The Golden Revolving Door: Hedging through Hiring Government Officials

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Abstract

Using both the onset of the US-China trade war in 2018 and the most recent Russia-Ukraine conflict and associated trade tensions, we show that government-linked firms increase their importing activity by roughly 33% (t=4.01) following the shock, while non-government linked firms trading to the same countries do the opposite, decreasing activity. These increases appear targeted, in that we see no increase for government-linked supplier firms generally to other countries (even countries in the same regions) at the same time, nor of these same firms in these regions at other times of no tension. In terms of mechanism, government supplier-linked firms are nearly twice as likely to receive tariff exemptions as equivalent firms doing trade in the region who are not also government suppliers. More broadly, these effects are increasing in level of government connection. For example, firms that are geographically closer to the agencies to which they supply increase their imports more acutely. Using micro-level data, we find that government supplying firms that recruit more employees with past government work experience also increase their importing activity more – particularly when the past employee worked in a contracting role. Lastly, we find evidence that this results in sizable accrued benefits in terms of firm-level profitability, market share gains, and outsized stock returns.

KEYWORDS: Government Connection; Government Suppliers; Trade Disruptions
JEL CLASSIFICATIONS: D72; H57

1. Introduction

In the prototypical Cobb-Douglas production function, firm output depends on the factors of production – typically, labor and capital – along with technology and productivity components. While this is a sensible static model of output, it ignores the fact that as industries progress, not only will relative elasticities of production change, but the fundamental components of the individual factors *themselves* will as well. In this paper, we document precisely this occurring in global production. Namely, one large and important shift in the global production function has been the shift of all countries toward a more integrated world economy. Foreign trade as a percentage of Global GDP has grown from less than 25% in 1970 to well over 50% in 2020 (The World Bank, 2022). This has meant that countries rely on each other, and globally interconnected supply chains, more than they ever have. With this reliance has also come the increasing exposure of global supply and production to trade disruptions driven by foreign political tensions and frictions (orthogonal to fundamental economic supply shocks themselves).

In this paper, we document a subtle but surprisingly powerful way that firms have empirically been able to hedge these shocks vis-à-vis competitors. Namely, ties to the government itself have proven strong, significant, and robust inoculators to the exact trade friction barriers put in place by these governments. Moreover, the closer the ties to the government, the more insulated the firms have been at times of political friction. Lastly, these have had real economic impacts on the firms and terms of firm growth, profitability, and even potential survival.

To identify this, we examine firms that have the same objectives, operating in the same industries, and even that utilize the same supply chains in production. The only difference between them is that upon a shock to that supply chain, one set of these firms has a channel of outside connection to the government in that the government is one of their customers. We find that this results in very different behaviors of the firms following this shock.

To concretize this, one of the central laboratories – and shocks – that we utilize is the US-China Trade War beginning in 2018. We begin by considering all firms importing from China, exploring how they respond surrounding this tension and imposition of import

tariffs. Unsurprisingly, we find that on average importing firms reduce their quantity and value of imports from China following the tariffs. However, this masks stark variation between the behavior of two types of firms. In particular, when we separate firms into those that are government suppliers versus those that are not, we see one group in fact *increase* their imports following the start of the trade war. The group that increases, though, is perhaps counterintuitively those firms tied to the government (the agents responsible for instituting and enforcing the trade tariffs and barriers).

Given this somewhat counterintuitive finding – for instance, those firms supplying to the government are mandated to have stricter minimum wage policies and other worker requirements, and so one might have thought more strict enforcement of this barrier as well – we explore its robustness in sample, a number of placebo tests, out of sample validation, and potential driving mechanisms.

To illustrate this, consider a firm in our sample - Honeywell International Inc. Honeywell is a multinational corporation headquartered in Charlotte, North Carolina, focusing on aerospace, building technologies, performance materials and technologies, and safety and productivity solutions. It is a government supplier and an importer from China throughout our sample period. Figure 1 of Appendix C shows that Honeywell's imports from China increased substantially in terms of both the number of transactions and the product quantity after the outbreak of the US-China Trade War in the third quarter of 2018. Figure 2 of Appendix C suggests that the pattern based on dollar terms also holds for the percentage of imports from China in total imports from all countries.

Honeywell's increasing imports from China during the US-China Trade War are partially attributable to its superior ability in obtaining tariff exemptions. Honeywell applied for 25 tariff exemptions in all four rounds of tariffs on Chinese goods and got 6 of them approved. This implies an approval rate of 24%, while the average approval rate for all applicants was only roughly half of that, 12.9%. One contributor to Honeywell's success in applying for tariff exemptions could have been its ample supply of former government contracting officers. In particularly, Honeywell recruits many ex-government officials, including former purchasing agents and contracting officers who specialized in government procurement (more examples are provided in Part II of Appendix C).

Moreover, the impact of the success in gaining outsized tariff exemptions eventually is reflected in Honeywell's financial and operating performance. Honeywell raised its sales and earnings guidance three times in 2018; at the same time tariffs concurrently took their toll on most other US manufacturing companies (Pan and Waldmeir, 2018).

We find that these Honeywell patterns hold true more broadly across the universe of firms. In particular, connections to the government provide a substantial strategic benefit to connected firms particularly at times of political tension, empirically dominating and more than offsetting (on average), any countervailing effects. For instance, using a diff-in-diff framework, we begin by exploring the changes in behavior of government supplier firms versus non-supplier firms around the onset of the trade frictions related to the 2018 trade war with China. On average, as mentioned, government suppliers actually significantly increase import activity from China by 4.9 percentage points (t=4.01) relative to non-suppliers. This represents a 33% jump from the sample mean – a sizable magnitude response. Moreover, we find that none of this comes before the trade war begins (no pre-trend), with 100% of it occurring in the quarters following.

We then explore a number of aspects of this effect. First, in order to rule out that it had something to do with trade from a specific region of the world or trade route, we explore trade behaviors to countries exploiting identical trade routes. In particular, using the same diff-in-diff framework, we examine trade patterns to Japan, South Korea, and Taiwan. We see no identifiable change in behavior between government suppliers and non-supplier firms that trade to these other similar trade-route countries at this exact same time. Second, we conduct an out-of-sample test for the external validity of the dynamics we see in the case of the trade tensions of the US-China trade conflict. In particular, we examine responses of firms importing from Russia surrounding the onset of the Russia-Ukraine Conflict and resulting trade sanctions imposed by the US. Nearly identically to the case of the US-China trade war, government suppliers have markedly different reactions following the sanctions, significantly increasing import activity vis-à-vis otherwise equivalent non-government supplier firms doing trade with Russia. This provides external validity regarding the generalizability of the dynamics and patterns we document. Third, we carry out another out-of-sample test when trade disruptions are triggered by natural disasters

instead of political tensions. In a setting of the 2011 Tohoku Earthquake and Tsunami in Japan, we find that both US government suppliers and non-suppliers reduce imports from Japan and the changes in the imports from Japan between the two groups of firms exhibit no significant difference around the earthquake. This suggests that ties with government plays a hedging role only when trade disruptions are associated with political tensions.

Second, we explore which government suppliers in particular appear to increase their intensity of trade the most following the trade war onset. We find that – consistent with Department of Defense (DoD) contracts being larger and more stringent in terms of their regulatory burden – that non-DoD contractors increase their trade by significantly more following the trade war's onset.

Once establishing these facts, we then turn to exploring the mechanism in more depth. In particular, we test whether connections to the government allow firms to have an advantage particularly at this time of supply-chain shock. One large, tangible benefit would be the ability to avoid these tariffs, in the form of tariff exemptions, that were given sparingly upon request by the federal government. We find that controlling for all other firm, industry, and time characteristics that government suppliers were over twice as likely (t=2.22) to receive these tariff exemptions as otherwise equivalent non-supplier firms.

If the patterns we find are related to government connections, then the more connected a firm is, the more we might expect to see the behaviors in the data. In order to explore this, we use a number of measures for strength of connections. We first look at the distance of the firm to the government agency that they are supplying. We find strong evidence that the closer in distance a firm is to their government agency, the more they increase trade.

Digging more deeply, we collect micro-level evidence by examining the backgrounds of executives and employees at the firms in our sample. In doing so, we find evidence that our results are stronger in firms with more direct ties to the government. For instance, firms that have a number of former government employees have especially large responses, which become even larger if the firm has former government employees *specifically* that specialized in contract allocation during their time at the government.

Lastly, we turn to the value implications of the behavior that we observe – and in particular the relative value differences between government suppliers and non-suppliers. We find that government suppliers accrue significant relative value precisely at the time of the increased importing activity differences. In particular, we observe statistically and economically significant rises in government connected firms' performance, profitability, and market share relative to non-government connected firms. Moreover, they also significantly outperform with regard to their equity returns– both in average abnormal returns and earnings announcement returns.

The paper proceeds as follows: Section 2 discusses related literature, while Section 3 discusses the data, sample characteristics, and provides institutional background. Section 4 explores the behaviors of government suppliers versus non-suppliers, and established the main dynamics of their trade behavior. In addition, it runs a number of placebo tests, and establishes out-of-sample evidence, along with exploring the mechanism in more depth. Section 5 concludes.

2. Related Literature

Our study contributes to three strands of literature in economics and finance. First, our paper is closely related to previous studies on the value of political connections, as a part of a much larger literature on the value of social ties (e.g., Cohen, Frazzini, and Malloy, 2008; 2010; Cohen and Malloy, 2014; Cohen, Gurun, and Malloy, 2017). Faccio (2006), Fisman (2006), and Godman, Rocholl, and So (2009) show that corporate political connections, through corporate owners, managers, or board members, are associated with an increase in firm value. Since politically connected firms are more likely to be bailed out by the government (Faccio, Masulis, and McConnell, 2006), the value of political connections is higher during a time of crisis and uncertainty (Acemoglu, Johnson, Kermani, and Kwak, 2016). Following-up studies extend this literature in two directions. On the one hand, a few studies introduce exogenous shocks of political connections, such as the sudden deaths of politicians (Faccio and Parsley, 2009) and close election outcomes (Akey, 2015), to quantify the causal effect of political connections on firm value. On the other hand, researchers have identified various economic channels of rent-seeking as the sources

of incremental firm value. For example, relative to other firms, politically connected firms enjoy a lower cost of external financing (Claessens, Feijen, and Laeven, 2008; Houston, Jiang, Lin, and Ma, 2014) and a lower likelihood of being involved in SEC enforcement (Correia, 2014). Our paper contributes to this literature by exploring the value of political connections through government contracts. We show that, under trade policy uncertainty, government suppliers are more likely to enjoy tariff exemption and information advantage, and this effect is stronger when managers, board members, or employees of government suppliers have personal connections with government agencies that offer contracts.

Our paper is also related to the literature examining the economic impacts of government spending (e.g., Chodorow-Reich, Feiveson, Liscow, and Woolston, 2012; Ramey, 2011; Shoag, 2016; Wilson, 2012). Among all types of government spending, government procurement accounts for a great proportion of the overall government budget (Liebman and Mahoney, 2017). Particularly related to our paper, Goldman, Rocholl, and So (2013), Brogaard, Denes, and Duchin (2022), and Duchin and Sosyura (2012) find that firms connected with powerful politicians are awarded more federal contracts and can negotiate with government agencies for better contract terms. A more recent debate in the literature focuses on whether and how government spending affects firm value, i.e., government contracts can generate both positive and negative economic consequences. For example, Cohen and Malloy (2014) find that firms relying on government contracts invest less in physical and intellectual properties and, consequently, generate lower sales growth. However, during economic downturns, government contracts generate a stabilizing effect. Goldman (2020) finds that firms with government contracts make higher capital expenditures and receive more bank credit during the subprime crisis. Our study provides an international trade perspective on whether and how contractual relationships with the government generate value for shareholders, especially during a period of high policy uncertainty.

This paper also joins a growing literature examining the real economic consequences of the US-China trade war. Studies in this literature have made a great effort to quantify the effects of the trade war on both the US and Chinese economies. For example, Amiti, Redding, and Weinstein (2019) and Fajgelbaum, Goldberg, Kennedy, and Khandelwal

(2020) find that import and retaliatory tariffs lead to large declines in imports and exports, a drastic increase in the average price of manufacturing goods, and a significant reduction in the varieties of products available in the US market. For Chinese firms, Benguria, Choi, Swenson, and Xu (2022) show that the trade policy uncertainty triggered by the trade war leads to significant impairments in operation, as exhibited by significant declines in corporate investment, R&D expenditure, and operating profits. These negative impacts are also reflected in the capital market. For example, Huang, Lin, Liu, and Tang (2022) finds that tariff announcements generate significant price drops among both US and Chinese firms with direct or indirect exposure to the US-China trade. More recent studies in this literature focus on the debate of whether the US-China trade war will generate a permanent restructuring of the global supply chain. Fajgelbaum, Goldberg, Kennedy, Khandelwal, and Taglioni (2021) find that, after the trade war, other countries decreased exports to China and increased exports to the US where exports from most other countries complement the US and substitute Chinese goods. Charoenwong, Han, and Wu (2022) suggest whether the US firms offshore or re-shore after the US-China trade war depends on the location of their customer base. Our paper contributes to this literature by providing a surprising contrast in the imports from China between the US government suppliers and other firms without government contracts, i.e., while firms that do not sell to the US government cut their imports from China after the outbreak of the trade war, government suppliers increase their purchases from Chinese firms significantly.

3. Data Sources, Sample Characteristics, and Institutional Background

3.1. Data Sources

We gather data from several sources covering a sample period from the first quarter of 2016 to the last quarter of 2019. The international trade data are retrieved from the S&P Panjiva database that compiles information from bills of lading with the original source from government customs agencies. The compiled dataset provides detailed information on US firms' sea-import transactions, including the names and addresses of the sellers (suppliers) and the buyers (customers), and the value, quantity, and weight of goods imported. The dataset also provides eight-digit Harmonized System (HS) Product

Codes for goods imported.

We obtain the federal government contract data from the USAspending.gov website maintained by the Bureau of the Fiscal Service (i.e., a bureau of the U.S. Department of the Treasury). The dataset includes all contracts and contract indefinite delivery vehicles (IDVs) offered by the US federal government. The dataset provides all information related to federal procurement contracts, including their value, duration, the number of bidders, awarding agency, product, and services code (PSC), and pricing type. We use computer algorithms to match the contract recipients in the federal contract dataset to publicly listed firms in Compustat based on corporate names and manually verify the accuracy of these matches.

We collect tariff information from the United State Trade Representative (USTR) website. USTR compiles a list of HS codes covered by additional tariffs on products of China. In our sample period, there are six batches of Chinese goods subject to additional tariffs. Most of these batches became effective since the third quarter of 2018, which we treat as the beginning of US-China trade war (See Section 3.3.1 for a detailed discussion). US importers can apply for tariff exemption by submitting exclusion requests to USTR and USTR would review case by case to determine whether a tariff exclusion is appropriate. Once approved, the tariff exclusion is valid for one year. Joe, McDaniel, and Parks (2019) compile all four tranches of tariff exclusion, which cover over 50 thousand tariff exclusion requests. This dataset includes the names of importers, the HS code of the goods, request submitted dates, and whether the requests are approved or denied.

For tests reported in Section 4.2, we construct measures for the connection between firms and government agencies based on whether corporate managers, board members, or employees have past career experience in government agencies. For the managers and board members, we obtain their career history from BoardEx. Profile information of other employees is retrieved from the Lightcase US Profile database.

3.2. Sample Characteristics

We focus on publicly traded firms that import from suppliers in other countries. Therefore, our main sample is the intersection of Compustat and Panjiva databases. We

match the import data to public firms in Compustat by using "conpanjivaid", which serves as the firm unique identifier in Panjiva. We then link them to Global Company Keys (GVKEYs) in the Compustat database. 946 US unique public firms have import data from Panjiva in our sample period. Based on Compustat Segment Customer File, we define firms that report the US government as their major customers following SFAS 131 in a specific year as "government suppliers" and other firms as "non-suppliers".[1] Panel A of Table I reports the summary statistics for US public importers in our sample and Panel B provides a comparison between government suppliers and non-suppliers.

[Insert Table I Here]

Statistics in Panel A show that the *China Import Ratios*, i.e., the percentage of imports from China in total imports from all countries, for US public importers range from 14.8% to 16.5% as measured by value, the number of transactions, and product quantity. China has been the top import country of the United States since 2007, with an import ratio of 16.86% measured by value.[2] The import ratio gradually increased to 21.42% in 2017 and declines to 18.40% in 2019. Public firms in our sample have lower *China Import Ratios* than private US importers. The difference is possibly driven by the fact that public firms are more capable of diversifying their international supply chains and importing more from other countries.

In Panel B, we show that, on average, government suppliers import less from China relative to non-suppliers. The differences in *China Import Ratios* range from 4.8% to 5.6% and are statistically significant. These gaps are likely driven by the differences in firm characteristics. For example, government suppliers have larger firm sizes, lower book-to-market ratios, and lower profitability relative to non-suppliers. In our empirical tests, we include these firm characteristics as controls (together with firm fixed effects that control for time-invariant firm characteristics) while investigating corporate decisions of importing from China around the US-China Trade War.

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[1] "Non-suppliers" refer to firms that are not dependent suppliers of the US federal and state governments.

[2] https://wits.worldbank.org/CountryProfile/en/Country/USA/Year/2007/SummaryText

3.3. Institutional Background

3.3.1 The US-China Trade War

The ongoing US-China Trade War is the largest bilateral trade conflict since the US-Japan Trade War in the 1980s. This trade war origins from a prolonged and large US trade deficit in goods with China. The US government, while complaining since China's entry into the World Trade Organization (WTO), attributes this trade deficit to China's unfair trade policies (e.g., subsidizing exporting firms in strategically important industries), exchange rate manipulation, and intellectual property theft.[3]

Donald Trump, when running his presidential campaign in 2016, promised to reduce the US trade deficit with China and bring manufacturing jobs back to the US labor market by imposing tariffs on Chinese goods. After being elected into office, he instructed the United State Trade Representative (USTR) to investigate applying tariffs on US$50-60 billion worth of Chinese goods. The White House, after a few rounds of unsuccessful negotiations with the Chinese government, formally launched the trade war against China by imposing tariffs on US$34 billion worth of Chinese goods on July 6, 2018, and the Chinese government retaliated immediately. The trade war escalated in the second half of 2018 and the entire year of 2019 until both countries signed the phrase-one deal in January 2020. We provide a detailed timeline of major events in the US-China Trade War in Table A1 and a time trend of the US tariff rates imposed on Chinese goods in Figure A1 of the appendix. We follow the consensus in the public media and define July 2018 as the beginning of the US-China Trade War and, accordingly, the dummy variable, *Post Trade War*, is set to one for sample periods after (including) the third quarter of 2018.

Bilateral trade conflicts have occurred frequently since the 18th century.[4] We focus on the US-China Trade War as our research setting for the following reasons. First, the

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[3] Details can be found in the "2018 Report to Congress on China's WTO Compliance" issued by the US Trade Representative (https://ustr.gov/sites/default/files/2018-USTR-Report-to-Congress-on-China%27s-WTO-Compliance.pdf).

[4] For example, the Boston Tea party between American colonists and Britain of 1970s, the Opium War between China and Britain of 1840s, the Smoot-Hawley Act of 1930s (between US, Canada and European countries), the Chicken Tariff War of the 1960s, the US-Japan Trade War of 1980s, and the Banana Wars of 1990s.

economic magnitude of this trade war is unprecedented. By the end of 2019, the US had imposed tariffs on more than US$350 billion worth of Chinese goods; China, in its retaliation, imposed tariffs on US exports worth more than US$100 billion. Figure A1 shows that the average US tariff rate reached 19.3% by the end of 2019, while the average rate for the rest of the world was only around 3%. Second, the US-China Trade War affects a large scope of products. By the end of 2019, 66.4% of Chinese exports to the US were subject to US tariffs while the Chinese retaliatory tariffs were extended to 58.3% of all US exports to China, covering almost all strategically important industries from agriculture to information technology. Third, the trade war between the two largest economies in the world generates significant economic consequences. For example, in the United States, consumer price indices (CPI) of all nine categories of tariffed goods shapely increased in 2019 while those of other categories declined.[5] The trade war was also recognized as the main reason for China's sluggish GDP growth of 5.9% in 2019 and 2.3% in 2020, the lowest one since 1990. Finally, the impact of the trade war has extended to social and geopolitical areas. Many researchers (e.g., Rothwell and Diego-Rosell, 2017; Lau, 2019; Schoenbaum and Chow, 2019) argue that Trump launched the trade war against China to defense the economic and geopolitical dominance of the United States, which contributed to a significant rise in nationalism and deepened the confrontation between the two nations.

3.3.2 The Cost of Hedging

While this study mainly focuses on a few important benefits of being a government contractor, it is important to outline its costs to support a comparative static analysis of two equilibriums around an exogenous macroeconomic shock, i.e., the US-China Trade War. We discuss a few major (not necessarily exhaustive) costs of being government suppliers/contractors below.

The first and also the most important cost arises from a higher minimum wage for government contractors/suppliers, relative to the one that other firms need to comply with. Since Obama signed Executive Order 13658 in 2015, the minimum wage for federal

[5] See "This chart from Goldman Sachs shows tariff are raising prices for consumers and it could get worse" (May 13, 2019), CNBC

contractors has increased significantly (we provide a time series of these increases in Table A2 in the appendix). Today, the minimum wage for federal contractors is $15/hour while the minimum wage for other US firms is $7.25/hour (remaining unchanged since 2009).

Second, in addition to facing a significantly higher minimum wage than other firms, government contractors have to bear other regulatory compliance costs. Most rules that a federal government contractor has to follow are outlined in the Federal Acquisition Regulation (FAR).[6] FAR requires that contractors must make "an affirmative determination of responsibility", including 1) having adequate financial resources to perform contracts; 2) complying with required delivery or performance schedule; 3) demonstrating necessary organization, experience, accounting control, and technical skills; 4) having necessary production, construction and technical equipment; and 5) completing all requisite certifications and representations (depending on the product/service in the contract) before contracts start (e.g., small business program representation; cost accounting standards notices and certifications; certificates of independent price determination, etc.).

Third, government contractors have to spend a great effort dealing with the bureaucracies in the procurement process and the payment system. For example, the bidding requires that a company registers with the System for Award Management (SAM). The bidding firm needs to apply for a NAICS code and a DUNS code. After those steps, the firm has to write up a request for quote (RFQ) and a request for proposal (RFP). While the bidding process is inefficient, it is equally slow to receive payments. In many cases, the government only pays when the entire work is done.

In addition to these major costs mentioned above, government contractors also bear the responsibility and cost to screen and monitor subcontractors, including 1) history of non-competitive procurements; 2) product quality; 3) unusual agents' commissions; and 4)

[6] Different government departments also have their own regulation supplements, such as Defense Federal Acquisition Regulation Supplement (DRARS) and General Service Acquisition Regulation Supplement (GSARS). When firms work with state governments, firms also have to comply with addition requirements set by the state-level regulations.

business ethics of subcontractors. Further, in fixed-price contracts, government contractors bear all risks driven by the fluctuation of input prices.

4. Empirical Results

4.1. Imports from China: Government Suppliers vs. Non-Suppliers

4.1.1 Baseline Test

In our baseline test, we examine whether government suppliers behave differently from other firms (i.e., non-suppliers) when they import from China around the US-China Trade War between 2016 to 2019. The dataset is organized at the firm-quarter-product (HSCODE8) level and the main test specification is outlined in Equation (1) below:

$$\begin{aligned} China\ \ Import\ \ Ratio_{i,p,t} \quad &= \beta_0 + \beta_1 Gov\ \ Supplier_{i,t} \times Post\ \ Trade\ \ War_t + \beta_2 Gov\ \ Supplier_{i,t} + Firm\ \ Controls \\ &+ Firm\ \ FE + Product\ \ FE + Industry \times Year\ \ Quarter\ \ FE + \ \varepsilon_{i,p,t} \end{aligned} \quad (1)$$

where *i* denotes a firm, *p* denotes a product category at the HSCODE8 (i.e., 8-digit HSCODE) level, and *t* denotes a year-quarter. The dependent variable, *China Import Ratio*$_{i,p,t}$, is the percentage of import from China in total import from all countries for a firm *i* in product category *p* at quarter *t*. We construct *China Import Ratio* based on estimated product value, the number of transactions, and product quantity.[7] *Gov Supplier*$_{i,t}$ is a dummy variable that is equal to 1 if the firm *i* discloses at least one government principal customer for year-quarter *t*. *Post Trade War*$_t$ is a dummy variable that is equal to 1 for periods after (including) the third quarter of 2018 when the White House formally launched the trade war (see Section 3.3.1 for a detailed discussion). In addition to the key independent variables mentioned above, we also include book-to-market ratio (*B/M*), firm size (*Log(MV)*), return on assets (*ROA*), and the percentage of total revenue from the U.S. market (*%Revenue from US Market*) as firm-level controls.

[7] As one-third of the import value are missing , following Jain et al. (2014), we impute the missing import value by using the average per-unit import value at the import country-HS code-quarter level, which is calculated by import value divided by import weight.

We include firm and product fixed effects to control for time-invariant unobservable firm and product characteristics that may affect a firm's decisions of importing from China. Changes in the imports from China could also arise from a time-varying industry-specific or market-wide shock, e.g., the outbreak of COVID in 2020 significantly increased the import of non-woven fabric (i.e., an essential input of making masks) from China. We thus include Industry×Year Quarter fixed effects, which control for all macroeconomic or industry shocks and allow us to compare the imports from China between government suppliers and non-suppliers within the same industry-quarter. In a standard diff-in-diff setting, β_2 in Equation (1) captures the difference in *China Import Ratios* between government suppliers and non-suppliers before the US-China Trade War. β_1 captures the difference-in-difference effect, i.e., the difference of changes in *China Import Ratios* between the two groups around the trade war, which is the focus of our paper.

Before presenting empirical results for our baseline tests, we start with evaluating a few important assumptions for the validity of our difference-in-difference approach. First, the US-China trade war is an exogenous and market-wide event to individual firms. Although we do show in a later test that more firms started to bid for federal contracts after the launch of the trade war, the status of government suppliers (i.e., having government organizations or agencies as principal customers) is unlikely affected by the trade war before the end of our sample period since it takes time to establish relationships and obtain contracts from the U.S. government (see Section 3.3.2 for a detailed discussion about the cost of being a government supplier). Second, we plot the time series of *China Import Ratios* in Figure 1, to have a visual assessment of the Parallel Trend Assumption (PTA). Figure 1 shows that the *China Import Ratios* of government suppliers were lower than those of non-government suppliers, which might be driven by certain firm characteristics given the suggested differences between the two groups in Table 1. The gap

between the two groups was stable before the launch of the trade war, which does not violate the Parallel Trend Assumption. After the tariffs were formally implemented in the third quarter of 2018, we observe a sharp difference: *China Import Ratios* of government suppliers drastically increase while those of non-suppliers gradually decline, leading to much smaller gaps in *China Import Ratios* between the two groups. Finally, although government suppliers and non-government suppliers might be competitors, a systematic spillover of import decisions between the two groups is unlikely either before or after the trade war and, therefore, the Stable Unit Treatment Value Assumption (SUTVA) generally holds for our setting.

[Insert Table 2 Here]

The empirical results of our baseline test are reported in Table 2 and we discuss the main patterns below. First, after controlling for the firm-fixed effects, β_2, the coefficients of *Gov Supplier*, are insignificantly different from zero. This suggests that the gaps in *China Import Ratios* between government suppliers and non-suppliers can be fully explained by the differences in some time-invariant firm characteristics. Second, β_1, the coefficients of *Gov Supplier*×*Post* Trade War, are positive and statistically significant at the 1% level in all test specifications. This effect is also economically meaningful. For example, β_1 in column (2) of Table 1 suggests that, around the launch of the trade war, the change in *China Import Ratio* (in terms of estimated value) of government suppliers is 4.9 percentage points higher than that of other firms, which can be translated to 33.11% of the sample mean. Third, the two patterns mentioned above are robust to alternative *China Import Ratios*, irrespective of whether they are measured by estimated value, the number of transactions, or product quantity. Overall, consistent with the visual assessment of Figure 1, our baseline results suggest that, after the launch of the trade war, the percentage import from China of government suppliers increased while that of other firms declined.

One potential concern is that *China Import Ratio* can be affected by the changes in its numerator or denominator. For example, an increase in *China Import Ratio* can be driven by the increase in the imports from China, the decrease in the total imports from all countries,

or both of them. To rule out the possibility that our baseline results are driven by the change in the total import from all countries, we carry out a set of robustness tests based on the import *level* from China, proxied by the natural logarithm of import value, the number of transactions, and product quantity. We repeat both the visual assessment and baseline tests based on the import level variables in Appendix Figure A1 and Table A3. Our results suggest that the patterns we have identified are indeed driven by the change in the numerator of *China Import Ratios*.

4.1.2. Placebo Tests: Imports from Japan, Korea, and Taiwan (JKT) during the US-China Trade War

Another internal validity concern related to the baseline test is whether the main empirical pattern is indeed driven by government suppliers' advantage under the economic and political tension between the US and China during the trade war. For example, one may argue that the main baseline pattern might exist in trade relationships between the US and other countries in East Asia if economic factors associated with geographic location (e.g., shipping logistics to East Asia) drive the main results in our baseline test.

We address this internal validity concern with a placebo test. In this placebo test, we maintain the baseline test specification identical as discussed in Section 4.1.1 but investigate the US imports from Japan, South Korea, and Taiwan (JKT). We choose JKT for the following reasons. First, like China, JKT are important trade partners of the United States. In 2021, while China was still the top trade partner where the US imported from, Japan, South Korea, and Taiwan were ranked 5th, 7th, and 8th based on the total trade value in US imports. Second, JKT, similar to China, are located in East Asia. If the main results in Table 3 are driven by economic or geopolitical factors associated with geographic locations, we should observe similar patterns when analyzing US imports from JKT. Third, JKT are traditionally US allies. The economic and political tension between US and China during the US-China Trade War, in terms of its nature or magnitude, did not exist between US and JKT in our sample period. For these reasons mentioned above, we aggregate US imports from JKT together as a placebo for Imports from China in the same baseline test specification. Specifically, the main dependent variables in the placebo test, *Japan-Korea-Taiwan (JKT) Import Ratios* are computed as the percentage of imports from JKT (in

aggregate) among imports from all countries/regions for a firm *i* in product category *p* at quarter *t*, in terms of estimated product value, the number of transactions, and product quantity.

We first plot the time series of *JKT Import Ratios* around the US-China Trade War in Appendix Figure A2. We observe no obvious structural changes in *JKT Import Ratios* for either government suppliers or non-suppliers around the outbreak of the trade war. In Table A4, we formally carry out the placebo test using the baseline specification. The insignificant coefficients of all interaction terms confirm the visual pattern observed in Appendix Figure A2. Overall, we do not observe that government suppliers and non-supplier behave differently in the US imports from other East Asian countries/regions around the US-China Trade War and, therefore, our baseline results are unlikely driven by economic or geopolitical factors associated with geographic locations.

4.1.3. Timing of the Baseline Effect

In this subsection, we examine the timing of the baseline effect. In this test, we have two goals in mind. First, since our research design relies on one major event, we want to verify that the change in imports from China indeed happens around the launch of the US-China Trade War. Second, since the trade war escalated in the second half of 2018 and throughout the entire year of 2019, we would like to investigate whether the baseline effect also becomes stronger when both the tariff rates and the scope of products covered by tariffs increases in both countries.

To test the time-series dynamics of the difference in imports from China between government suppliers and non-suppliers, we replace the interaction term *Gov Supplier×Post Trade War* in Equaltion (1) with ten interaction terms from *Gov Supplier×Before Tradewar Quarter -4* to *Gov Supplier×Post Tradewar>4*, where *Before (Post) Tradewar Quarter -X (Y)* is a dummy variable that is equal to 1 for a period that is *X* (*Y*) quarters before (after) the launch of the trade war. Under this new test specification, the benchmark is the sample period at least 4 quarters before the trade war, which is captured by the coefficient of *Gov Supplier*. In addition to this change in test specification, all other controls, including the

fixed effects, remain the same as those in Equation (1).

[Insert Table 3 Here]

Results for the timing of the baseline effect are reported in Table 3. Consistent with what we observe in the baseline results, government suppliers and non-suppliers exhibit no significant difference in imports from China in the benchmark period (i.e., at least 4 quarters before the trade war starts) after controlling for their firm characteristics. The difference started to emerge in Quarter -1, after Donald Trump had asked USTR to investigate the possibility of applying potential tariffs on imports from China around the end of March. Its magnitude significantly increased in Quarter 1, after the first batch of tariffs was formally announced and implemented in July 2018. The difference kept increasing in the remaining parts of 2018 and the first half of 2019 as the trade war escalated. This increasing difference was temporarily muted in the third quarter of 2019 after the presidents of both countries met at the G20 Summit in Japan and tentatively agreed on a trade war truce. However, while the truce was not fully implemented and both sides added more tariffs as negotiations went on, the difference in imports from China between government suppliers and non-suppliers continued to increase afterward. Overall, the results in Table 3 suggest that the patterns we observe in the baseline results are closely associated with the evolution of the US-China Trade War. More importantly, the difference-in-difference of imports from China between government suppliers and non-suppliers increases when the trade war escalates.

4.1.4 Cross-Sectional Analysis

In this subsection, we carry out cross-sectional analyses based on the government agencies that offer the contracts, the contract size, and the contract duration. We do these cross-sectional analyses for the following reasons. First, among all federal government contracts, around 50% of them (in terms of contract value) are issued by the Department

of Defense (DoD). Second, the DoD contracts are subject to more stringent regulations that restrict contractors (and their subcontractors) to import from China.[8] Violations of these regulations generate significant penalties.[9] Third, the DoD contracts are usually larger in contract value and longer in contract duration than contracts offered by other departments. Therefore, the DoD contracts may attract a higher level of public scrutiny than contracts offered by other departments. Based on these features, we conjecture that the baseline results would be weaker when government suppliers mainly work with the DoD with larger or longer government contracts.

[Insert Table 4 Here]

To test this conjecture, we augment our baseline specification by a triple interaction term with *NonDoD Ratio*, which is defined as the percentage of contracts (in terms of contract value) received from Non-DoD departments among all federal contracts held by a firm in quarter *t*. To make the triple interaction term econometrically meaningful, we also include all three double interaction terms together with *Gov Supplier* and *NonDoD Ratio* in control variables.[10] Results are tabulated in columns (1), (4), and (7) of Table 4 for the three *China Import Ratios* that we use in Table 2. The coefficients of *Gov Supplier*×*NonDoD Ratio* are negative and statistically significant, suggesting that government suppliers for non-DoD departments import less from China than suppliers for the DoD before the trade war. However, the positive and statistically significant coefficients of the triple interaction term show that the difference-in-difference between non-DoD government

[8] For example, National Defense Authorization Act (effective in August 2019) prohibits DoD to procure from any firms using products or services from Huawei or ZTE (Section 889) or from entities that "DOD reasonably believes to be owned, controlled by, or otherwise connected to the governments of China" (Section 1656).

[9] For example, SoNo International LLC and Ark Capital Equipment LLC have to jointly pay $904,000 to the federal government to resolve allegations that they violated the False Claims Act by supplying the Department of Defense with shipping containers made in China and/or made from Chinese steel.

[10] *Post Trade War* is absorbed by the industry-year quarter fixed effects.

suppliers and non-suppliers is much larger than that between DoD government suppliers and non-suppliers around the trade war.

Since the contracts offered by the DoD are, on average, larger in value and longer in duration, we repeat similar tests based on *Short Ratio* (i.e., the percentage of short-duration contracts among all federal contracts held by a firm in quarter *t*) and *Small Ratio* (i.e., the percentage of small-value contracts among all federal contracts held by a firm in quarter *t*). We find generally consistent results. Overall, the results in our cross-sectional analyses support the conjecture that the empirical pattern in the baseline test is stronger among government suppliers holding smaller and shorter contracts from non-DoD departments, which are subject to less stringent internal regulations and public scrutiny.

4.1.5 External Validity Tests

As discussed in Section 3.3, we explore the US-China Trade War as our main research setting because this trade war, between the two most powerful countries in the world today, has created profound impacts on the economic, social, and political aspects. While this setting has many good features for researchers, one major concern of exclusively relying on this setting is its external validity, i.e., under which conditions can we generalize the main results of this paper in other settings? Specifically, we examine two dimensions of external validity in this section. First, are all empirical patterns documented in this paper specific to the US-China Trade War setting, or they can be generalized under other trade wars triggered by political and economic tensions? Second, are all empirical patterns documented in this paper specific to trade frictions associated with political risks or they are generalizable under all types of trade frictions, e.g., trade disruptions caused by natural disasters?

4.1.5.1. US-Russia Trade Conflicts under Ukraine-Russia War

The data availability does not allow us to repeat all tests for earlier trade wars in history to answer the first question. However, we can present results based on another recent political uncertainty that affects international trade between two major countries, i.e., the trade between US and Russia under the ongoing Ukraine-Russia War. After Putin had launched a "special military operation" in Eastern Ukraine on February 24, 2022, G7

countries stripped Russia of its "most favored nation" status and imposed punitive tariffs on Russian products, to further isolate Moscow from obtaining financial resources to continue the war. For example, the White House vowed to implement higher tariff rates on more than 570 groups of Russian products worth approximately $2.3 billion (USD).[11] Although neither the coverage of products nor the magnitude of this tariff increase is comparable to the one in the US-China trade war, this "hot" war between Ukraine and Russia has generated significant impacts on the trade relationship between the U.S. and Russia.

We repeat our baseline tests under the setting of the Ukraine-Russia War. In this test, the cut-off point is set as November 2021, when the U.S. intelligence first reported unusual military movements of Russian troops. Since this war was launched recently and we do not have many post-war quarters, we organize our sample at the firm-product-month level (instead of the firm-product-quarter level that we use in the main test). We first plot the time trend of US imports from Russia in Figure 2. The figure shows that government suppliers and non-suppliers exhibit similar behaviors in importing from Russia (in terms of the comovement of their imports) before the cut-off point. After abnormal military movements of Russian troops had been reported, government suppliers significantly increased imports from Russia while non-suppliers kept their imports from Russia at the pre-war level.

[Insert Table 5 Here]

We repeat the baseline specification in Equation (1) for the Ukraine-Russia War setting and the results are reported in Table 5. We find very similar patterns to those reported in Table 2. After controlling for the firm, product, and industry×month fixed effects, we show that government suppliers import less from Russia than non-suppliers before the war starts. Consistent with the figure, government suppliers increase their imports from Russia much faster than non-suppliers after the outbreak of the Ukraine-Russia War. When we compare the results between Tables 2 and 5, one major difference is the economic

[11] https://www.whitehouse.gov/briefing-room/statements-releases/2022/06/27/fact-sheet-the-united-states-and-g7-to-take-further-action-to-support-ukraine-and-hold-the-russian-federation-accountable/

magnitude. Relative to our finding in Table 5, the baseline effect is much stronger under the US-China Trade War setting. This difference is not surprising given the relative interdependence between the US and China and the relative importance of these two countries in international trade relationships.

4.1.5.2 US-Japan Trade Frictions around the 2011 Tohoku Earthquake and Tsunami

Another important dimension of external validity is whether our main finding is specific to trade conflicts associated with political and economic tensions or it can be generalized to any trade disruptions. Answers to this question directly speak to whether contractual relationships with the US government allow firms to hedge against political risks specifically or all general disruptions in international trades.

We explore the 2011 Tohoku Earthquake and Tsunami (occurred on March 11, 2011) as the research setting for this question. The trade disruptions between US and Japan in this setting are triggered by an unexpected natural disaster. This earthquake and tsunami, killing almost 20,000 people, caused the Fukushima nuclear leakage that led to a permanent relocation of than 220,000 people and paralyzed the industrial production of the entire Tohoku region. Carvalho, Nirei, Saito, and Tahbaz-Saleihi (2021) find that the 2011 Tohoku Earthquake and Tsunami generated supply-chain disruptions propagated and amplified along economic and trade links and resulted in a 0.47 percentage decline in Japan's real GDP growth.

[Insert Table 6 Here]

We repeat the baseline specification in Equation (1) for the 2011 Tohoku Earthquake setting for the US imports from Japan and the results are tabulated in Table 6. We find that government suppliers and non-suppliers exhibit similar behaviors in importing from Japan around the earthquake and the differences of their importing behaviors, as suggested by the coefficients of all interaction terms in Table 6, are statistically indifferent from zero. Consistent with this finding, Figure 3 shows that imports from Japan decline for both US government suppliers and non-suppliers after the earthquake and the changes of imports from Japan in the two groups are paralleling to each other. Results in Table 6 and Figure 3 are consistent with the notion that contractual relationships with the US government

agencies help US firms hedge trade conflicts triggered by political tensions but generate no effect in trade disruptions driven by non-political reasons, e.g., natural disasters.

4.2. Economic Channels

After we have established results on different importing behaviors of government suppliers vs. non-suppliers around the US-China Trade War, we now discuss potential economic channels of these differences in this section. The main economic channel that we propose in this paper is the personal connection between government suppliers and government agencies, which is found to play a significant role in many economic transactions (Fisman, 2001; Goldman, Rocholl, and So, 2013). This economic channel is broadly related to the social network literature as informal ties in economic transactions (Cohen, Frazzini, and Malloy, 2008).

In this subsection, we first explore indirect measures of connections based on geographical distance and relationship duration. Second, we further the economic channel discussion using direct connection measures based on past government careers of corporate executives, board members, and employees. At the end of this section, we show that, for government suppliers, their connections with government offer them advantages in obtaining tariff exemption, i.e., they have much higher probabilities of being included in the tariff exclusion list relative to non-suppliers.

4.2.1. Indirect Measures of Connections: Geographic Distances and Relationship Duration

Geographic distance is frequently used in past studies to proxy for the cost of direct communication and information sharing (e.g., Coval and Moskowitz, 2001; Malloy, 2005). As discussed in Section 3.3.2, government suppliers need to spend much effort dealing with the bureaucracy in the procurement process and payment system. A shorter geographic distance between government suppliers and government agencies would allow government suppliers to build stronger connections with lower costs. For example, a shorter distance would allow government supplier firms to visit government agencies more

frequently. We conjecture that the baseline results would be stronger when the government suppliers are located closer to the offices of government agencies that offer contracts to them.

In addition to the spatial perspective above, we construct another indirect measurement of connection from the time perspective. As companies would gain experience in their supply relationships with the federal government, the longer the relationships between government suppliers and federal agencies, the more stable and strategic the relationships would be. Therefore, we conjecture that the baseline results would be stronger when the government suppliers have longer relationships with government agencies.

To test these conjectures, we augment our baseline specification by a triple interaction term with the two indirect measures proposed, i.e., *Distance* and *Duration*. *Distance* is defined as the distance from the headquarter of a firm to the office address of its awarding government agency (or Washington D.C.) in miles divided by 1000. *Duration* is the number of years since a firm has been awarded federal contracts without interruption of more than one year. To make the triple interaction term econometrically meaningful, we include all three double interaction terms together with *Gov Supplier* and *Distance* / *Duration* in control variables.

[Insert Table 7 Here]

The results based on the indirect connection measure, *Distance*, are presented in Panel A of Table 7. The coefficients of *Gov Supplier*×*Distance* are statistically insignificant. However, the negative and significant coefficients of the triple interaction term suggest the difference-in-difference in imports from China between government suppliers with shorter distances to government agencies and non-suppliers is much larger than that between government suppliers with larger distances to government agencies and non-

suppliers. The results based on the indirect connection measure, *Duration*, are presented in Panel B of Table 7. The positive and significant coefficients of the triple interaction term show that, relative to non-suppliers, suppliers with longer relationship durations with government agencies increase imports from China in a much faster manner than those with shorter durations. These results confirm our conjecture that the difference-in-difference effect in the baseline test is stronger when 1) government suppliers are located closer to government agencies, and/or 2) government suppliers have longer relationships with government agencies.

4.2.2. Direct Measures of Connections: Past Government Careers

In this section, our analysis is built upon more direct measures of connections with government agencies. Faccio (2006) finds economic benefits when controlling shareholders and top managers have a government background. We use the profile information of corporate managers and board members from the BoardEx database and the profile information of employees from the Lightcase US Profiling database, to identify those with past career experience with government agencies.

[Insert Table 8 Here]

In Panel A of Table 8, we first focus on the past government career experience of corporate managers and board members. The dummy variable, *Former Government 1*, is set to one if a firm has at least one corporate manager or board member with past government experience in year *t*, and zero otherwise. The coefficient of *Former Government 1* is positive and statistically significant, while the coefficient of Gov *Supplier*×*Former Government 1* is mostly insignificant. This suggests that before the trade war, companies with ex-government employees serving as corporate executives or board members imported more from China than companies without those executives, regardless of whether the company was a government supplier or not. The triple interaction term, our primary subject of

interest, is positive and statistically significant, suggesting that the difference-in-difference in imports from China between government suppliers with former government employees as executive managers and board members and non-suppliers is larger than that between government suppliers with no former government employees and non-suppliers around the trade war.

Vidal, Draca, and Fons-Rosen (2012) show that ex-government employees, after taking corporate jobs, benefit from the connections acquired during their public service. Therefore, besides the former government experience of corporate managers and board members, we also investigate whether the former government experience of corporate employees supports the connection as a significant economic channel. We obtain information on corporate employee profiles from the Lightcast US profiling database.

BoardEx does not specify which government agencies a board member or a corporate manager previously worked for. The advantage of using personal profile data is that we can search whether any current employee of the firm worked for the government agencies that are currently offering contracts to the firm. This will allow us to identify the pairs of connected parties in the contracting process of government procurement. By extracting the current and past titles of employees, we can also tell whether employees with past government experience are specialized in contracting or procurement. This will allow us to speak to the relevance of the connected employees in our story.

In tests reported in Panel B of Table 8, we search firm-agency pairs in the Lightcast US profiling database and identify the number of current employees who previously worked for the government agencies offering contracts to the firm. This number has a mean of 2.79 and a standard deviation of 10.79. In Panel B, we form a *Former Government 2* dummy that is equal to one if a firm has more than 3 former government employees, i.e., above the sample mean. Since this cutoff is arbitrary, we carry out a robustness check

based on another cutoff (i.e., 10 former government employees) and the results are reported in Appendix Table A5. We repeat similar tests as those in Panel A using this new *Former Government 2* dummy and we find similar results. The difference-in-difference in the baseline test becomes stronger when firms have more employees who previously worked for government agencies that offer contracts to the firms right now.

In tests reported in Panel C of Table 8, we directly speak to the relevance of connected employees in our main story. If a connected employee can help government suppliers obtain tariff exemptions and purchase more from China, this is more likely to happen when the connected employee is specialized in contracting and procurement. In this spirit, the dummy variable, *Former Government 3*, is set to one, if a firm has at least one connected employee specializing in contracting and procurement, as indicated by her previous title in government or existing title in the firm. Specially, we search the following set of keywords in job titles and descriptions to identify employees specialized in contracting and procurement: contract (including "contracting"), procur (including "procure" and "procurement"), purchas (including "purchase" and "purchasing"), supply (including "supply" and "supply chain"), inventory, customer, import, export, sourcing, and trade.

In Panel C, we repeat similar tests as those in Panel A using this new *Former Government 3* dummy and we find similar results. The difference-in-difference in the baseline test becomes stronger when government suppliers have connected employees who are specialized in contracting and procurement. Overall, the results in Table 8 suggest that the direct connection between government suppliers and government agencies offering contracts through connected corporate managers, board members, and employees is one of the major economic channels explaining the main pattern in our baseline tests.

4.2.3. Government Suppliers and Tariff Exclusion

It is established in the literature that political access is of significant value to

corporations. Faccio, Masulis, and McConnell (2006) show that politically connected firms are significantly more likely to be bailed out than similar non-connected firms in challenging times, as such connections influence the allocation of public resources. Brown and Huang (2020) find that firms with connections with federal government officials are more likely to receive regulatory relief. Therefore, to conclude the analysis of the economic channels, we examine whether government suppliers have advantages in applying for tariff exclusion.

Our dependent variable, *Approved*, is constructed as a dummy variable equal to one if the firm's application for tariff exclusion gets approved and zero if the application is rejected. We construct two related independent variables. *Federal Contractor* is a dummy variable equal to one if a firm holds contracts offered by the federal government in 2018; *Gov Supplier* is a dummy variable equal to 1 when a firm discloses the US government as its principal customer in 2018.[12]

[Insert Table 9 Here]

We run a linear probability model to estimate the likelihood of approval in tariff exclusion applications during the 2018 US-China Trade War, conditional on whether the applicants are US government suppliers or not. The results are presented in Panel A of Table 9. In column (1), we include all applicants that have submitted tariff exclusion applications, regardless of their public status. Note that we do not include any other firm attributes in this model due to the lack of such information for private firms. Hence, we only include the application round and product HS code (8-digit) fixed effects in this model. The coefficient of *Federal Contractor* is positive and statistically significant, suggesting that being a federal contractor in 2018 helps to increase the probability of obtaining tariff exemptions.

In column (2) of Panel A, we only include publicly listed applicants, including their subsidiaries. We observe a similar result that the government supplier status increases the

[12] Regulation S-K only requires firms with public securities to disclose major customers in SEC filings.

likelihood of a successful application to the tariff exemption list. If a firm discloses government agencies as its major customers, we see an incremental effect in the probability. The coefficient for *Gov Supplier* is about five times larger than that for Federal Contractor. In terms of the results on control variables, we see the chance of obtaining tariff exemption is higher for larger firms, as they may have more resources to gain government support.

In Panel B, we use the same sample as column (2) of Panel A and interact the government supplier status with all direct and indirect connection measures in Sections 4.2.1 and 4.2.2. We find that the coefficients of interaction terms between *Gov Supplier* and all direction connection measures (i.e., *Former Government 1, 2 & 3*) are positive and statistically significant at the 1% level, suggesting that government suppliers that employ ex-government officials enjoy incremental favorable treatment in tariff exclusion applications. However, we do not find a similar effect when *Gov Supplier* interacts with indirect connection measures.

4.3. Economic Outcomes

In the previous subsection, we show that, unlike other firms reducing purchases from China, government suppliers increase their imports from China during the US-China Trade War because their connections with the government offer them advantages in obtaining tariff exemption. In this subsection, we investigate the economic outcomes of government suppliers' advantages from the perspectives of companies, government agencies, and participants (e.g., investors and analysts) in the capital market.

4.3.1. Corporate Perspectives

We first focus on how the advantages of government suppliers during the trade war affect relative corporate operating performance. Government suppliers' advantages in obtaining tariff exemption and identifying product categories that will not be included in the tariff list will generate cost reductions and make them more competitive in the product market. These advantages will eventually be reflected in corporate operating performance. In this test, we measure corporate operating performance by three widely used measures: return on assets (*ROA*) is defined as the operating income scaled by total assets, return on

equity (*ROE*) is defined as the net income scaled by the book value of shareholder's equity, and market share is the percentage sales within the main industry of a firm. The test specification is similar to the baseline while the measures capturing imports from China in the baseline are now replaced by operating performance measures. Since dependent variables are different, we update control variables following Patatoukas (2012), including firm size (market value in logarithm), sales growth rate, book leverage, and book-to-market ratio. We also include firm and industry-quarter fixed effects to remove the impacts from time-invariant firm characteristics and industry-wide common shocks.

[Insert Table 10 Here]

Results are presented in Table 10. The coefficients of *Gov Supplier* suggest that government suppliers did not perform better than non-suppliers before the US-China Trade War. The coefficient in column (1) of Table 10 suggests the opposite: in terms of *ROA*, government suppliers underperformed non-suppliers by 0.005 before the trade war and this difference is statistically significant at the 5% level. This result is consistent with our earlier discussion on the costs of being US government suppliers.

The key result in Table 10 is that all coefficients of the interaction term, *Gov Supplier* × *Post Trade War*, are positive and statistically significant. This suggests that, in terms of all three operating performance measures, government suppliers experience higher improvements than non-suppliers after the outbreak of the US-China Trade War. The differences in these improvements between the two groups can offset government suppliers' disadvantage in *ROA* before the trade war and even put them into a leading position in terms of *ROE* and market share. Overall, results based on corporate operating performance are consistent with our conjecture that government suppliers take advantage of their connections with the US government during the trade war, which allows them to catch up or even outperform non-suppliers after the trade war starts.

When the operating performance of government suppliers, relative to that of non-suppliers, improves during the trade war, we expect more firms to participate in the bidding of government contracts. In Table 11, we formally test this conjecture. The dataset for this test is retrieved from USAspending.com, covering all new federal government contracts (excluding contract renewals) issued between 2016Q1 and 2019Q4. While the dataset is

organized at the contract level, we control for the government agency, product category, and industry fixed effects to remove the impact from time-invariant factors driven by the requirements of issuing agencies, product/service characteristics, and industry features. We also control for the quarter fixed effects to remove the seasonality driven by the cycle of the federal budget in each fiscal year.

[Insert Table 11 Here]

In columns (1)-(3) of Table 11, the dependent variable is the natural logarithm of the number of bidders. We use this variable in its logarithm form since the number of bidders is extremely skewed in our sample (skewness=7..03). Results in column (1) suggest that the number of bidders for federal contracts indeed increases after the outbreak of the US-China Trade War. However, the economic magnitude for the full sample is small: after controlling for all fixed effects, the number of bidders increases by 0.8% after the trade war starts. In columns (2) and (3), we interact the *Post Trade War* dummy with *Short Duration* and *Small Value* to examine whether the pattern exhibited in column (1) depends on contract characteristics and we find that this is indeed the case. Let us take the results in column (2) as an example. The coefficient of *Post Trade War* is -0.102, suggesting that the number of bidders for long-duration contracts decreases by 10.2% after the outbreak of the trade war. The coefficient of the interaction term (0.168), *Post Trade War* × *Short Duration*, is positive and statistically significant at the 1% level. Adding the two coefficients above together, we show that the number of bidders for short-duration contracts increases by 5.6% after the trade war starts. Similarly, the results in column (3) show that small-value and large-value contracts exhibit opposite patterns in terms of the trend in the number of bidders, i.e., after the trade war starts, the number of bidders for large-value contracts decreases and the one for small-value contracts increases. These results are consistent with empirical patterns identified in Table 4. Firms with smaller and shorter government contracts are subject to less strict government regulation and public scrutiny and, therefore, can benefit more from policy and information advantages. As a consequence, short-duration and small-value contracts gain increasing popularity in the government procurement bidding process after the trade war starts.

When we replace the dependent variable with *Single Bidder*, a dummy variable that is equal to 1 when a contract has only one bidder, in columns (4)-(6). We find similar patterns as those shown in columns (1)-(3). This result confirms that the empirical pattern identified in columns (1)-(3) is not driven by the skewness in the number of bidders and is robust to alternative dependent variables that capture the competitiveness in the government procurement bidding process.

4.3.2. Government Perspectives

Next, we examine the economic outcomes from the perspective of government agencies. In the previous subsection, we show that the number of firms bidding for government contracts increases after the trade war starts. A natural question related to the government perspective is whether the decisions of contract renewals are affected by government suppliers' imports from China (assuming there is no violation of government regulations), especially after the trade war starts. To address this question, we retrieve all federal contracts that are completed between 2016Q1 and 2019Q3. The dependent variable, *Renewal*, is set to one if a contract is renewed (same product/service and offered by the same government agency) within 6 months after its completion. We partition the entire sample into "before trade war" and "after trade war" sub-periods and the results are tabulated in Appendix Table A6. We find no evidence that importing from China, no matter before or after the outbreak of the US-China Trade War, affects the likelihood of contract renewals.

4.3.3. Capital Market Perspectives

In Section 4.3.1, we show that government suppliers outperform non-suppliers in operating performance by taking advantage of their connections with the government during the trade war. In this subsection, we examine whether investors fully understand this pattern or whether they underreact to the advantages of government suppliers after the trade war starts. We still follow the standard diff-in-diff setup while dependent variables now capture capital market reactions.

[Insert Table 12 Here]

We first focus on the cumulative abnormal returns around the earnings announcement, as a proxy for earnings surprises. The dependent variable, CAR[-2,2], is the cumulative

abnormal return from two trading days before to two trading days after the quarterly earnings announcement.[13] Since the computation of cumulative abnormal returns has already removed the systematic components of returns based on parameters estimated in the benchmark period, we do not include firm fixed effects in this test. We only include year-quarter fixed effects to address market-wide common shocks. The results are reported in Panel A of Table 12. The coefficient of *Gov Supplier* in column (1) is 0.000, suggesting that there is no difference in cumulative abnormal returns around earnings announcements between government suppliers and non-suppliers before the trade war. However, the coefficient of *Gov Supplier*×*Post Trade War* is 0.014, which is statistically significant at the 5% level. This result shows that government suppliers experience a higher level of cumulative abnormal returns than non-suppliers around earnings announcements. This pattern is consistent with the notion that investors underreact to the advantages that government suppliers gain from their connections with the government during the trade war and they are surprised when government suppliers announce earnings that are higher than their expectations.

In column (2), we replace the dependent variable with analyst forecast revisions, to examine whether the underreaction suggested by the pattern based on CAR[-2,2] is also reflected in analyst forecast revisions. The dependent variable in column (2), *Monthly Forecast Revisions*, is defined as the difference between consensus forecasts of this month and that of the previous month, scaled by the price at the end of the previous month. We multiply *Monthly Forecast Revisions* by 100 for legibility. The results in column (2) are consistent with the underreaction pattern in column (1). Specifically, while we observe no significant difference in forecast revisions between the two groups before the trade war, government suppliers experience more positive forecast revisions than non-suppliers after the trade war starts.

In column (3), we replace the dependent variable with the DGTW adjusted monthly returns following Daniel, Grinblatt, Titman, and Wermers (1997). We find a similar pattern

[13] We use the market model to estimate cumulative abnormal returns with an estimation period [-120, -20]. Our results are robust to other models, such as the Fama-French three-factor model.

to those identified in columns (1) and (2). The results suggest that government suppliers start to outperform non-supplier by 0.7% monthly (or 2.1% quarterly) after the outbreak of the trade war. When we compare the results in columns (1) and (3), it is clear that almost two-thirds of quarterly abnormal returns are realized around earnings announcements. This result also supports the notion that investors are not aware of the advantages that the government suppliers have gained through their connections with the government during the trade war until the advantages are reflected in earnings.

Since we find that government suppliers and non-suppliers exhibit no difference in CAR[-2,2], monthly analyst forecast revisions, and DGTW-adjusted monthly returns before the trade war starts. The diff-in-diff approach in Panel A can be simplified as univariate comparisons of these variables in the post-trade-war period. We report these univariate comparisons in Panel B and find consistent results as those reported in Panel A, both qualitatively and quantitatively.

5. Conclusion

Using both the onset of the US-China trade war in 2018 and the most recent Russia-Ukraine conflict and associated trade tensions, we show that government-linked firms increase their importing activity by roughly 33% (t=4.01) of their pre-shock mean, while non-government linked firms trading to same regions do the opposite decrease their importing activity.

We find no such increase for government-linked supplier firms to other countries (even in the same regions) at the same time, nor of these same firms in these regions at other times of no tension. In terms of mechanism, we find that government supplier linked firms are nearly twice as likely to receive tariff exemptions as equivalent firms doing trade in the region who are not also government suppliers. Moreover, the dynamics we find are increasing in level of government connection. For example, firms that are geographically closer to the agencies to which they supply and firms that have longer relationships with the agencies increase their imports more. Additionally, using micro-level data, we find that government supplying firms that recruit more employees with past

government work experience also increase their importing activity more acutely – particularly when the past employee worked in a contracting role.

As both types of firms (government suppliers and non-suppliers) found it optimal by revealed preference to utilize importing as part of their production function, it may not be surprising that the government supplier firms (who are less disrupted by the tariffs and tensions, and have a comparative advantage in dealing with them), fare better during the conflict. We find evidence that this is true across a range of measures including profitability, market share gains, and stock return performance.

Stepping back, the sum of our results suggests that the human capital these former government employees possess – in terms of knowledge, expertise, and networks – is important for firm value at the firms to which they are employed. This value realizes particularly at times of stress to international value and supply chains. As geo-political disruptions and tensions continue to evolve, and as these disruptions represent increasingly larger shocks to percentage of firm value – these "hedges" in terms of human capital become increasingly valuable assets and insurance contracts for firms to possess.

References

Acemoglu, D., Johnson, S., Kermani, A., Kwak, J. and Mitton, T., 2016. The value of connections in turbulent times: Evidence from the United States. *Journal of Financial Economics*, *121*(2), pp.368-391.

Akey, P., 2015. Valuing changes in political networks: Evidence from campaign contributions to close congressional elections. *The Review of Financial Studies*, *28*(11), pp.3188-3223.

Amiti, M., Redding, S.J. and Weinstein, D.E., 2019. The impact of the 2018 tariffs on prices and welfare. *Journal of Economic Perspectives*, *33*(4), pp.187-210.

Benguria, F., Choi, J., Swenson, D.L. and Xu, M.J., 2022. Anxiety or pain? The impact of tariffs and uncertainty on Chinese firms in the trade war. *Journal of International Economics*, *137*, p.103608.

Brogaard, J., Denes, M. and Duchin, R., 2021. Political influence and the renegotiation of government contracts. *The Review of Financial Studies*, *34*(6), pp.3095-3137.

Brown, J.R. and Huang, J., 2020. All the president's friends: Political access and firm value. *Journal of Financial Economics*, *138*(2), pp.415-431.

Brunk, J., McDaniel, C. and Parks, D., 2019. Steel and Aluminum Tariffs: Thousands of Exclusion Requests from US Firms. *Fairfax, VA: Mercatus Center, George Mason University*.

Carvalho, V M, Nirei, M., Saito, Y. and Tahbaz-Salehi, A., 2020. Supply chain disruptions: Evidence from the Great East Japan Earthquake. *Quarterly Journal of Economics* 136: 1255–1321.

Charoenwong, B., Han, M. and Wu, J., 2022. Trade and Foreign Economic Policy Uncertainty in Supply Chain Networks: Who Comes Home?. *Manufacturing & Service Operations Management*.

Chodorow-Reich, G., Feiveson, L., Liscow, Z. and Woolston, W.G., 2012. Does state fiscal relief during recessions increase employment? Evidence from the American Recovery and Reinvestment Act. *American Economic Journal: Economic Policy*, *4*(3), pp.118-45.

Claessens, S., Feijen, E. and Laeven, L., 2008. Political connections and preferential access to finance: The role of campaign contributions. *Journal of financial economics*, *88*(3), pp.554-580.

Cohen L, Frazzini A, Malloy C. Sell-side school ties. *Journal of Finance*. 2010 Aug;65(4):1409-37.

Cohen, L. and Malloy, C.J., 2014. Friends in high places. *American Economic Journal: Economic Policy*, *6*(3), pp.63-91.

Cohen, L. and Malloy, C.J., 2016. Mini west Virginias: Corporations as government dependents. *Available at SSRN 2758835*.

Cohen, L., Frazzini, A. and Malloy, C., 2008. The small world of investing: Board connections and mutual fund returns. *Journal of Political Economy*, *116*(5), pp.951-979.

Cohen, L., Gurun, U.G. and Malloy, C., 2017. Resident networks and corporate connections: Evidence from World War II internment camps. *The Journal of Finance*, *72*(1), pp.207-248.

Correia, M.M., 2014. Political connections and SEC enforcement. *Journal of Accounting and Economics*, *57*(2-3), pp.241-262.

Coval, J.D. and Moskowitz, T.J., 2001. The geography of investment: Informed trading and asset prices. *Journal of political Economy*, *109*(4), pp.811-841.

Daniel, K., Grinblatt, M., Titman, S. and Wermers, R., 1997. Measuring mutual fund performance with characteristic-based benchmarks. *The Journal of finance*, *52*(3), pp.1035-1058.

Duchin, R. and Sosyura, D., 2012. The politics of government investment. *Journal of Financial Economics*, *106*(1), pp.24-48.

Faccio, M. and Parsley, D.C., 2009. Sudden deaths: Taking stock of geographic ties. *Journal of Financial and Quantitative Analysis*, *44*(3), pp.683-718.

Faccio, M., 2006. Politically connected firms. *American economic review*, *96*(1), pp.369-386.

Faccio, M., Masulis, R.W. and McConnell, J.J., 2006. Political connections and corporate bailouts. *The journal of Finance*, *61*(6), pp.2597-2635.

Fajgelbaum, P., Goldberg, P.K., Kennedy, P.J., Khandelwal, A. and Taglioni, D., 2021. *The US-China trade war and global reallocations* (No. w29562). National Bureau of Economic Research.

Fajgelbaum, P.D., Goldberg, P.K., Kennedy, P.J. and Khandelwal, A.K., 2020. The return to protectionism. *The Quarterly Journal of Economics*, *135*(1), pp.1-55.

Fisman, R., 2001. Estimating the value of political connections. *American economic review*, *91*(4), pp.1095-1102.

Goldman, E., Rocholl, J. and So, J., 2009. Do politically connected boards affect firm value?. *The review of financial studies*, *22*(6), pp.2331-2360.

Goldman, E., Rocholl, J. and So, J., 2013. Politically connected boards of directors and the allocation of procurement contracts. *Review of Finance*, *17*(5), pp.1617-1648.

Goldman, J., 2020. Government as customer of last resort: The stabilizing effects of government purchases on firms. *The Review of Financial Studies*, *33*(2), pp.610-643.

Houston, J.F., Jiang, L., Lin, C. and Ma, Y., 2014. Political connections and the cost of bank loans. *Journal of Accounting Research*, *52*(1), pp.193-243.

Huang, Y., Lin, C., Liu, S. and Tang, H., 2022. Trade networks and firm value: Evidence from the US-China trade war. *Available at SSRN 3504602*.

i Vidal, J.B., Draca, M. and Fons-Rosen, C., 2012. Revolving door lobbyists. *The American Economic Review*, *102*(7), p.3731.

Lau, L.J., 2019. The China–US trade war and future economic relations. *China and the World*, *2*(02), p.1950012.

Liebman, J.B. and Mahoney, N., 2017. Do expiring budgets lead to wasteful year-end spending? Evidence from federal procurement. *American Economic Review*, *107*(11), pp.3510-49.

Malloy, C.J., 2005. The geography of equity analysis. *The Journal of Finance*, *60*(2), pp.719-755.

Patatoukas, P.N., 2012. Customer-base concentration: Implications for firm performance and capital markets: 2011 American accounting association competitive manuscript award winner. *The accounting review*, *87*(2), pp.363-392.

Ramey, V.A., 2011. Identifying government spending shocks: It's all in the timing. *The Quarterly Journal of Economics*, *126*(1), pp.1-50.

Rothwell, J.T. and Diego-Rosell, P., 2016. Explaining nationalist political views: The case

of Donald Trump. *Available at SSRN 2822059*.

Schoenbaum, T.J. and Chow, D.C., 2019. The peril of economic nationalism and a proposed pathway to trade harmony. *Stan. L. & Pol'y Rev.*, *30*, p.115.

Shoag, D., 2010. The impact of government spending shocks: Evidence on the multiplier from state pension plan returns. *unpublished paper, Harvard University*.

Wilson, D.J., 2012. Fiscal spending jobs multipliers: Evidence from the 2009 American Recovery and Reinvestment Act. *American Economic Journal: Economic Policy*, *4*(3), pp.251-82.

World Bank. "Trade(% of GDP)." World Development Indicators. The World Bank Group, 2022, https://data.worldbank.org/indicator/NE.TRD.GNFS.ZS Accessed 18 Nov. 2022.

Figure 1 China Import Ratios: US Government Suppliers vs Other Firms around the US-China Trade War

China Import Ratio (based on Product Value)

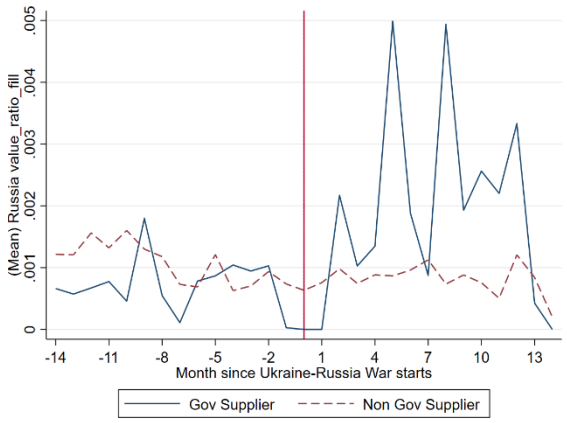
China Import Ratio (based on Product Quantity)

China Import Ratio (based on the Number of Transactions)

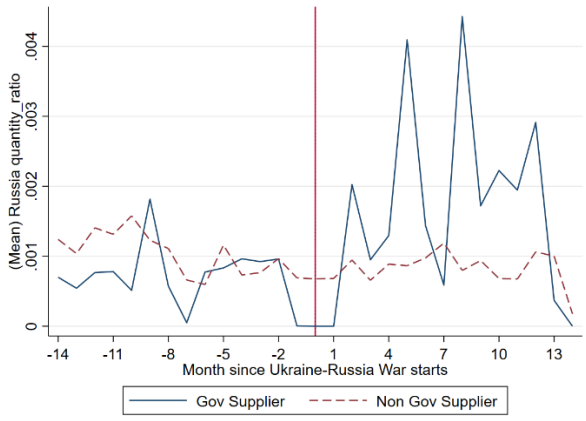
China Import Ratio is the percentage of imports from China in imports from all countries for US firms for each firm-quarter-hscode8. Three *China Import Ratios* computed below are based on product value, product quantity, and the number of transactions, respectively.

Figure 2 Russia Import Ratios: US Government Suppliers vs Other Firms around the Ukraine-Russia War

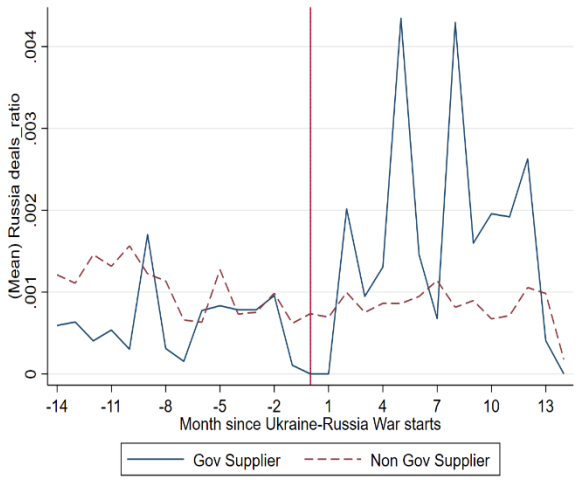
Russia Import Ratio (based on Product Value)



Russia Import Ratio (based on Product Quantity)



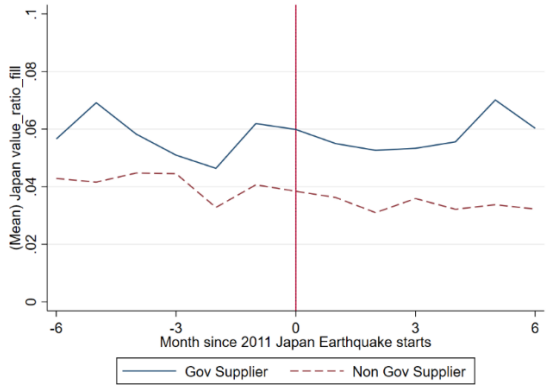
Russia Import Ratio (based on the Number of Transactions)



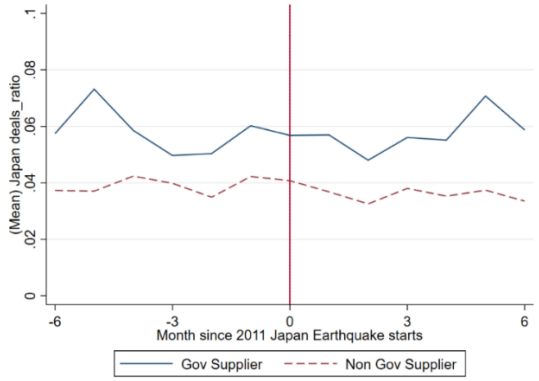
Russia Import Ratio is the percentage of imports from Russia in imports from all countries for US firms for each firm-quarter-hscode8. Three *Russia Import Ratios* computed below are based on product value, product quantity, and the number of transactions, respectively.

Figure 3 Japan Import Ratios: US Government Suppliers vs Other Firms around the 2011 Tohuku Earthquake and Tsunami

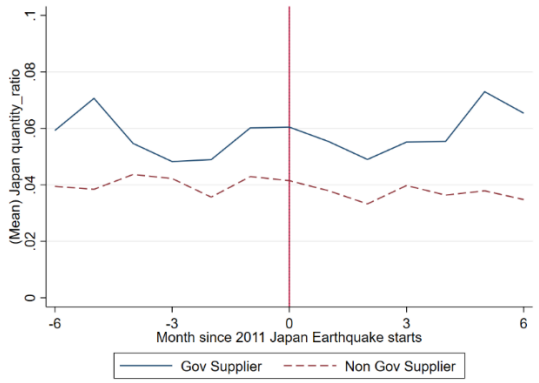
Japan Import Ratio (based on Product Value)



Japan Import Ratio (based on Product Quantity)



Japan Import Ratio (based on the Number of Transactions)



Japan Import Ratio is the percentage of imports from Japan in imports from all countries for US firms for each firm-quarter-hscode8. Three *Japan Import Ratios* computed below are based on product value, product quantity, and the number of transactions, respectively.

Table 1 Summary Statistic

This table provides summary statistics of dependent and independent variables used in the main tests of this paper. The sample period is from 2016Q1 to 2019Q4. Panel A provides summary statistics for the full sample and Panel B provides a comparison between government suppliers and non-suppliers. Detailed definitions of these variables are provided in Appendix I.

Panel A: Full Sample

Variable	N	Mean	STD	P25	Median	P75	Min	Max
China Import Ratio Product Value	160,698	0.148	0.347	0.000	0.000	0.000	0.000	1.000
China Import Ratio Number of Transactions	160,698	0.163	0.360	0.000	0.000	0.000	0.000	1.000
China Import Ratio Product Quantity	160,698	0.165	0.366	0.000	0.000	0.000	0.000	1.000
B/M	127,910	0.442	0.436	0.201	0.354	0.543	0.004	3.041
Log(MV)	127,913	9.307	1.719	8.127	9.366	10.510	4.436	12.590
ROA	159,863	0.057	0.060	0.029	0.056	0.090	-0.154	0.204
%Revenue from US Market	159,948	0.464	0.217	0.274	0.451	0.610	0.000	1.000
Distance	131,959	0.765	0.649	0.337	0.542	0.941	0.001	4.838
Duration	160,698	2.515	4.339	0.000	0.000	3.000	0.000	15.000

Panel B: Government Suppliers vs. Non-Suppliers

	Non-Suppliers		Government Suppliers		
Variable	N	Mean	N	Mean	Difference
China Import Ratio Product Value	153,337	0.150	7,361	0.102	0.049***
China Import Ratio Number of Transactions	153,337	0.165	7,361	0.111	0.055***
China Import Ratio Product Quantity	153,337	0.168	7,361	0.112	0.056***
B/M	120,642	0.446	7,268	0.366	0.080***
Log(MV)	120,645	9.259	7,268	10.095	-0.836***
ROA	152,506	0.058	7,357	0.038	0.020***
%Revenue from US Market	152,857	0.459	7,091	0.562	-0.103***
Distance	124,615	0.772	7,344	0.636	0.136***

Table 2: China Import Ratios: US Government Suppliers vs. Other Firms around the US-China Trade War

This table compares the China Import Ratio between US government suppliers and other firms around the 2018 US-China Trade War. The dataset for this table is organized at the firm-quarter-hscode8 level. The sample period is from 2016Q1 to 2019Q4. The dependent variable for columns (1) and (2) is *China Import Ratio* in terms of product value; the dependent variable for columns (3) and (4) is *China Import Ratio* in terms of the number of transactions; the dependent variable for columns (5) and (6) is *China Import Ratio* in terms of product quantity. *Gov Supplier* is a dummy variable that is equal to 1 when a firm discloses the US government as its principal customer for the fiscal year t. *Post Trade War* is a dummy variable that is equal to 1 for periods after (including) 2018Q3. Other independent variables include lagged total assets (in logarithm), book-to-market ratios, return on assets, and the ratio of domestic sales to total sales. We include the firm, industry×year quarter, and product HSCODE (8-digit) fixed effects in all test specifications. Standard errors are clustered at the product HSCODE (8-digit) level. *T*-statistics are provided in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	China Import Ratio		China Import Ratio		China Import Ratio	
VARIABLES	Product Value		Number of Transactions		Product Quantity	
Gov Supplier×Post Trade War	0.044***	0.048***	0.053***	0.058***	0.052***	0.058***
	(4.46)	(4.01)	(5.35)	(4.90)	(5.14)	(4.97)
Gov Supplier	0.004	-0.004	0.010	0.002	0.014	0.006
	(0.17)	(-0.16)	(0.41)	(0.09)	(0.56)	(0.26)
B/M		-0.008		-0.012		-0.010
		(-0.94)		(-1.45)		(-1.25)
Log(MV)		0.002		-0.002		0.002
		(0.34)		(-0.37)		(0.32)
ROA		-0.074**		-0.048		-0.054*
		(-2.46)		(-1.61)		(-1.77)
%Revenue from US Market		0.046*		0.064***		0.064**
		(1.95)		(2.59)		(2.53)
Firm FE	Y	Y	Y	Y	Y	Y
Hscode8 FE	Y	Y	Y	Y	Y	Y
Ind x Year Quarter FE	Y	Y	Y	Y	Y	Y
Observations	159,023	125,802	159,023	125,802	159,023	125,802
R-squared	0.485	0.489	0.535	0.540	0.531	0.536

Table 3: The Timing of Changes in China Import Ratios: US Government Suppliers vs. Non-Suppliers around the Trade War

This table reports the timing of changes in *China Import Ratio* between US government suppliers and other firms around the 2018 US-China Trade War. The dataset for this table is organized at the firm-quarter-hscode8 level. The sample period is from 2016Q1 to 2019Q4. The dependent variable for columns (1) and (2) is *China Import Ratio* in terms of product value; the dependent variable for columns (3) and (4) is *China Import Ratio* in terms of the number of transactions; the dependent variable for columns (5) and (6) is *China Import Ratio* in terms of product quantity. *Gov Supplier* is a dummy variable that is equal to 1 when a firm discloses the US government as its principal customer for the fiscal year *t*. *Before Tradewar Quarter -T* is a dummy variable that is equal to 1 for the period t quarters before the outbreak of the US-China trade war (Quarter 0 is 2018Q3). Similarly, *Post Tradewar Quarter T* is a dummy variable that is equal to 1 for the period t quarters after the outbreak of the US-China trade war. Other independent variables include lagged total assets (in logarithm), book-to-market ratios, return on assets, and the ratio of domestic sales to total sales. We include the firm, industry×year quarter, and product HSCODE (8-digit) fixed effects in all test specifications. Standard errors are clustered at the product HSCODE (8-digit) level. *T*-statistics are provided in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

VARIABLES	(1) China Import Ratio Product Value	(2) China Import Ratio Number of Transactions	(3) China Import Ratio Product Quantity
Gov Supplier	-0.009	-0.003	0.002
	(-0.39)	(-0.12)	(0.09)
Gov Supplier×Before Tradewar Quarter -4	0.001	0.006	0.005
	(0.03)	(0.38)	(0.37)
Gov Supplier×Before Tradewar Quarter -3	0.005	-0.004	-0.008
	(0.33)	(-0.31)	(-0.54)
Gov Supplier×Before Tradewar Quarter -2	0.000	0.008	0.004
	(0.01)	(0.43)	(0.20)
Gov Supplier×Before Tradewar Quarter -1	0.021	0.025	0.020
	(1.08)	(1.29)	(1.02)
Gov Supplier×Post Tradewar Quarter 0	0.029	0.026	0.018
	(1.54)	(1.43)	(0.95)
Gov Supplier×Post Tradewar Quarter +1	0.039**	0.050**	0.046**
	(2.08)	(2.58)	(2.42)
Gov Supplier×Post Tradewar Quarter +2	0.047**	0.064***	0.058***
	(2.48)	(3.41)	(3.09)
Gov Supplier×Post Tradewar Quarter +3	0.063***	0.070***	0.070***
	(3.18)	(3.59)	(3.55)
Gov Supplier×Post Tradewar Quarter +4	0.041**	0.045**	0.042**
	(2.07)	(2.31)	(2.13)
Gov Supplier×Post Tradewar Quarter >4	0.064***	0.077***	0.077***
	(3.64)	(4.50)	(4.44)
Other Controls	Y	Y	Y
Firm FE	Y	Y	Y
Ind x Year Quarter FE	Y	Y	Y
Hscode FE	Y	Y	Y
Observations	125,802	125,802	125,802
R-squared	0.489	0.540	0.536

Table 4: Cross-Sectional Comparison – Type of Contracts

This table compares *China Import Ratios* between US government suppliers and other firms around the 2018 US-China Trade War conditional on the type of federal contracts received by the US government suppliers. The dataset for this table is organized at the firm-quarter-hscode8 level. The sample period is from 2016Q1 to 2019Q4. The dependent variable for columns (1)-(3) is the China Import Ratio in terms of product value; the dependent variable for columns (4)-(6) is the China Import Ratio in terms of the number of transactions; the dependent variable for columns (7)-(9) is the China Import Ratio in terms of product quantity. *Gov Supplier* is a dummy variable that is equal to 1 when a firm discloses the US government as its principal customer for the fiscal year *t*. *Post Trade War* is a dummy variable that is equal to 1 for periods after (including) 2018Q3. *Nondod Ratio* is the percentage of contracts (in terms of value) received from Non-Defense Departments among all federal government contracts held by the firm; *Short Ratio* is the percentage of short-term contracts (i.e., duration shorter than 6 months) among all federal government contracts held by the firm; *Small Ratio* is the percentage of small contracts (initial value less than 0.1 million USD) among all federal government contracts held by the firm. Other independent variables include lagged total assets (in logarithm), book-to-market ratios, return on assets, and the ratio of domestic sales to total sales. We include the firm, industry×quarter, and product HSCODE (8-digit) fixed effects in all test specifications. Standard errors are clustered at the product HSCODE (8-digit) level. T-statistics are provided in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

VARIABLES	China Import Ratio Product Value			China Import Ratio Number of Transactions			China Import Ratio Product Quantity		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Gov Supplier×Post Trade War	0.020	0.032**	0.041***	0.032**	0.044***	0.053***	0.029*	0.043***	0.053***
	(1.25)	(2.26)	(3.09)	(1.98)	(3.05)	(4.04)	(1.86)	(3.08)	(4.10)
Gov Supplier	0.016	0.000	-0.003	0.022	0.007	0.001	0.030	0.011	0.005
	(0.62)	(0.01)	(-0.12)	(0.90)	(0.31)	(0.06)	(1.19)	(0.48)	(0.20)
Gov Supplier×Post Trade War×Nondod Ratio	0.103***			0.097***			0.106***		
	(2.79)			(2.58)			(2.87)		
Gov Supplier×Post Trade War×Short Ratio		0.131***			0.117**			0.122**	
		(2.70)			(2.40)			(2.51)	
Gov Supplier×Post Trade War×Small Ratio			0.138			0.096			0.095
			(1.54)			(1.15)			(1.11)
Nondod Ratio	0.028***			0.031***			0.034***		
	(3.46)			(3.66)			(3.99)		
Short Ratio		-0.000			0.003			0.003	
		(-0.03)			(0.59)			(0.48)	
Small Ratio			0.003			0.009			0.008
			(0.33)			(0.90)			(0.82)
Gov Supplier×Nondod Ratio	-0.072**			-0.076***			-0.093***		
	(-2.57)			(-2.75)			(-3.38)		
Gov Supplier×Short Ratio		-0.025			-0.034			-0.034	
		(-0.64)			(-0.88)			(-0.89)	
Gov Supplier×Small Ratio			-0.069			-0.022			-0.012
			(-1.07)			(-0.38)			(-0.22)
Post Trade War×Nondod Ratio	-0.008			-0.012			-0.014		
	(-0.72)			(-1.09)			(-1.33)		
Post Trade War×Short Ratio		0.017*			0.013			0.017*	
		(1.81)			(1.41)			(1.77)	
Post Trade War×Small Ratio			-0.005			-0.007			-0.007
			(-0.42)			(-0.57)			(-0.52)
Other Controls	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firm FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Ind × Year Quarter FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hscode FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Observations	125,802	125,802	125,802	125,802	125,802	125,802	125,802	125,802	125,802
R-squared	0.490	0.490	0.489	0.540	0.540	0.540	0.537	0.536	0.536

Table 5 Out of Sample (External Validity) Test: Imports from Russia around Ukraine-Russia Conflict

This table compares the total imports from Russia between US government suppliers and other firms around the 2022 Ukraine-Russia Trade War. The dataset for this table is organized at the firm-month level. The sample period is from January 2020 to May 2022. The dependent variable for column (1) is *Russia Import Ratio* in terms of product value; the dependent variable for column (2) is *Russia Import Ratio* in terms of the number of transactions, and the dependent variable for column (3) is *Russia Import Ratio* in terms of product quantity. *Gov Supplier* is a dummy variable that is equal to 1 when a firm discloses the US government as its principal customer for the fiscal year t. *Post War* is a dummy variable that is equal to 1 for periods since November 2021. Other independent variables include lagged total assets (in logarithm), book-to-market ratios, and return on assets. We include the firm and industry×month fixed effects in all test specifications. *T*-statistics are provided in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)
	Russia Import Ratio	Russia Import Ratio	Russia Import Ratio
VARIABLES	Product Value	Number of Transactions	Product Quantity
Gov Supplier×Post War	0.005***	0.005***	0.004***
	(3.36)	(3.38)	(3.363)
Gov Supplier	-0.009***	-0.008***	-0.009***
	(-2.77)	(-2.76)	(-2.754)
B/M	-0.001	-0.000	-0.000
	(-1.47)	(-0.99)	(-0.863)
Log(MV)	-0.000	-0.000	-0.000
	(-1.15)	(-1.51)	(-1.358)
ROA	-0.028***	-0.026***	-0.026***
	(-4.75)	(-4.80)	(-4.716)
Firm FE	Y	Y	Y
Hscode8 FE	Y	Y	Y
Ind x Year Month FE	Y	Y	Y
Observations	385,353	402,713	402,690
R-squared	0.139	0.145	0.141

Table 6 Out of Sample (External Validity) Test: Imports from Japan around the 2011 Tohoku Earthquake and Tsunami

This table compares the Japan Import Ratio between US government suppliers and other firms around the 2011 Tohoku Earthquake and Tsunami. The dataset for this table is organized at the firm-month-hscode8 level. The sample period is from six months before and after the earthquake and includes goods categories severely impacted by the earthquake. The dependent variable for columns (1) and (2) is *Japan Import Ratio* in terms of product value; the dependent variable for columns (3) and (4) is Japan Import Ratio in terms of the number of transactions; the dependent variable for columns (5) and (6) is *Japan Import Ratio* in terms of product quantity. *Gov Supplier* is a dummy variable that is equal to 1 when a firm discloses the US government as its principal customer for the fiscal year *t*. *Post Earthquake* is a dummy variable that is equal to 1 for periods from Mar 2011 to May 2011. Other independent variables include lagged total assets (in logarithm), book-to-market ratios, return on assets, and the ratio of domestic sales to total sales. We include the firm, industry×year quarter, and product HSCODE (8-digit) fixed effects in all test specifications. Standard errors are clustered at the product HSCODE (8-digit) level. T-statistics are provided in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	Japan Import Ratio		Japan Import Ratio		Japan Import Ratio	
VARIABLES	Product Value		Number of Transactions		Product Quantity	
Gov Supplier×Post Earthquake	0.009	0.008	0.006	0.005	0.007	0.006
	(1.55)	(1.38)	(1.02)	(0.85)	(1.17)	(0.99)
Gov Supplier	-0.006	-0.007	-0.004	-0.006	-0.004	-0.006
	(-0.83)	(-1.04)	(-0.64)	(-0.90)	(-0.63)	(-0.90)
B/M		0.013***		0.013***		0.014***
		(3.90)		(4.28)		(4.39)
Log(MV)		-0.001		-0.001		-0.001
		(-0.17)		(-0.17)		(-0.28)
ROA		0.001		0.011		0.012
		(0.04)		(0.57)		(0.63)
Firm FE	Y	Y	Y	Y	Y	Y
Hscode8 FE	Y	Y	Y	Y	Y	Y
Ind x Year Month FE	Y	Y	Y	Y	Y	Y
Observations	143,799	141,805	154,124	152,020	154,124	152,020
R-squared	0.285	0.287	0.272	0.274	0.269	0.271

Table 7: Connections with Government: Measures based on Geographical Distance and Relationship Duration

This table compares *China Import Ratio* between US government suppliers and other firms around the 2018 US-China Trade War conditional on the connection with the federal government. Panels A and B measure the connection with the federal government based on the distance and duration, separately. The dataset for this table is organized at the firm-quarter-hscode8 level. The sample period is from 2016Q1 to 2019Q4. The dependent variable for column (1) is the *China Import Ratio* in terms of product value; the dependent variable for column (2) is the *China Import Ratio* in terms of the number of transactions; the dependent variable for column (3) is the *China Import Ratio* in terms of product quantity. *Gov Supplier* is a dummy variable that is equal to 1 when a firm discloses the US government as its principal customer for the fiscal year t. *Post Trade War* is a dummy variable that is equal to 1 for periods after (including) 2018Q3. In Panel A, *Distance* is the geographical distance from a firm to the office address of its awarding government agency (or Washington D.C.) in miles divided by 1000. In Panel B, *Duration* is the number of years since a firm has been awarded federal contracts without interruption of more than one year. Other independent variables include lagged total assets (in logarithm), book-to-market ratios, return on assets, and the ratio of domestic sales to total sales. We include the firm, industry×quarter, and product HSCODE (8-digit) fixed effects in all test specifications. Standard errors are clustered at the product HSCODE (8-digit) level. T-statistics are provided in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Geographic Distance

VARIABLES	(1) China Import Ratio Product Value	(2) China Import Ratio Number of Transactions	(3) China Import Ratio Product Quantity
Gov Supplier×Post Trade War	0.077***	0.090***	0.091***
	(4.09)	(4.84)	(4.99)
Gov Supplier×Post Trade War×Distance	-0.045***	-0.050***	-0.053***
	(-3.39)	(-3.80)	(-4.11)
Gov Supplier	-0.052	-0.042	-0.033
	(-1.22)	(-0.94)	(-0.75)
Distance	0.000	0.000*	0.000*
	(1.19)	(1.81)	(1.67)
Gov Supplier×Distance	0.039*	0.035	0.032
	(1.69)	(1.45)	(1.34)
Post Trade War×Distance	-0.011**	-0.013***	-0.013***
	(-2.26)	(-2.95)	(-2.96)
B/M	-0.005	-0.010	-0.007
	(-0.44)	(-0.93)	(-0.69)
Log(MV)	0.002	-0.001	0.004
	(0.35)	(-0.17)	(0.50)
ROA	-0.058*	-0.031	-0.038
	(-1.71)	(-0.94)	(-1.12)
%Revenue from US Market	0.054**	0.068***	0.070***
	(2.16)	(2.66)	(2.70)
Firm FE	Y	Y	Y
Hscode8 FE	Y	Y	Y
Ind × Year Quarter FE	Y	Y	Y
Observations	113,515	113,515	113,515
R-squared	0.506	0.558	0.555

Panel B: Relationship Duration

VARIABLES	(1) China Import Product Value	(2) China Import Ratio Number of	(3) China Import Product Quantity
Gov Supplier×Post Trade War	0.034**	0.038**	0.039**
	(2.22)	(2.34)	(2.47)
Gov Supplier×Post Trade	0.005	0.008**	0.007**
	(1.37)	(2.34)	(2.20)
Gov Supplier	0.003	0.015	0.018
	(0.13)	(0.62)	(0.75)
Duration	-0.004**	-0.004**	-0.004*
	(-1.97)	(-2.01)	(-1.83)
Gov Supplier×Duration	-0.001	-0.005	-0.004
	(-0.31)	(-1.05)	(-0.94)
Post Trade War×Duration	-0.000	-0.000	-0.000
	(-0.06)	(-0.01)	(-0.24)
B/M	-0.008	-0.012	-0.011
	(-0.98)	(-1.51)	(-1.31)
Log(MV)	0.001	-0.003	0.001
	(0.14)	(-0.57)	(0.10)
ROA	-0.074**	-0.048	-0.054*
	(-2.45)	(-1.62)	(-1.78)
%Revenue from US Market	0.049**	0.066***	0.067***
	(2.03)	(2.65)	(2.62)
Firm FE	Y	Y	Y
Hscode8 FE	Y	Y	Y
Ind × Year Quarter FE	Y	Y	Y
Observations	125,802	125,802	125,802
R-squared	0.489	0.540	0.537

Table 8. Connections with Government: Direct Measures based on Past Government Careers of Corporate Managers, Board Members, and Employees

This table compares *China Import Ratio* between US government suppliers and other firms around the 2018 US-China Trade War conditional on whether a firm has former government employees. The dataset for this table is organized at the firm-quarter-hscode8 level. The sample period is from 2016Q1 to 2019Q4. The dependent variable for column (1) is *China Import Ratio* in terms of product value; the dependent variable for column (2) is *China Import Ratio* in terms of the number of transactions; the dependent variable for column (3) is *China Import Ratio* in terms of product quantity. *Gov Supplier* is a dummy variable that is equal to 1 when a firm discloses the US government as its principal customer for the fiscal year t. *Post Trade War* is a dummy variable that is equal to 1 for periods after (including) 2018Q3. In Panel A, *Former Government 1* is a dummy variable that is equal to 1 if a firm has executive officers or board members with former government experience. In Panel B, *Former Government 2* is a dummy variable that is equal to 1 if a firm has more than 3 former government employees. In Panel C, *Former Government 3* is a dummy variable that is equal to 1 if a firm has former government employees specialized in contracting and procurement. Other independent variables include lagged total assets (in logarithm), book-to-market ratios, return on assets, and the ratio of domestic sales to total sales. We include the firm, industry×quarter, and product HSCODE (8-digit) fixed effects in all test specifications. Standard errors are clustered at the product HSCODE (8-digit) level. T-statistics are provided in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Past Government Careers of Corporate Managers and Board Members

VARIABLES	(1) China Import Ratio Product Value	(2) China Import Ratio Number of Transactions	(3) China Import Ratio Product Quantity
Gov Supplier×Post Trade War	-0.007	0.003	-0.001
	(-0.29)	(0.14)	(-0.03)
Gov Supplier×Post Trade War×Former Government 1	0.069**	0.069**	0.073***
	(2.30)	(2.39)	(2.59)
Gov Supplier	0.007	0.002	0.008
	(0.19)	(0.06)	(0.22)
Former Government 1	0.031***	0.035***	0.038***
	(4.12)	(4.87)	(5.13)
Gov Supplier×Former Government 1	-0.014	-0.000	-0.002
	(-0.44)	(-0.00)	(-0.09)
Post Trade War×Former Government 1	-0.012**	-0.011*	-0.007
	(-1.99)	(-1.72)	(-1.15)
B/M	-0.008	-0.013	-0.011
	(-1.04)	(-1.57)	(-1.38)
Log(MV)	0.000	-0.004	-0.000
	(0.04)	(-0.70)	(-0.04)
ROA	-0.061**	-0.034	-0.039
	(-2.05)	(-1.15)	(-1.30)
%Revenue from US Market	0.052**	0.070***	0.073***
	(2.18)	(2.87)	(2.89)
Firm FE	Y	Y	Y
Hscode8 FE	Y	Y	Y
Ind × Year Quarter FE	Y	Y	Y
Observations	125,802	125,802	125,802
R-squared	0.490	0.540	0.537

Panel B: Past Government Careers of Non-Executive Employees

	(1)	(2)	(3)
	China Import Ratio	China Import Ratio	China Import Ratio
	Product	Number of	Product
VARIABLES	Value	Transactions	Quantity
Gov Supplier×Post Trade War	0.019	0.028**	0.027**
	(1.27)	(2.10)	(2.02)
Gov Supplier×Post Trade War×Former Government 2	0.050**	0.052**	0.052**
	(2.00)	(1.97)	(2.04)
Gov Supplier	0.013	0.019	0.025
	(0.41)	(0.62)	(0.81)
Former Government 2	0.068***	0.070***	0.068***
	(8.04)	(8.32)	(8.16)
Gov Supplier×Former Government 2	-0.032	-0.032	-0.034
	(-1.23)	(-1.26)	(-1.34)
Post Trade War×Former Government 2	-0.003	-0.003	0.000
	(-0.60)	(-0.56)	(0.04)
B/M	-0.006	-0.009	-0.008
	(-0.68)	(-1.16)	(-0.95)
Log(MV)	0.000	-0.004	0.000
	(0.02)	(-0.68)	(0.00)
ROA	-0.070**	-0.043	-0.050
	(-2.32)	(-1.46)	(-1.64)
%Revenue from US Market	0.046*	0.064**	0.063**
	(1.94)	(2.57)	(2.46)
Firm FE	Y	Y	Y
Hscode8 FE	Y	Y	Y
Ind × Year Quarter FE	Y	Y	Y
Observations	125,802	125,802	125,802
R-squared	0.490	0.540	0.537

Panel C: Past Government Contracting Expertise of Employees

VARIABLES	(1) China Import Ratio Product Value	(2) China Import Ratio Number of Transactions	(3) China Import Ratio Product Quantity
Gov Supplier×Post Trade War	0.034**	0.045***	0.043***
	(2.13)	(2.84)	(2.78)
Gov Supplier×Post Trade War×Former Government 3	0.058**	0.056*	0.063**
	(1.98)	(1.87)	(2.13)
Gov Supplier	0.003	0.008	0.013
	(0.11)	(0.36)	(0.56)
Former Government 3	0.017*	0.011	0.014
	(1.93)	(1.17)	(1.50)
Gov Supplier×Former Government 3	0.019	0.045**	0.040*
	(1.05)	(2.22)	(1.96)
Post Trade War×Former Government 3	-0.034***	-0.036***	-0.037***
	(-4.53)	(-4.74)	(-4.70)
B/M	-0.010	-0.013	-0.012
	(-1.21)	(-1.64)	(-1.47)
Log(MV)	0.000	-0.004	0.000
	(0.06)	(-0.60)	(0.08)
ROA	-0.067**	-0.038	-0.044
	(-2.21)	(-1.27)	(-1.45)
%Revenue from US Market	0.058**	0.078***	0.079***
	(2.41)	(3.16)	(3.09)
Firm FE	Y	Y	Y
Hscode8 FE	Y	Y	Y
Ind × Year Quarter FE	Y	Y	Y
Observations	125,802	125,802	125,802
R-squared	0.490	0.540	0.537

Table 9 Government Suppliers and Outcomes of Tariff Exclusion Applications

This table reports the likelihood of approval in tariff exclusion applications during the 2018 US-China Trade War, conditional on whether the applicants are US government suppliers or not. The dataset is organized at the tariff exclusion application level following Joe, McDaniel, and Parks (2019). The dependent variable, *Approved*, is a dummy variable that is equal to one if an application gets approved, and zero if the application is rejected. *Federal Contractor* is a dummy variable that is equal to one if a firm holds contracts offered by the federal government in 2018; *Gov Supplier* is a dummy variable that is equal to 1 when a firm discloses the US government as its principal customer in 2018. In column (1) of Panel A, we include all applicants, including public and private firms; in column (2) of Panel A, we only include publicly listed applicants, including their subsidiaries. Other independent variables in column (2) include lagged market capitalization (in logarithm), book leverage, returns on assets, book-to-market ratios, capital expenditure (scaled by total assets), and R&D expense (scaled by total assets). In Panel B, we interact *Gov Supplier* with all connection measures, including *Former Government 1* (a dummy variable that is equal to 1 if a firm has executive officers or board members with former government experience), *Former Government 2* (a dummy variable that is equal to 1 if a firm has more than 3 former government employees), *Former Government 3* (a dummy variable that is equal to 1 if a firm has former government employees specialized in contracting and procurement), Duration (the number of years since a firm has been awarded federal contracts without interruption of more than one year), and Distance (geographical distance from a firm to the office address of its awarding government agency (or Washington D.C.) in miles divided by 1000). We include the application round and product HSCODE (8-digit) fixed effects in all test specifications. *T*-statistics are provided in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Panel A: Government Suppliers and Tariff Exclusion Application Approval Rate

	Public & Private Firms	Public Firms (Including Subsidiaries)
	(1)	(2)
VARIABLES	Approved	Approved
Federal Contractor	0.032***	0.030*
	(5.70)	(1.90)
Gov Suppliers		0.140**
		(2.22)
Log(MV)		0.023***
		(5.20)
Leverage		0.049
		(1.17)
ROA		-0.198**
		(-2.19)
B/M		-0.013
		(-0.98)
Capx		-1.201***
		(-4.57)
R&D		-1.183
		(-1.54)
Round FE	Y	Y
Hscode FE	Y	Y
Observations	52,752	4,015
R-squared	0.484	0.613

Panel B: Interactions with Connection Measures

	(1)	(2)	(3)	(4)	(5)
VARIABLES			Approved		
Federal Contractor	0.056***	0.053***	0.046***	0.055***	0.058***
	(3.70)	(3.51)	(3.02)	(3.65)	(3.61)
Gov Supplier	-0.318	0.336***	0.353***	0.397***	0.322**
	(-1.01)	(6.75)	(7.07)	(7.93)	(2.46)
Former Government1	-0.022				
	(-1.46)				
Gov Supplier×Former Government1	0.741**				
	(2.32)				
Former Government2		-0.133***			
		(-5.33)			
Gov Supplier×Former Government2		0.656***			
		(4.63)			
Former Government3			-0.060		
			(-1.15)		
Gov Supplier×Former Government3			0.581***		
			(3.89)		
Duration				-0.003	
				(-1.44)	
Gov Supplier×Durantion				0.005	
				(0.29)	
Distance					-0.000
					(-0.46)
Gov Supplier×Distance					0.000
					(0.65)
Log(MV)	0.012***	0.017***	0.011***	0.011***	0.008*
	(2.64)	(3.82)	(2.62)	(2.63)	(1.72)
ROA	-0.306***	-0.318***	-0.294***	-0.305***	-0.279***
	(-4.03)	(-4.23)	(-3.89)	(-4.03)	(-3.61)
B/M	-0.044*	-0.042*	-0.046**	-0.044*	-0.049**
	(-1.92)	(-1.87)	(-2.00)	(-1.92)	(-2.08)
Round FE	Y	Y	Y	Y	Y
Hscode4 FE	Y	Y	Y	Y	Y
Observations	4,015	4,015	4,015	4,015	3,750
R-squared	0.375	0.381	0.376	0.374	0.386

Table 10 Operating Performance of US Government Suppliers vs Other Firms around the US-China Trade War

This table reports the operating performance of government suppliers and other firms around the 2018 US-China Trade War. The sample period is from 2016Q1 to 2019Q4. The dependent variable in columns (1)-(3) are ROA (operating income scaled by total assets), ROE (net income scaled by the book value of shareholders' equity); and market share (percentage sales within the industry), respectively. *Gov Supplier* is a dummy variable that is equal to 1 when a firm discloses the US government as its principal customer for the fiscal year *t*. *Post Trade War* is a dummy variable that is equal to 1 for periods after (including) 2018Q3. All control variables, including market value in logarithm (*Log(MV)*), sales growth rate (*Sale Growth*), leverage (*Leverage*), and book-to-market value (*B/M*), reflect information at the previous fiscal year-end. We include firm fixed effects and Industry-year-quarter fixed effects in test specifications. T-statistics are provided in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)
VARIABLES	ROA	ROE	Market Share
Gov Supplier	-0.005**	-0.011	0.000
	(-2.47)	(-0.63)	(0.23)
Gov Supplier×Post Trade War	0.004***	0.017*	0.002**
	(3.41)	(1.88)	(2.50)
Log(MV)	-0.000	-0.002	0.002***
	(-0.33)	(-0.56)	(6.23)
Sale Growth	0.006***	0.009	0.003***
	(6.19)	(1.32)	(3.98)
Leverage	-0.004	0.068***	0.004**
	(-1.50)	(3.42)	(2.54)
B/M	-0.001***	-0.014***	0.000*
	(-3.70)	(-4.56)	(1.76)
Firm FE	Y	Y	Y
Ind x Year Quarter FE	Y	Y	Y
Observations	8,002	7,947	8,357
R-squared	0.709	0.454	0.991

Table 11 Number of Bidders of Federal Government Contracts around the Trade War

This table reports the change in the number of bidders in competing federal contracts around the 2018 US-China Trade War. The dataset is organized at the federal contract level. The sample period is from 2016Q1 to 2019Q4. The dependent variable in columns (1)-(3) is the natural logarithm of the number of bidders. The dependent variable in columns (4)-(6) is a dummy variable that is equal to one if a federal government contract has only one bidder. Short Duration is a dummy variable that is equal to one if a contract has a duration short than 6 months; Small Value is a dummy variable that is equal to one if a contract carries an initial value lower than 0.1 million USD. We have included offering agency, product, industry, and quarter fixed effects. T-statistics are provided in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Log(number of bidders)			Single Bidder		
Post Trade War	0.008***	-0.102***	-0.072***	-0.002**	0.047***	0.032***
	(6.25)	(-48.11)	(-41.75)	(-2.05)	(35.78)	(29.52)
Post Trade War×Short Duration		0.168***			-0.073***	
		(64.42)			(-45.13)	
Post Trade War×Small Value			0.157***			-0.063***
			(66.80)			(-43.13)
Short Duration		-0.059***			0.039***	
		(-36.20)			(38.96)	
Small Value			-0.043***			0.035***
			(-50.83)			(66.41)
Agency FE	Y	Y	Y	Y	Y	Y
Product/Services FE	Y	Y	Y	Y	Y	Y
Industry FE	Y	Y	Y	Y	Y	Y
Quarter FE	Y	Y	Y	Y	Y	Y
Observations	2,448,718	2,448,718	2,448,718	2,448,718	2,448,718	2,448,718
R-squared	0.721	0.722	0.722	0.549	0.549	0.550

Table 12 Capital Market Responses: Analyst Forecast Revisions and Abnormal Stock Returns

Panel A reports the monthly forecast revisions and the monthly DGTW-adjusted abnormal returns of government suppliers and other firms around the 2018 US-China Trade War. The sample period is from 2016Q1 to 2019Q4. *CAR[-2,2]* is the cumulative abnormal returns around the earnings announcement, i.e., 2 trading days before to 2 trading days after the earnings announcement, based on the market model adjustment. *Monthly Forecast Revision* is defined as the difference between consensus forecasts (i.e., one-year-ahead EPS forecasts) of this month and that of the previous month, scaled by the price at the end of the previous month. We multiply *Monthly Forecast Revision* by 100 for legibility. *DGTW Adjusted Monthly Returns* is the monthly abnormal returns after the benchmark adjustment following Daniel, Grinblatt, Titman, and Wermers (1997). *Gov Supplier* is a dummy variable that is equal to 1 when a firm discloses the US government as its principal customer for the fiscal year *t*. *Post Trade War* is a dummy variable that is equal to 1 for periods after (including) 2018Q3. We include firm fixed effects and year-month fixed effects in test specifications. T-statistics are provided in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively. In Panel B, we provide a univariate comparison of the monthly forecast revisions and the monthly DGTW-adjusted abnormal returns of government suppliers and non-government suppliers in the post trade war sample.

Panel A: Difference-in-Difference Comparison

	(1)	(2)	(3)
	CAR[-2,2]	Monthly Forecast Revisions	DGTW Adjusted Monthly Returns (%)
VARIABLES		Before & After Trade War	
Gov Supplier	0.000	-0.020	0.001
	(0.08)	(-0.36)	(1.35)
Gov Supplier × *Post Trade War*	0.014**	0.090***	0.007*
	(2.09)	(3.15)	(1.86)
Firm Fixed Effect	No	Yes	No
Year-Quarter Fixed Effect	Yes	No	No
Year-month Fixed Effect	No	Yes	Yes
Observations	7,754	20,546	25,064
Adjusted R-squared	0.006	0.092	0.017

Panel B: Post Trade War Univariate Comparison

	CAR[-2,2]	Monthly	DGTW Adjusted
Groups		Forecast Revisions	Monthly Returns (%)
Non Gov Supplier (1)	0.325%	-0.138	-0.179%
Gov Supplier (2)	1.787%	-0.063	0.621%
Difference (2) - (1)	1.462%*	0.074**	0.800%*
t-stat	(1.95)	(2.36)	(1.85)

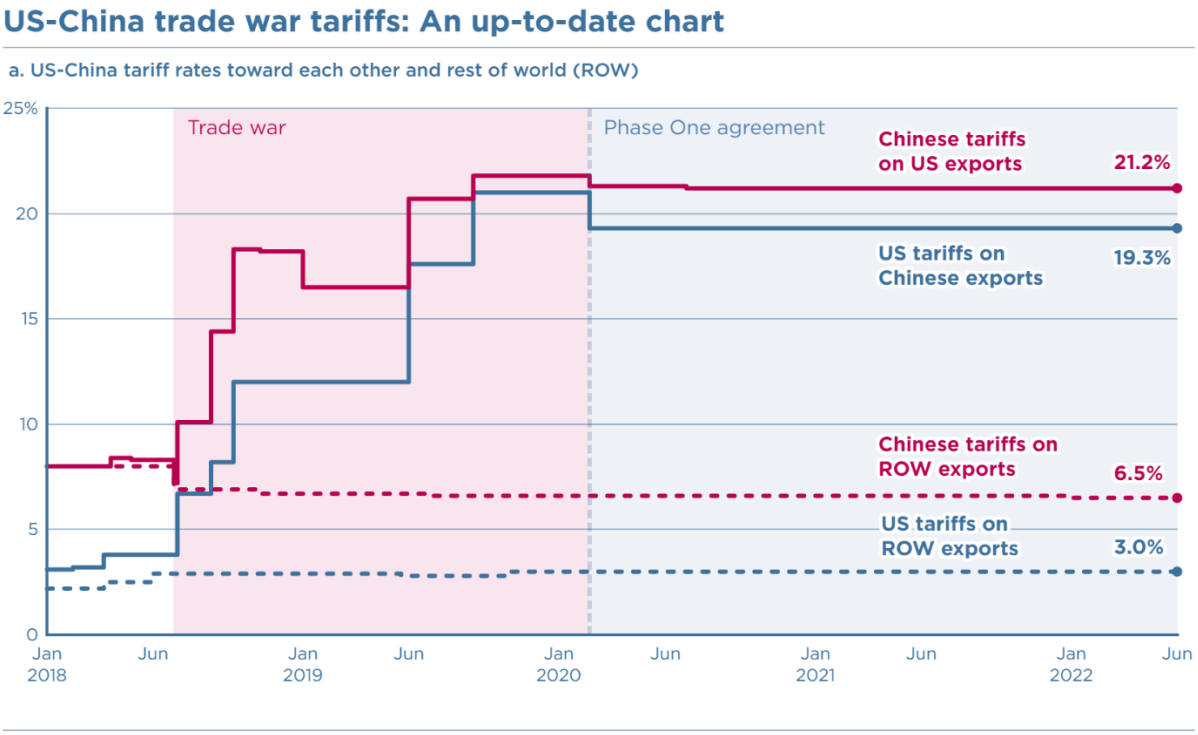
Appendix I: Detailed Definitions of Variables

VARIABLES	DEFINITION
Main Variables	
China Import Ratio	The percentage of import from China in total import from all countries for a firm i in product category p at quarter t; we construct China Import Ratio based on estimated product value, the number of transactions, and product quantity.
Gov Supplier	A dummy variable that is equal to 1 when a firm discloses the US government as its principal customer for the fiscal year t.
Post Trade War	A dummy variable that is equal to 1 for periods after (including) 2018Q3.
Before Tradewar Quarter -T	A dummy variable that is equal to 1 for the period t quarters before the outbreak of the US-China trade war (Quarter 0 is 2018Q3).
Post Tradewar Quarter T	A dummy variable that is equal to 1 for the period t quarters after the outbreak of the US-China trade war.
Government Connections	
Distance	The geographical distance from a firm to the office address of its awarding government agency (or Washington D.C.) in miles divided by 1000.
Duration	The number of years since a firm has been awarded federal contracts without interruption of more than one year.
Firm Characteristics	
Federal Contractor	A dummy variable that is equal to one if a firm holds contracts offered by the federal government in 2018.
B/M	The ratio of firm's book value to its market value.
Log(MV)	The logarithm of the market capitalization.
ROA	Operating income scaled by total assets.
ROE	Net income scaled by the book value of shareholders' equity.
%Revenue from US Market	The ratio of domestic sales to total sales.
market share	Percentage sales within the industry.
Sale Growth	The change in sales over last quarter.
Leverage	The ratio of total debt to total asset.
CAR[-2,2]	The cumulative abnormal returns around the earnings announcement, i.e., 2 trading days before to 2 trading days after the earnings announcement, based on the market model adjustment.
Monthly Forecast Revision	The difference between consensus forecasts (i.e., one-year-ahead EPS forecasts) of this month and that of the previous month, scaled by the price at the end of the previous month.
DGTW Adjusted Monthly Returns	The monthly abnormal returns after the benchmark adjustment following Daniel, Grinblatt, Titman, and Wermers (1997).
Contract Terms	
Nondod Ratio	The percentage of contracts (in terms of value) received from Non-Defense Departments among all federal government contracts held by the firm.
Short Ratio	The percentage of short-term contracts (i.e., duration shorter than 6 months) among all federal government contracts held by the firm.
Small Ratio	The percentage of small contracts (initial value less than 0.1 million USD) among all federal government contracts held by the firm.
Log(number of bidders)	The natural logarithm of the number of bidders.

Single Bidder	A dummy variable that is equal to one if a federal government contract has only one bidder.
Short Duration	A dummy variable that is equal to one if a contract has a duration short than 6 months.
Small Value	A dummy variable that is equal to one if a contract carries an initial value lower than 0.1 million USD.
Others	
Russia Import Ratio	The percentage of import from Russia in total import from all countries for a firm i in product category p at quarter t; we construct Russia Import Ratio based on estimated product value, the number of transactions, and product quantity.
Post War	A dummy variable that is equal to 1 for periods since November 2021.
Approved	A dummy variable that is equal to one if an application gets approved, and zero if the application is rejected.

Appendix Figures

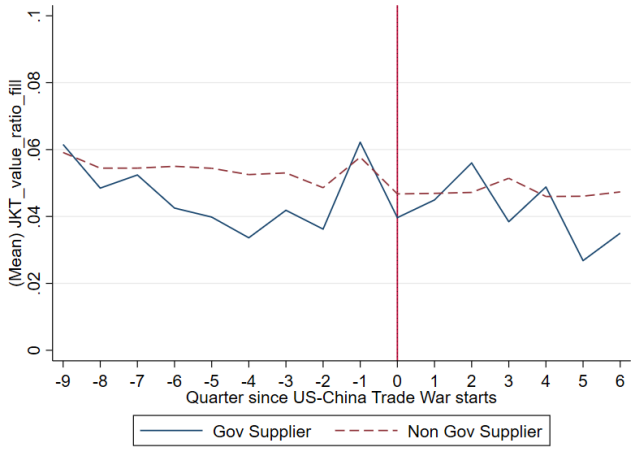
Figure A1 Time Trend of Tariff Rates in the US-China Trade War



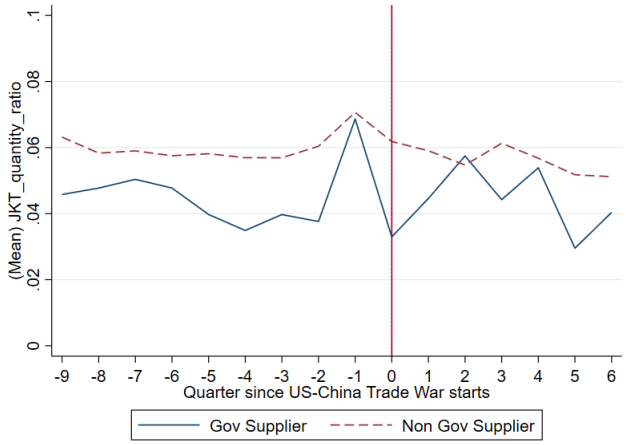
(Source: This diagram is obtained from the PIIE website: https://www.piie.com/research/piie-charts/us-china-trade-war-tariffs-date-chart)

Figure A2 Japan-Korea-Taiwan (JKT) Import Ratios: US Government Suppliers vs Other Firms around the US-China Trade War

JKT Import Ratio (based on Product Value)



JKT Import Ratio (based on Product Quantity)



JKT Import Ratio (based on the Number of Transactions)

Japan-Korea-Taiwan (JKT) Import Ratio is the percentage of imports from Japan, South Korea, and Taiwan in imports from all countries/regions for a US firm for each firm-quarter-hscode8. Three *JKT Import Ratios* computed below are based on product value, product quantity, and the number of transactions, respectively.

Appendix Tables

Table A1: Major Events in the Timeline of the US-China Trade War before 2020

Date (DD/MM/YYYY)	Major Events
2016 presidential election	Donald Trump promises to reduce the US trade deficit with China, which he attributes to unfair trade practices.
22/03/2018	Donald Trump asks the USTR to investigate applying tariffs on US$50-60 billion worth of Chinese goods
29/05/2018	The White House announces that it would impose a 25% tariff on US$ 50 billion of Chinese goods
15/06/2018	Donald Trump announces that the 25% tariff on US$ 50 billion of Chinese goods will start on July 6, 2018
06/07/2018	**US-China trade war begins as US imposes 25% tariffs on US$34 billion worth of Chinese imports**
06/07/2018	China retaliates by imposing 25% tariffs on 545 goods originating from the US worth US$34 billion
23/08/2018	US imposes 25% tariffs on a further US$16 billion worth of Chinese goods
23/08/2018	China responds by applying 25% tariffs on US$16 billion worth of US goods
24/09/2018	US places 10% tariffs on US$200 billion worth of Chinese imports
24/09/2018	China responds by placing customs duties on US$60 billion worth of US goods
01/12/2018	Xi Jinping and Donald Trump call a truce in the trade war at the G20 summit in Argentina
10/05/2019	US increases tariffs on US$200 billion worth of Chinese goods, from 10% to 25%
15/05/2019	US Department of Commerce announces the addition of Huawei to its "entity list"
31/05/2019	China announces plans to establish its own "unreliable entity list"
01/06/2019	China increases tariffs on US$60 billion worth of US products
29/06/2019	Xi Jinping and Donald Trump again agree to a trade war truce, this time at the G20 summit in Japan
05/08/2019	The US designates China as a "currency manipulator"
13/08/2019	US delays or removes various planned levies on US$455 billion worth of Chinese products
23/08/2019	China announces planned tariffs of 5% and 10% on US$75 billion worth of US goods
01/09/2019	US tariffs on more than US$125 billion worth of Chinese imports begin as expected
11/09/2019	US agrees to delay new tariffs on US$250 billion worth of Chinese goods
11/10/2019	US delays a planned tariff increase of 25% to 30% on US$250 billion worth of Chinese goods
15/01/2020	China and the US sign the phase-one trade deal

Table A2: Minimum Wage of Federal Contractors

Since	Hourly Rate	Source
1/1/2015	$10.10	https://www.federalregister.gov/documents/2014/02/20/2014-03805/establishing-a-minimum-wage-for-contractors
1/1/2016	$10.15	https://www.federalregister.gov/documents/2015/09/16/2015-23235/establishing-a-minimum-wage-for-contractors-notice-of-rate-change-in-effect-as-of-january-1-2016
1/1/2017	$10.20	https://www.federalregister.gov/documents/2016/09/20/2016-22515/establishing-a-minimum-wage-for-contractors-notice-of-rate-change-in-effect-as-of-january-1-2017
1/1/2018	$10.35	https://www.federalregister.gov/documents/2017/09/15/2017-19668/establishing-a-minimum-wage-for-contractors-notice-of-rate-change-in-effect-as-of-january-1-2018
1/1/2019	$10.60	https://www.federalregister.gov/documents/2018/09/04/2018-19166/establishing-a-minimum-wage-for-contractors-notice-of-rate-change-in-effect-as-of-january-1-2019
1/1/2020	$10.80	https://www.federalregister.gov/documents/2019/09/19/2019-19673/establishing-a-minimum-wage-for-contractors-notice-of-rate-change-in-effect-as-of-january-1-2020
1/1/2021	$10.95	https://www.federalregister.gov/documents/2020/08/31/2020-19037/establishing-a-minimum-wage-for-contractors-notice-of-rate-change-in-effect-as-of-january-1-2021
1/1/2022	$11.25	https://www.federalregister.gov/documents/2021/09/16/2021-19995/minimum-wage-for-federal-contracts-covered-by-executive-order-13658-notice-of-rate-change-in-effect
1/30/2022	$15.00	https://www.federalregister.gov/documents/2021/04/30/2021-09263/increasing-the-minimum-wage-for-federal-contractors

Table A3 Imports from China: US Government Suppliers vs Other Firms around the US-China Trade War

This table compares the total imports from China between US government suppliers and other firms around the 2018 US-China Trade War. The dataset for this table is organized at the firm-quarter-hscode level. The sample period is from 2016Q1 to 2019Q4. The dependent variable for columns (1) and (2) is the natural logarithm of total imports from China in terms of product value; the dependent variable for columns (3) and (4) is the natural logarithm of total imports from China in terms of the number of transactions; the dependent variable for columns (5) and (6) is the natural logarithm of total imports from China in terms of the number of items. *Gov Supplier* is a dummy variable that is equal to 1 when a firm discloses the US government as its principal customer for the fiscal year t. *Post Trade War* is a dummy variable that is equal to 1 for periods since 2018Q3. Other independent variables include lagged total assets (in logarithm), book-to-market ratios, return on assets, and the ratio of domestic sales to total sales. We include the firm and industry×quarter fixed effects in all test specifications. Standard errors are clustered at the industry level. *T*-statistics are provided in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	Log(China Import Value)		Log(China Import Num of Transactions)		Log(China Import Num of Items)	
VARIABLES						
Gov Supplier×Post Trade War	0.537***	0.636***	0.116***	0.123***	0.350***	0.394***
	(5.03)	(4.95)	(5.55)	(4.64)	(5.47)	(4.91)
Gov Supplier	0.128	0.000	-0.010	-0.020	-0.019	-0.039
	(0.46)	(0.00)	(-0.20)	(-0.43)	(-0.13)	(-0.27)
B/M		-0.024		-0.004		-0.055
		(-0.27)		(-0.29)		(-1.14)
Log(MV)		0.076		0.012		-0.001
		(1.14)		(1.01)		(-0.03)
ROA		-0.559*		-0.035		-0.424**
		(-1.71)		(-0.66)		(-2.19)
%Revenue from US Market		0.648**		0.092**		0.561***
		(2.55)		(2.06)		(3.81)
Firm FE	Y	Y	Y	Y	Y	Y
Ind x Quarter FE	Y	Y	Y	Y	Y	Y
Observations	159,023	125,802	159,023	125,802	159,023	125,802
R-squared	0.550	0.563	0.418	0.424	0.612	0.621

Table A4: Japan-Korea-Taiwan (JKT) Import Ratios: US Government Suppliers vs. Other Firms around the US-China Trade War

This table compares the Japan-Korea-Taiwan (JKT) Import Ratio between US government suppliers and other firms around the 2018 US-China Trade War. The dataset for this table is organized at the firm-quarter-hscode8 level. The sample period is from 2016Q1 to 2019Q4. The dependent variable for columns (1) and (2) is *JKT Import Ratio* in terms of product value; the dependent variable for columns (3) and (4) is *JKT Import Ratio* in terms of the number of transactions; the dependent variable for columns (5) and (6) is *JKT Import Ratio* in terms of product quantity. *Gov Supplier* is a dummy variable that is equal to 1 when a firm discloses the US government as its principal customer for the fiscal year t. *Post Trade War* is a dummy variable that is equal to 1 for periods after (including) 2018Q3. Other independent variables include lagged total assets (in logarithm), book-to-market ratios, return on assets, and the ratio of domestic sales to total sales. We include the firm, industry×year quarter, and product HSCODE (8-digit) fixed effects in all test specifications. Standard errors are clustered at the product HSCODE (8-digit) level. *T*-statistics are provided in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	JKT Import Ratio		JKT Import Ratio		JKT Import Ratio	
VARIABLES	Product Value		Number of Transactions		Product Quantity	
Gov Supplier×Post Trade War	0.009	0.006	0.008	0.006	0.007	-0.008
	(1.60)	(1.15)	(1.48)	(1.25)	(0.48)	(-0.39)
Gov Supplier	-0.026***	-0.022**	-0.025***	-0.024***	0.001	-0.007
	(-2.69)	(-2.43)	(-2.64)	(-2.61)	(0.15)	(-0.36)
B/M		0.005		0.007		-0.002
		(0.88)		(1.35)		(-0.09)
Log(MV)		0.004		0.005		-0.004
		(0.97)		(1.18)		(-0.36)
ROA		0.026		0.026		0.072
		(1.40)		(1.44)		(1.31)
%Revenue from US Market		0.007		0.015		-0.021
		(0.52)		(1.10)		(-0.41)
Firm FE	Y	Y	Y	Y	Y	Y
Hscode8 FE	Y	Y	Y	Y	Y	Y
Ind x Year Quarter FE	Y	Y	Y	Y	Y	Y
Observations	159,023	125,802	159,023	125,802	159,023	125,802
R-squared	0.480	0.265	0.490	0.273	0.534	0.516

Table A5: Robustness Check for Panel B of Table 7

This table compares *China Import Ratio* between US government suppliers and other firms around the 2018 US-China Trade War conditional on whether a firm has former government employees. The dataset for this table is organized at the firm-quarter-hscode8 level. The sample period is from 2016Q1 to 2019Q4. The dependent variable for column (1) is the China Import Ratio in terms of product value; the dependent variable for column (2) is the China Import Ratio in terms of the number of transactions; the dependent variable for column (3) is the *China Import Ratio* in terms of product quantity. *Gov Supplier* is a dummy variable that is equal to 1 when a firm discloses the US government as its principal customer for the fiscal year t. *Post Trade War* is a dummy variable that is equal to 1 for periods after (including) 2018Q3. Different from Panel B of Table 7, *Former Government* is a dummy variable that is equal to one if a firm has more than 10 former government employees. Other independent variables include lagged total assets (in logarithm), book-to-market ratios, return on assets, and the ratio of domestic sales to total sales. We include the firm, industry×quarter, and product HSCODE (8-digit) fixed effects in all test specifications. Standard errors are clustered at the product HSCODE (8-digit) level. T-statistics are provided in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)
	China Import Ratio	China Import Ratio	China Import Ratio
VARIABLES	Product Value	Number of Transactions	Product Quantity
Gov Supplier×Post Trade War	0.021	0.031**	0.029**
	(1.45)	(2.31)	(2.18)
Gov Supplier×Post Trade War×Former Government	0.051**	0.053**	0.056**
	(1.99)	(2.00)	(2.14)
Gov Supplier	0.007	0.013	0.018
	(0.30)	(0.54)	(0.73)
Former Government	0.046***	0.048***	0.048***
	(5.82)	(5.91)	(6.00)
Gov Supplier×Former Government	-0.057**	-0.050*	-0.053*
	(-2.01)	(-1.83)	(-1.89)
Post Trade War×Former Government	-0.005	-0.006	-0.005
	(-0.69)	(-0.73)	(-0.59)
B/M	-0.008	-0.012	-0.010
	(-0.92)	(-1.43)	(-1.22)
Log(MV)	-0.000	-0.005	-0.001
	(-0.06)	(-0.77)	(-0.09)
ROA	-0.068**	-0.041	-0.047
	(-2.23)	(-1.38)	(-1.55)
%Revenue from US Market	0.050**	0.068***	0.068***
	(2.13)	(2.78)	(2.70)
Firm FE	Y	Y	Y
Hscode8 FE	Y	Y	Y
Ind x Year Quarter FE	Y	Y	Y
Observations	125,802	125,802	125,802
R-squared	0.490	0.540	0.537

Table A6 Import from China and Federal Contract Renewal

This table reports the impact of imports from China on the likelihood of renewals of federal contracts. The dependent variable, Renewal, is an indicator variable that is equal to one if a contract is renewed (defined by receiving another contract of the same HSCODE from the same government department) within 6 months after its completion. Key independent variables are *China Import Ratios* (in terms of product value, number of transactions, and product quantity). We also include the firm size (Log(MV)), sales growth (Sale Growth), book leverage (Leverage), and book-to-market ratio (B/M) as additional control variables. The tests are carried out in two subsamples: 2016Q1-2018Q2 (before the trade war) and 2018Q3 – 2019Q3 (after the trade war). We include year-quarter fixed effects in all test specifications. T-statistics are provided in parentheses. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
	2016Q1-2018Q2			2018Q3-2019Q3		
China Import Ratio – Product Value	0.014			-0.028		
	(0.57)			(-0.65)		
China Import Ratio - Number of Transactions		-0.018			0.001	
		(-1.17)			(0.07)	
China Import Ratio – Product Quantity			-0.021			0.001
			(-1.31)			(0.04)
Log(MV)	0.005	0.018**	0.018**	0.007	0.010	0.010
	(0.54)	(2.01)	(2.02)	(0.86)	(1.24)	(1.24)
Sale Growth	-0.082	0.022	0.022	0.275***	0.266***	0.266***
	(-0.76)	(0.24)	(0.23)	(2.83)	(3.15)	(3.15)
Leverage	0.013	0.002	0.003	-0.103*	-0.130**	-0.130**
	(0.19)	(0.02)	(0.03)	(-1.90)	(-2.12)	(-2.12)
B/M	0.047	0.038	0.038	-0.046	-0.058	-0.058
	(0.91)	(0.80)	(0.81)	(-0.72)	(-1.07)	(-1.08)
Year Quarter Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	90,737	269,974	269,974	40,394	123,930	123,930
Adjusted R-squared	0.132	0.163	0.163	0.161	0.174	0.174

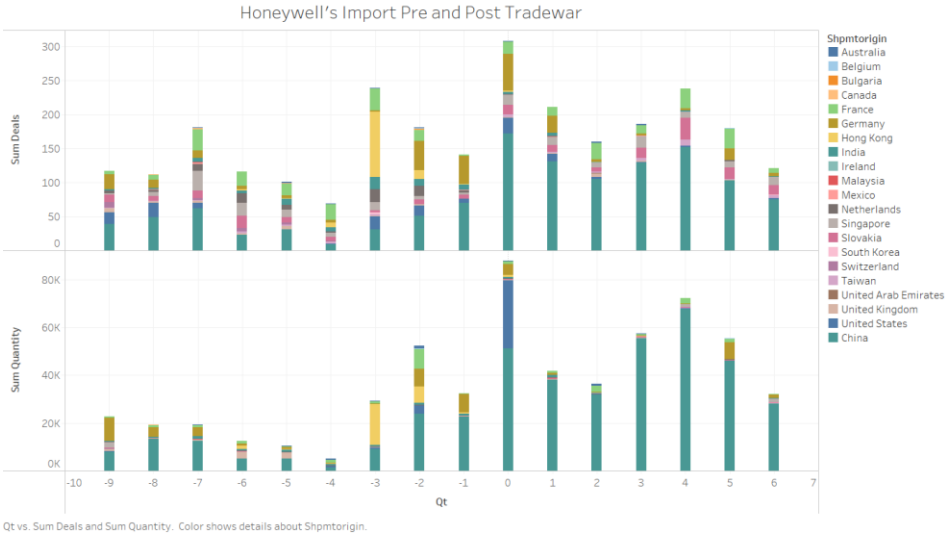
Appendix C –Illustrative Example

Honeywell's during the US-China Trade war

Part I Import

Figure 1 depicts Honeywell's import trend before and after the US-China Trade war. Shown in Figure1, in terms of both the number of import deals and the quantity of import goods, Honeywell increased the imports from China right after the start of US-China Trade war. Honeywell imports more from China after the US-China Trade War in terms of both absolute magnitude and relative amount. Figure 2 shows the ratio of goods imported from China to the overall goods imported from all countries significantly increased after the trade war.

Figure 1 Import Level



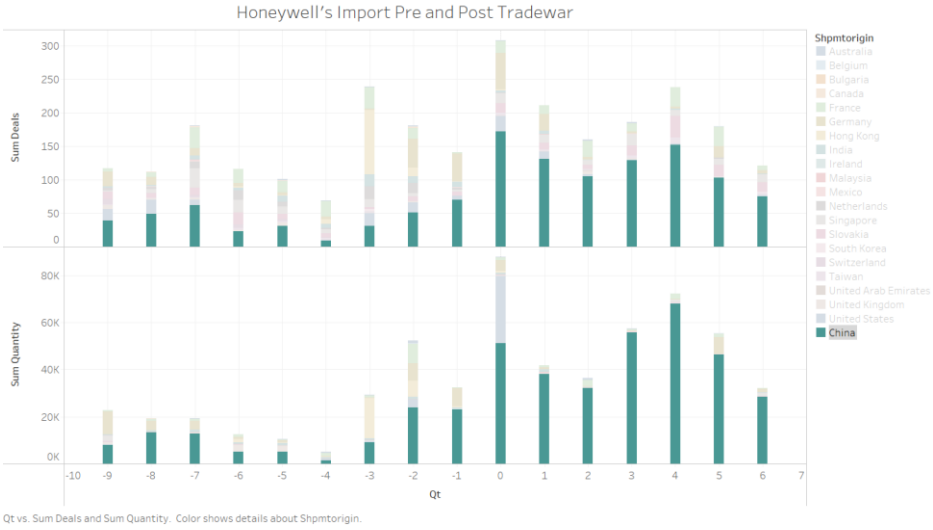
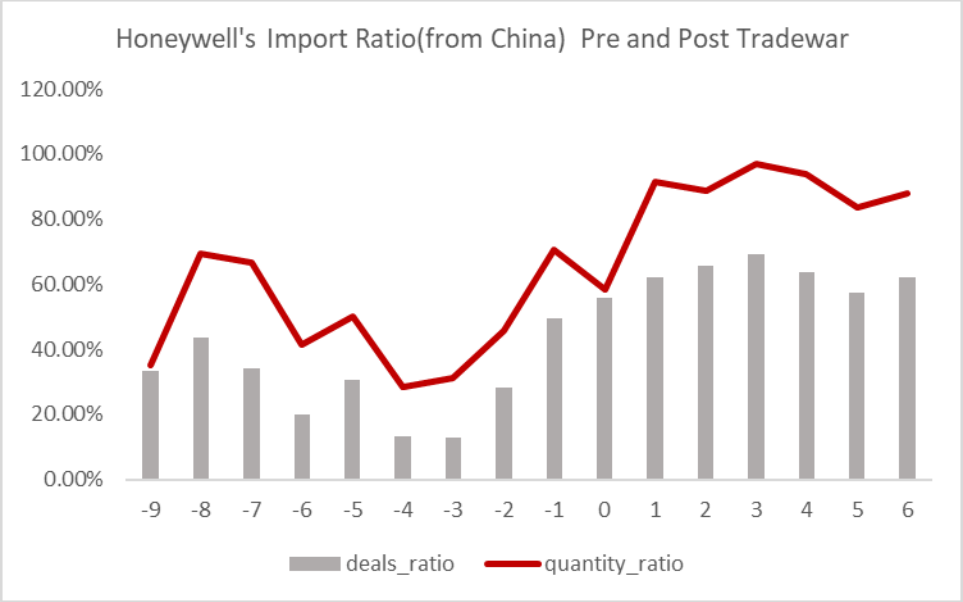
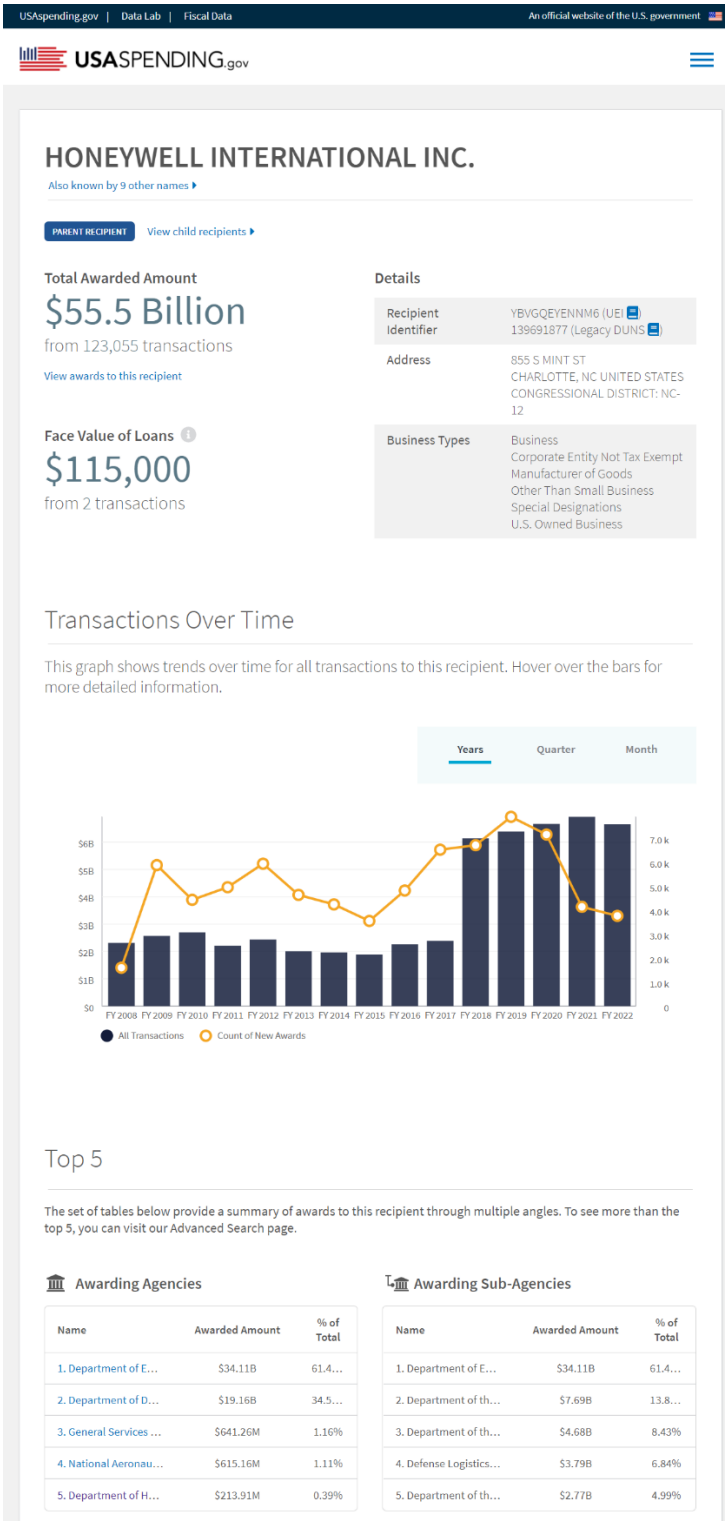


Figure 2 Import Ratio



Part II Doing Business with the Government and Former Government Officials

Honeywell does business with various federal government agencies. Below provides the trend since FY2008. https://www.usaspending.gov/recipient/7633e6a7-b265-9555-210b-c3443cb6d529-P/all



Meanwhile Honeywell have hired many former government employees. Below we provide six employees' profiles. These employees worked for the government before joining Honeywell. Most of them are specifically related to government contracts.

Example1: https://www.linkedin.com/in/vannellberrien/details/experience/

Vannell Berrien
Senior Purchasing Agent, Business Systems Software & Services, Information Technology and Data Analytics at Boeing | Army Veteran

Senior Procurement Specialist
Honeywell Aerospace
Apr 2017 - Feb 2018 · 11 mos
Tempe, AZ

Served as consultant for The Price Fair and Reasonable team for Honeywell's International Supply Chain (ISC) team. Responsible for driving continuous improvement in the total cost of acquiring materials and equipment in the Supply Chain Group. This primary role includes managing Procurement and RFx process for operations and Capital Manufacturing Projects and any other duties assigned by the Director of Contracts and Procurement.

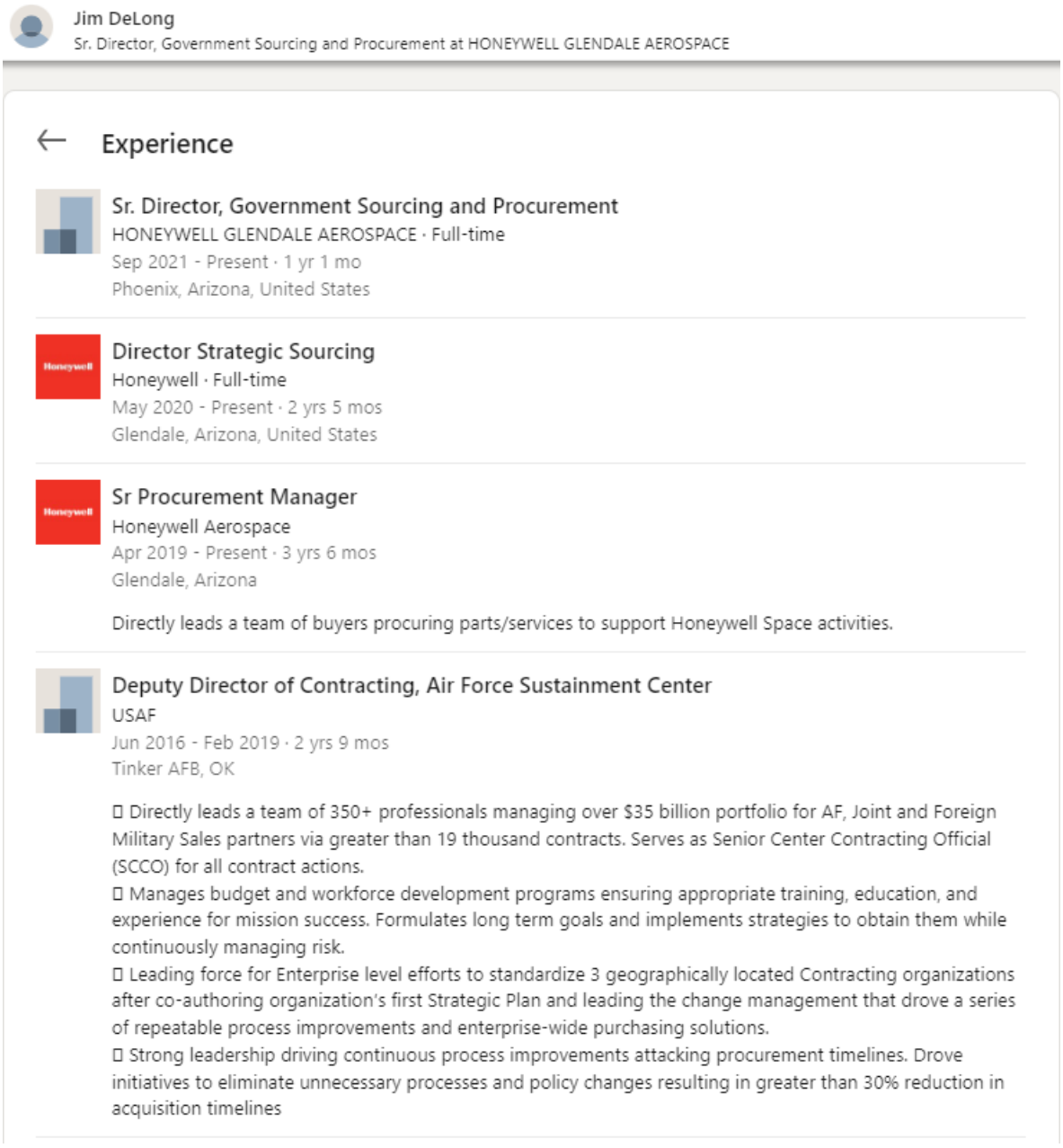
*Manage and Issuance of Purchase Orders for operations and Capital Construction Projects
*Manage RFx process and negotiate PO terms, conditions and pricing, including analyzing commercial aspects of supplier proposals
*Manage Approved Supplier List
*Serve as a liaison between internal and external parties during negotiation stages
*Manage purchase order administration post-award activities including change order management, invoice issues and claims avoidance
*Perform Purchase Order Close Out activities

Purchasing Agent
United States Department of Defense
Oct 2016 - Apr 2017 · 7 mos
Joint Base Lewis-McChord

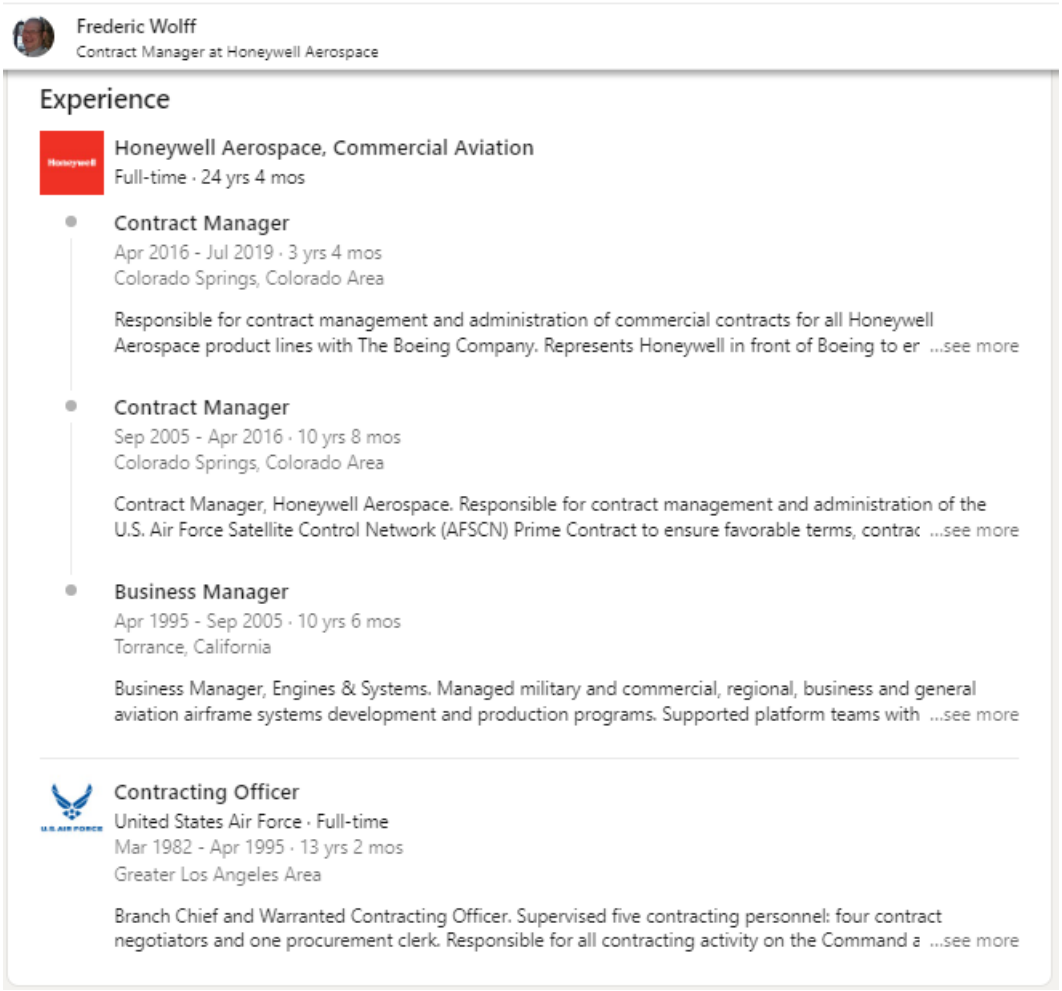
Responsible for Purchasing specialized and commercial items and services with unstable and insufficient price history, and product characteristics using cradle-to-grave acquisitions, with product information hard to locate, have inadequate or restrictive specifications, or other critical characteristics; used a variety of purchase methods involving solicitation of quotations and evaluation of offers to consummate transactions; make determinations as to the most advantageous bid or offer considering transportation and handling charges, prices, delivery dates and discount rates; execute transactions from initiation to recommendation for award for procurement of service, supplies, equipment and other material, including technical items, specialized items and items which are commonly known but which, because of use and purpose, are designed specifically to meet the needs of government uses and are complicated by restrictive government specifications.

• Instrumental in eliminating a 15-year contract closeout backlog.
• Experience in Standard Procurement System (SPS), Procurement Desktop-Defense (PD2), PDF, CTOC contract writing, documenting and management systems, wide area work flow (WAWF), and electronic document Access (EDA) systems.
• Performed pre-solicitation and pre-award reviews of procurement documents to include acquisition plans, determination and findings, and justification and approvals.

Example2:https://www.linkedin.com/in/jim-delong-2019/details/experience/



Example3: https://www.linkedin.com/in/frederic-wolff-9ba531a0/



Frederic Wolff
Contract Manager at Honeywell Aerospace

Experience

Honeywell Aerospace, Commercial Aviation
Full-time · 24 yrs 4 mos

Contract Manager
Apr 2016 - Jul 2019 · 3 yrs 4 mos
Colorado Springs, Colorado Area

Responsible for contract management and administration of commercial contracts for all Honeywell Aerospace product lines with The Boeing Company. Represents Honeywell in front of Boeing to er ...see more

Contract Manager
Sep 2005 - Apr 2016 · 10 yrs 8 mos
Colorado Springs, Colorado Area

Contract Manager, Honeywell Aerospace. Responsible for contract management and administration of the U.S. Air Force Satellite Control Network (AFSCN) Prime Contract to ensure favorable terms, contrac ...see more

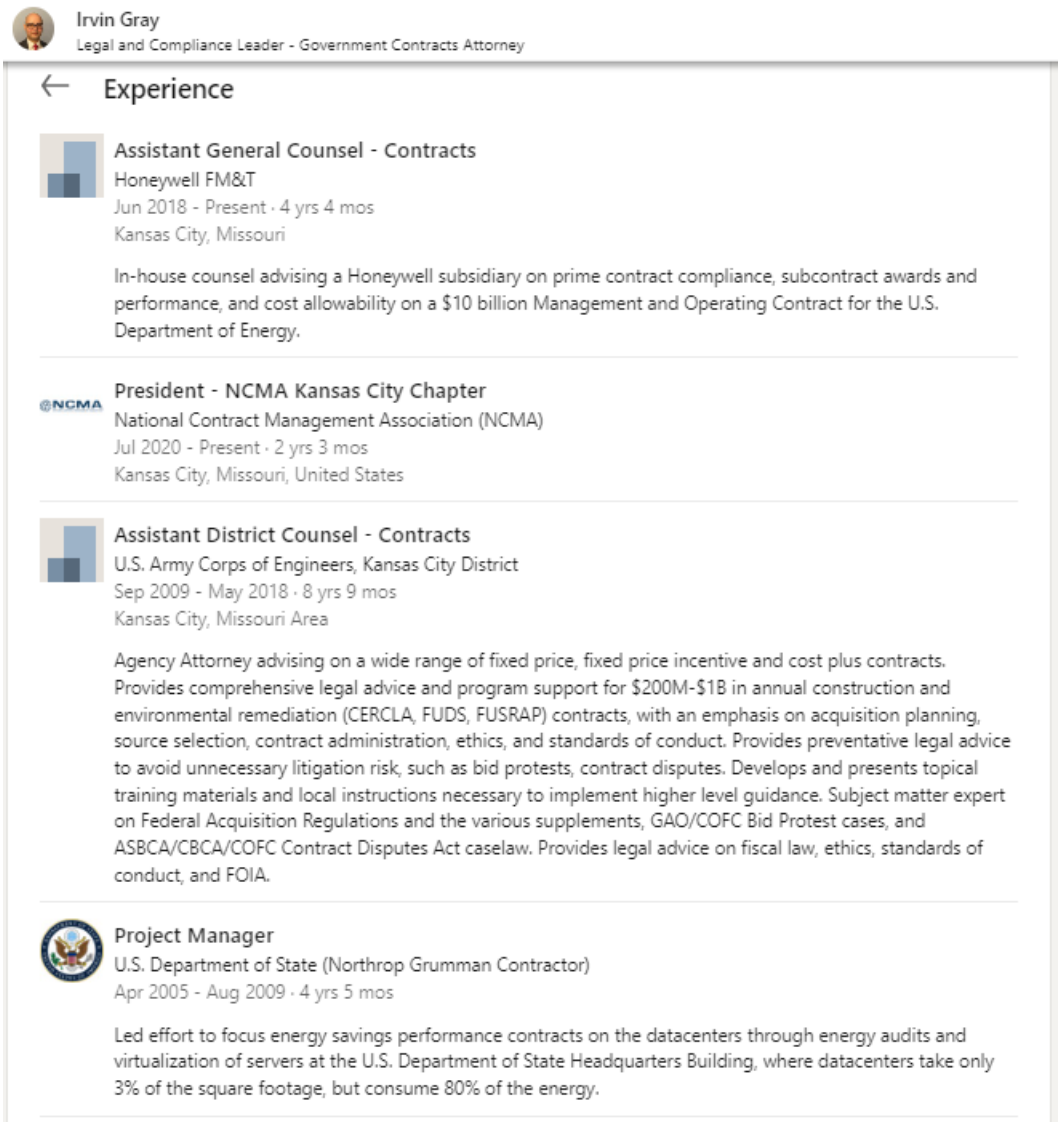
Business Manager
Apr 1995 - Sep 2005 · 10 yrs 6 mos
Torrance, California

Business Manager, Engines & Systems. Managed military and commercial, regional, business and general aviation airframe systems development and production programs. Supported platform teams with ...see more

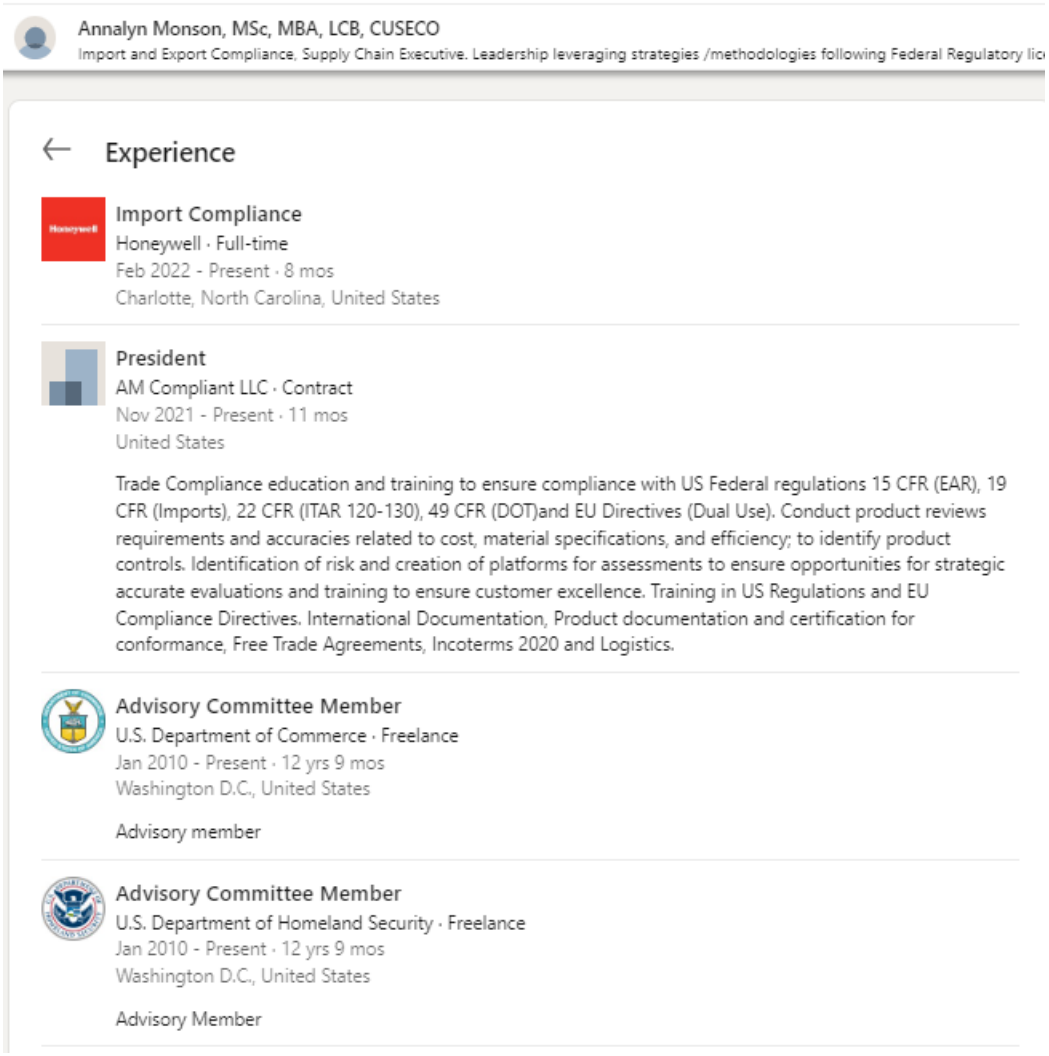
Contracting Officer
United States Air Force · Full-time
Mar 1982 - Apr 1995 · 13 yrs 2 mos
Greater Los Angeles Area

Branch Chief and Warranted Contracting Officer. Supervised five contracting personnel: four contract negotiators and one procurement clerk. Responsible for all contracting activity on the Command a ...see more

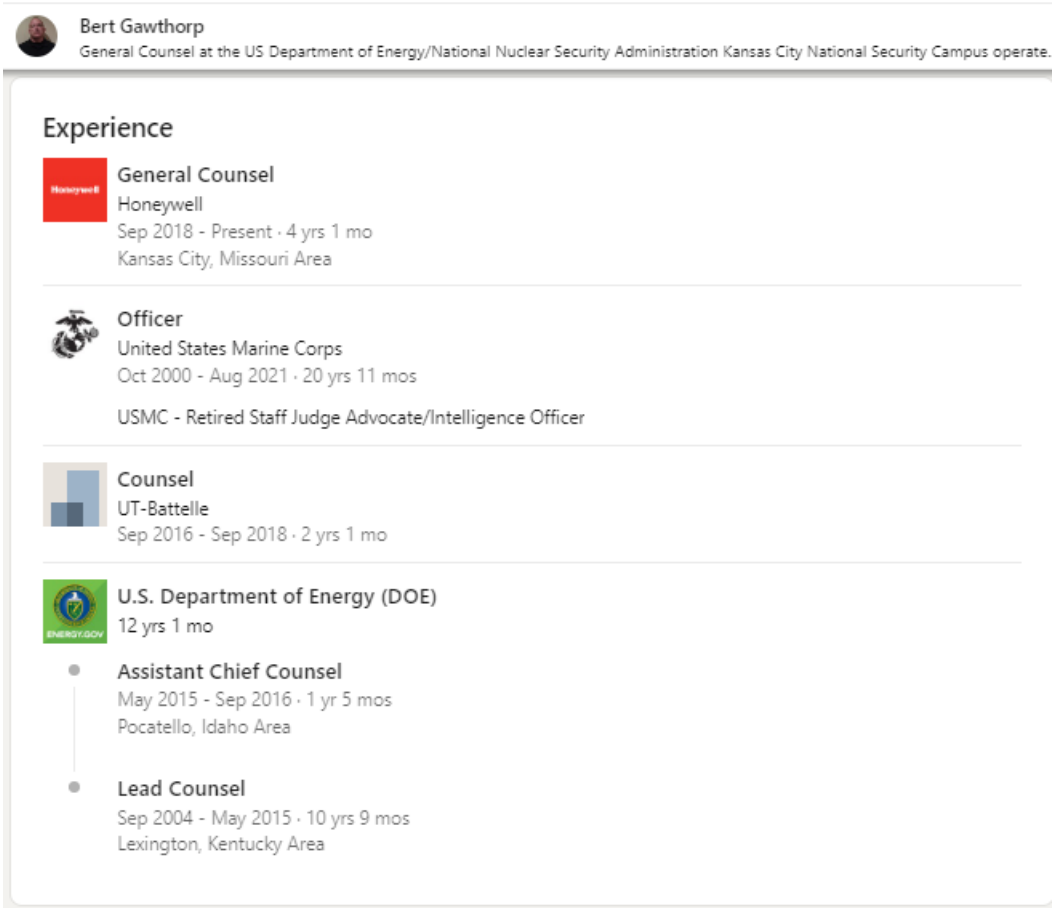
Example4: https://www.linkedin.com/in/irvgray/details/experience/



Example5: https://www.linkedin.com/in/annalyn-monson-msc-mba-lcb-cuseco-7629456/details/experience/



Example6: https://www.linkedin.com/in/bert-gawthorp-b48919155/



Part III Tariff Exemption

In total, Honeywell applies for 25 tariff exemptions in all four rounds and get 6 approved, implying an approval rate of 24%. The average approval rate of all the applications is 12.9%. Although the approval rate varies round to round, Honeywell outperformed the average firm in applying for tariff exemption significantly.

Part IV News Report/CEO Interview

https://www.ft.com/content/5d71a824-8c07-11e8-bf9e-8771d5404543

US industrial conglomerate Honeywell raised its full-year sales and earnings guidance for the third time this year, as strong growth across all segment of its businesses eclipsed uncertainties around US trade policies.

https://fortune.com/2019/05/15/honeywell-ceo-china-tariffs/

Honeywell CEO Darius Adamczyk says the company has already been moving critical supplies from North America to China and he has also been analyzing pricing options to "moderate the impact of the tariffs."

Part V The other side of the story: connection with China

https://www.wsj.com/articles/honeywells-formula-for-success-in-china-11634911201

Building personal relations with local officials was important to shielding Honeywell from the choppy U.S.-China politics of the past few years, he said."

https://www.defensenews.com/industry/2021/05/04/honeywell-fined-13-million-for-defense-export-violations/

The U.S. State Department announced it reached a $13 million settlement with American defense firm Honeywell over allegations it exported technical drawings of parts for the F-35 fighters and other weapons platforms to China and other foreign countries.

https://www.scmp.com/news/world/united-states-canada/article/3192051/pentagon-says-banned-china-made-alloy-all-f-35-jets

The component – a magnet used in an aircraft-powering device supplied by Honeywell International Inc. – has been used in the plane since 2003, the Pentagon's F-35 programme office said.