-0.82)
Capex/AT	-8.5032	-6.6590	-8.3015
	(-3.95)***	(-2.81)***	(-4.01)***
Constant	-2.6597	-2.3762	-2.4965
	(-6.89)***	(-5.70)***	(-6.03)***
List fixed effects	YES	YES	YES
Product code fixed effects	YES	YES	YES
Industry fixed effects	YES	YES	YES
Observations	7,015	7,015	7,015
Pseudo R2	0.224	0.224	0.232

Table V. Campaign Contributions by Party and USTR-Provided Criteria

This table presents results (not marginal effects) from linear probit models to test the effect of campaign contributions by party on the probability of receiving tariff exemptions after controlling for USTR-provided tariff-exemption criteria. The response variable is *Approved* (a binary variable set equal to one if the exemption application is approved). Complete variable definitions are in Appendix Table A1. Firm-level characteristics are winsorized at the 1st and 99th percentiles. Standard errors are adjusted for firm and list level clustering. Two-sided *z*-statistics are reported in parenthesis. ***, **, and * represent 1%, 5%, and 10% statistical significance levels, respectively.

	(1)	(2)	(3)
Variable	*Approved*	*Approved*	*Approved*
Republican contributions / AT	0.0292		0.0548
	(5.75)***		(14.12)***
Democratic contributions / AT		-0.0777	-0.1613
		(-1.87)*	(-6.99)***
Lobbying / AT	0.0168	0.0219	0.0171
	(3.44)***	(8.17)***	(2.89)***
Dual donor	-0.3029	-0.2092	-0.3147
	(-3.53)***	(-3.46)***	(-5.56)***
PAC	-0.1522	-0.1322	-0.1466
	(-2.36)**	(-2.14)**	(-2.50)**
Substitute	-4.4020	-4.5423	-4.3870
	(-13.30)***	(-13.05)***	(-12.60)***
Final product	-0.2699	-0.1502	0.1156
	(-1.87)*	(-2.12)**	(0.67)
China 2025	-0.3173	-0.2153	-0.4666
	(-2.32)**	(-1.99)**	(-3.02)***
Size	0.0182	-0.0098	0.0036
	(0.72)	(-0.48)	(0.18)
ROA	-1.6692	-1.7470	-1.5410
	(-0.99)	(-0.97)	(-0.88)
R&D/AT	-1.8739	-1.7158	-2.3631
	(-3.88)***	(-6.68)***	(-4.91)***
Capex/AT	-7.0036	-6.4760	-8.0580
	(-2.44)**	(-1.78)*	(-2.52)**
Constant	-1.8172	-1.6539	-1.6113
	(-3.11)***	(-3.15)***	(-3.60)***
List fixed effects	YES	YES	YES
Product code fixed effects	YES	YES	YES
Industry fixed effects	YES	YES	YES
Observations	6,716	6,716	6,716
Pseudo R2	0.236	0.232	0.245

Table VI. Robustness tests

This table presents results (not marginal effects) from linear probit models of robustness tests of the effect of campaign contributions by party on the probability of receiving tariff exemptions. The response variable is *Approved* (a binary variable set equal to one if the exemption application is approved). Model 2 is restricted to firms whose political contributions are at least 66% focused on republican or democrat candidates. Model 3 is restricted to the sample of firms that make political contributions through a political action committee. Complete variable definitions are in Appendix Table A1. Firm-level characteristics are winsorized at the 1st and 99th percentiles. Standard errors are adjusted for firm and list level clustering. Two-sided *z*-statistics are reported in parenthesis. ***, **, and * represent 1%, 5%, and 10% statistical significance levels, respectively.

		Only concentrated donors	Only donor firms			
	(1)	(2)	(3)	(5)	(6)	(7)
Variable	*Approved*	*Approved*	*Approved*	*Approved*	*Approved*	*Approved*
Republican contributions / AT		0.1090	0.0594			
		(15.95)***	(4.88)***			
Democratic contributions / AT		-0.3663	-0.1877			
		(-6.62)***	(-8.67)***			
Lobbying / AT	0.0158	0.0065	0.0094			
	(1.87)*	(0.61)	(1.57)			
(Republican minus democrat contributions) / AT	0.0439					
	(5.61)***					
Log (1 + Rep contributions)				0.0578		0.0756
				(1.70)*		(1.73)*
Log (1 + Dem contributions)					-0.1683	-0.2327
					(-1.93)*	(-1.86)*
Log (1 + Lobbying)				0.0409	0.0469	0.0435
				(5.29)***	(6.93)***	(6.64)***
Includes control variables	YES	YES	YES	YES	YES	YES
List fixed effects	YES	YES	YES	YES	YES	YES
Product code fixed effects	YES	YES	YES	YES	YES	YES
Industry fixed effects	YES	YES	YES	YES	YES	YES
Observations	6,716	1,217	1,928	6,716	6,716	6,716
Pseudo R2	0.240	0.307	0.243	0.214	0.212	0.220

Table VII. Multiple Applications – Robustness Tests

This table presents results (not marginal effects) from linear probit models to test the effect of campaign contributions by party on the probability of receiving tariff exemptions after controlling for multiple applications by firms. The response variable is *Approved* (a binary variable set equal to one if the exemption application is approved). Complete variable definitions are in Appendix Table A1. Firm-level characteristics are winsorized at the 1st and 99th percentiles. Standard errors are adjusted for firm and list level clustering. Two-sided *z*-statistics are reported in parenthesis. ***, **, and * represent 1%, 5%, and 10% statistical significance levels, respectively.

	Excluding applications submitted by multiple companies for the same product codes	Instead of dropping applications, a dummy variable (*Multiple applications*) is added	Applications for the same product codes submitted by multiple companies with different decisions
	(1)	(2)	(3)
Variable	*Approved*	*Approved*	*Approved*
Republican contributions / AT	0.1511	0.0519	0.0425
	(1.95)*	(3.61)***	(1.83)*
Democratic contributions / AT	-0.2318	-0.1319	-0.3697
	(-1.67)*	(-2.25)**	(-2.78)***
Lobbying / AT	-0.0010	0.0038	0.0028
	(-0.52)	(2.57)**	(1.70)*
Dual donor	-0.2161	0.0983	0.5098
	(-0.43)	(0.33)	(0.91)
PAC	-0.4776	-0.5025	-0.1984
	(-1.40)	(-1.79)*	(-0.42)
Substitute	-0.1376	-0.3312	-0.3728
	(-0.54)	(-1.85)*	(-1.36)
Final product	0.3329	-0.1678	-0.6773
	(1.34)	(-1.04)	(-2.83)***
China 2025	-4.0933	-4.2322	0.1903
	(-8.73)***	(-13.82)***	(0.30)
Size	0.1281	0.0324	-0.0564
	(1.60)	(0.56)	(-0.74)
ROA	0.0449	-0.8266	2.0351
	(0.03)	(-0.72)	(1.27)
R&D/AT	2.3166	-1.1873	3.0038
	(1.05)	(-0.61)	(0.91)
CAPEX/AT	-14.0800	-9.5958	-5.2531
	(-3.01)***	(-2.32)**	(-1.09)
Multiple applications		-0.0717	
		(-0.57)	
Constant	-3.0786	-2.1838	1.0732
	(-5.04)***	(-3.62)***	(0.82)
List fixed effects	YES	YES	YES
Product code fixed effects	YES	YES	YES
Observations	1,746	6,755	1,859
Pseudo R2	0.2522	0.2163	0.1433

Table VIII. Selection Bias in Political Contributions

This table presents results of a Heckman two-step estimation where we model the likelihood of having a political action committee (PAC) in the first stage (model 1), and then model the likelihood of receiving a tariff exemption in step 2 (models 2 – 4). *Voter participation rate* is the percent of eligible voters who cast a valid vote in the 2016 presidential election, by state. The *Inverse Mills ratio* is estimated from information in the first stage regression. Two-sided *z*-statistics are reported in parenthesis. ***, **, and * represent 1%, 5%, and 10% statistical significance levels, respectively.

	(1)	(2)	(3)	(4)
	First stage	2nd stage		
Variable	*PAC*	*Approved*	*Approved*	*Approved*
Voter participation rate	0.5605			
	(17.69)***			
Republican contributions / AT		0.0403		0.0656
		(2.32)**		(8.74)***
Democratic contributions / AT			-0.0449	-0.1354
			(-1.92)*	(-5.36)***
Lobbying / AT		0.0222	0.0262	0.0224
		(2.00)**	(2.98)***	(1.87)*
Substitute	0.1538	0.1792	0.2725	0.1430
	(8.62)***	(1.07)	(1.81)*	(0.86)
Final product	-0.1126	0.1995	0.2492	0.1715
	(-4.92)***	(0.79)	(0.86)	(0.67)
China 2025	0.0754	-4.2253	-4.5677	-4.4581
	(1.33)	(-12.52)***	(-10.42)***	(-11.81)***
Size	0.1777	0.4455	0.3257	0.4386
	(32.31)***	(2.18)**	(2.26)**	(2.49)**
ROA	0.1525	-2.0763	-3.4779	-2.7092
	(1.39)	(-1.58)	(-6.23)***	(-2.18)**
R&D/AT	1.5179	-9.4065	-4.7888	-12.3851
	(6.08)***	(-1.97)**	(-2.19)**	(-6.12)***
Capex/AT	-1.3181	-6.7716	-7.3327	-10.0648
	(-4.42)***	(-2.69)***	(-2.04)**	(-5.62)***
Inverse Mills ratio		1.5085	1.3620	1.5226
		(3.80)***	(6.82)***	(5.62)***
Constant		-8.3068	-6.7367	-8.0984
		(-2.88)***	(-3.47)***	(-3.23)***
List fixed effects	YES	YES	YES	YES
Product code fixed effects	YES	YES	YES	YES
Industry fixed effects	YES	YES	YES	YES
Observations	6,716	2,356	2,356	2,356
Pseudo R2	0.388	0.284	0.268	0.301

Table IX. Event Study Results

Table IX presents cumulative abnormal returns (CARs) around the announcement of decisions (accept vs. reject) regarding trade tariff exemption applications. Day 0 is the day on which the decision is announced. Event windows are labelled accordingly. Panel A includes the number of observations, mean, median, standard deviation, and 10^{th} and 90^{th} percentiles of the distribution of CARs. Panel B includes the number of observations, mean, and standard deviation for data subsets focusing on accepted and rejected applications. Further, the table includes the difference in means between the two subsets and p-values from a two-sided t-test for significance of the difference in means. Panel C and Panel D mirror Panel B in construction, respectively for accepted and rejected applications. In each panel, mean abnormal returns for "high probability" applications are compared to mean abnormal returns for "low probability" applications. "Low probability" ("High probability") applications are those for which the difference between campaign contributions to Republican politicians and Democrat politicians are below (above) the median of the sample distribution; only firms with at least one non-zero contribution are included. ***, **, and * represent 1%, 5%, and 10% statistical significance levels, respectively.

Panel A. All applications

Window	N Obs	Mean	Median	St Dev	p10	p90
(0,+1)	5756	-0.139%	-0.075%	1.968%	-2.663%	2.068%
(0,+2)	5756	-0.007%	0.189%	2.411%	-3.261%	2.820%
(-1,+1)	5756	-0.237%	-0.035%	2.544%	-3.981%	2.762%
(-2,+2)	5756	-0.043%	0.253%	3.320%	-4.329%	3.744%

Panel B. Difference of means

	Approved				Rejected	
Window	N Obs	Mean	Difference	P-value	N Obs	Mean
(0,+1)	890	0.236%	0.445%	<0.001	4434	-0.210%
(0,+2)	890	0.645%	0.724%	<0.001	4434	-0.078%
(-1,+1)	890	0.015%	0.270%	0.003	4434	-0.254%
(-2,+2)	890	0.512%	0.607%	<0.001	4434	-0.095%

Table IX. Event Study Results - Continued

Table IX presents cumulative abnormal returns (CARs) around the announcement of decisions (accept vs. reject) regarding trade tariff exemption applications. Day 0 is the day on which the decision is announced. Event windows are labelled accordingly. CARs are computed using a four-factor (Fama French three factors plus momentum) model estimated over one-hundred trading days ending ten days prior to the event. Panel A includes the number of observations, mean, median, standard deviation, and 10^{th} and 90^{th} percentiles of the distribution of CARs. Panel B includes the number of observations, mean, and standard deviation for data subsets focusing on accepted and rejected applications. Further, the table includes the difference in means between the two subsets and *p*-values from a two-sided *t*-test for significance of the difference in means. Panels C and Panel D mirror Panel B in construction, respectively for accepted and rejected applications. In each panel, mean abnormal returns for "high probability" applications are compared to mean abnormal returns for "low probability" applications. "Low probability" ("High probability") applications are those for which the difference between campaign contributions to Republican politicians and Democratic politicians are below (above) the median of the sample distribution; only firms with at least one non-zero contribution are included. ***, **, and * represent 1%, 5%, and 10% statistical significance levels, respectively.

Panel C – Approved applications only

Low probability of acceptance							High probability of acceptance			
Window	N Obs	Mean	St Dev	Difference		p-value	Window	N Obs	Mean	St Dev
(0,+1)	85	1.34%	1.34%	1.11%	***	<0.001	(0,+1)	169	0.23%	0.45%
(0,+2)	85	1.74%	1.42%	1.52%	***	<0.001	(0,+2)	169	0.22%	0.09%
(-1,+1)	85	0.87%	1.96%	1.38%	***	<0.001	(-1,+1)	169	-0.51%	-0.63%
(-2,+2)	85	2.18%	2.29%	2.99%	***	<0.001	(-2,+2)	169	-0.81%	-1.35%

Panel D – Rejected applications only

Low probability of acceptance							High probability of acceptance			
Window	N Obs	Mean	St Dev	Difference		p-value	Window	N Obs	Mean	St Dev
(0,+1)	658	0.20%	0.25%	0.40%	***	<0.001	(0,+1)	632	-0.20%	-0.58%
(0,+2)	658	0.17%	0.37%	0.03%		0.391	(0,+2)	632	0.14%	0.04%
(-1,+1)	658	0.21%	0.05%	-0.05%		0.6732	(-1,+1)	632	0.27%	-0.17%
(-2,+2)	658	0.26%	0.21%	-0.39%		0.999	(-2,+2)	632	0.64%	0.25%

Table X. Event Study Regressions

This table presents results from OLS regressions of the stock price reaction to tariff exemption decisions by the United States Trade Representative (USTR). The response variable is the cumulative abnormal return for the stock price of the filing firm, over an event window around the announcement of the adjudication decision (approval or rejection) for trade-tariff exemption applications, estimated as described in Table VI. Complete variable definitions are in Appendix Table A1. *Predicted approval* is the fitted probability of approval estimated on the basis of the model presented in column (3) of Table V. Firm-level characteristics are winsorized at the 1st and 99th percentiles. Standard errors are adjusted for firm and list level clustering. Two-sided *t*-statistics are reported in parenthesis. ***, **, and * represent 1%, 5%, and 10% statistical significance levels, respectively.

	(1)	(2)	(3)	(4)
Variable	CAR (0,+1)	CAR (0,+2)	CAR(-1,+1)	(CAR-2,+2)
Approved	0.0049	0.0075	0.0038	0.0076
	(2.14)**	(2.57)**	(1.97)**	(1.90)*
Predicted approval	-0.0178	-0.0319	-0.0439	-0.0557
	(-3.50)***	(-5.26)***	(-4.25)***	(-2.81)***
Size	-0.0003	-0.0009	0.0010	0.0008
	(-0.38)	(-1.15)	(2.56)**	(0.73)
ROA	-0.0171	-0.0173	-0.0210	-0.0097
	(-0.99)	(-0.58)	(-0.96)	(-0.23)
R&D/TA	-0.0400	-0.0455	-0.1062	-0.0910
	(-0.91)	(-0.64)	(-6.45)***	(-1.78)*
Capex/TA	-0.0311	-0.0761	-0.0797	-0.0810
	(-1.97)**	(-1.97)**	(-1.81)*	(-2.57)**
Constant	0.0000	0.0090	-0.0160	-0.0156
	(0.00)	(1.03)	(-2.97)***	(-1.15)
Observations	5,098	5,098	5,098	5,098
R-squared	0.088	0.109	0.137	0.110

Table XI. Inaugural Committee and Lobbyists Connected to the Administration

This table presents results (not marginal effects) from a linear probit model to test the effect of donations to the inaugural committee of president Trump and firm lobbyists in the Trump administration on the probability of receiving tariff exemptions. The response variable is *Approved* (a binary variable set equal to one if the exemption application is approved). *Inaugural/AT* measures firm contributions to the Trump inaugural committee. *Lobby connection* is a binary variable set equal to one if the filing firm has hired a lobbyist employed, currently or in the past, by the Trump administration. Complete variable definitions are in Appendix Table A1. Firm-level characteristics are winsorized at the 1st and 99th percentiles. Standard errors are adjusted for firm and list level clustering. Two-sided *z*-statistics are reported in parenthesis. ***, **, and * represent 1%, 5%, and 10% statistical significance levels, respectively.

	(1)	(2)	(3)
Variable	*Approved*	*Approved*	*Approved*
Inaugural/AT	-0.4271		-0.4855
	(-5.67)***		(-6.48)***
Lobby connection		0.2251	0.2628
		(2.12)**	(2.07)**
Republican contributions/AT	0.0536	0.0573	0.0558
	(20.41)***	(18.74)***	(25.60)***
Democratic contributions/AT	-0.1459	-0.1642	-0.1510
	(-8.93)***	(-7.16)***	(-8.06)***
Lobbying/AT	0.0188	0.0161	0.0177
	(2.94)***	(3.01)***	(3.03)***
Dual donor	0.1303	0.0375	0.0382
	(0.83)	(0.17)	(0.18)
PAC	-0.4816	-0.4507	-0.4520
	(-3.85)***	(-2.58)***	(-3.02)***
Substitute	-0.2996	-0.3177	-0.3004
	(-4.69)***	(-5.92)***	(-5.08)***
Final product	-0.1315	-0.1423	-0.1227
	(-2.15)**	(-2.42)**	(-1.96)**
China 2025	-4.4868	-4.3892	-4.3997
	(-13.92)***	(-12.81)***	(-12.96)***
Size	0.0063	-0.0062	-0.0056
	(0.30)	(-0.35)	(-0.34)
ROA	-1.6046	-1.5415	-1.6220
	(-0.89)	(-0.90)	(-0.92)
R&D/AT	-2.3639	-2.5215	-2.5624
	(-5.07)***	(-5.40)***	(-6.32)***
Capex/AT	-7.4663	-8.0743	-7.3231
	(-2.45)**	(-2.53)**	(-2.49)**
Constant	-1.6675	-1.5590	-1.6012
	(-3.57)***	(-3.48)***	(-3.54)***
List fixed effects	YES	YES	YES
Product code fixed effects	YES	YES	YES
Industry fixed effects	YES	YES	YES
Observations	6,716	6,716	6,716
Pseudo R2	0.250	0.246	0.251