Corporate Political Connections and Value Appropriation in Buyer-Supplier Relationships: A Value-Based Framework

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Abstract

This paper investigates the understudied role of political connections in shaping buyer-supplier relationships, utilizing the value-based framework. We hypothesize that a firm's connections with the government enhance its outside options, hence its ability to capture value in transactions. We leverage the empirical opportunity to quantify the value acquired by the supplier by examining the trade credit it extends to buyers. We manually extracted buyer-supplier pair level trade credit data for publicly listed U.S. firms. We find that an increase in a firm's political connections decreases the trade credit it extends to buyers, particularly the financially risky ones and those with a shorter duration of transactional relationships. The study sheds light on the benefits of political connections in enhancing firms' value appropriation in their supply chain.

1. INTRODUCTION

Effectively managing relationships with buyers and suppliers forms a critical component of a firm's value chain strategy and holds a central position in strategic management (Chatain, 2011; Obloj & Zemsky, 2015). A widely-used framework for examining buyer-supplier relationships is the value-based view proposed by Brandenburger & Stuart (2007), which models the interplay of value creation and appropriation between transactional partners. Existing studies suggest that these dynamics are influenced by multiple market-based factors, including competition (e.g., Chatain & Zemsky, 2011; Jia, 2013), contract design (Obloj & Zemskey, 2015), transactional history (e.g., Elfenbein & Zenger, 2014), and partner characteristics (Chatain & Plaksenkova, 2018). Nonmarket factors, especially politics and business-government relationships, may plausibly influence firms' supply chain management (Bucheli, Ciravegna, & Saenz, 2023). However, a significant disconnect exists. Governments undeniably influence the business environment, but supply chain strategy depends on decisions concerning the dyadic relationships between buyers and suppliers. On the one hand, the literature on corporate political strategy emphasizes the role of governments in shaping the business environment in which decisions regarding critical business practices are made, but it often overlooks the intricacies of decision-making specific to individual suppliers or buyers. On the other hand, research on buyer-supplier relationships, which delves into this decision-making process, has not yet conceptualized political factors or specified the nature of their influence in this process. With the sharp rise of governmental influence on buyer-supplier relationships in recent years (Economist, 2019, 2023), there is an urgent need to bridge this gap, by generating a solid theoretical basis to help firms determine when and how to modify their interactions with transactional partners, considering the governmental influence.

We address this gap by applying the value-based view to examine how a firm's relationships with the government, i.e., its political connections, impact its ability to capture value in interactions with transactional partners. We begin with the fundamental conclusion of the value-based framework, that in transactions generating value, the firm's ability to capture that value lies on a spectrum between the firm's own "added value" ceiling and the "outside option" floor. We argue that the firm's political connections

expand its market opportunities, either by directly securing government contracts or by fostering increased business with other private entities. This mechanism enhances the value of the firm's "outside options," hence enabling it to extract greater value from its interactions with transactional partners. We also posit that politically connected firms capture even more value when transacting with financially risky partners and those with a relatively short transactional history.

We overcome the primary empirical challenge posed by the scarcity of data in the research of buyer-supplier relationships regarding gauging the value appropriation by each party. Prior studies in this domain often relied on proprietary data from a single organization (Argyres, Bercovitz & Mayer, 2007; Chatain, 2011). We leverage the financial instrument of "trade credit" which enables us to use large-scale public data in a more systematic fashion. Trade credit allows a buyer to defer payment until after the supplier delivers the goods or services. This arrangement represents a cost borne by the supplier and a benefit accrued by the buyer (McMillan & Woodruff, 1999; Chod, 2017; Yang & Birge, 2018; Chen, Jain, & Yang, 2022). Thus, a *reduction* in trade credit offered by the supplier to the buyer indicates *greater* value captured by the supplier in its relationship with the buyer. We assess all publicly listed firms in the U.S. spanning the period from 2003 through 2019. Data on trade credit appears in firms' annual reports under the accounting entry known as "accounts receivable" (AR) (Yang & Birge, 2018). Although a firm's total AR is mandatorily reported on the firm's balance sheet, the pairwise AR owed by a firm's each major customer are disclosed in the notes of the annual report and do not follow a standardized format. We undertook the process of manually extracting this crucial data. We integrated this data with the information of political connections, which was derived from the political experience of firms' top executives and directors sourced from the BoardEx database (Ridge, Ingram, & Hill, 2017; Hawk, Lahiri, & Pacheco-de-Almeida, 2023).

Empirical evidence based on analyses at the buyer-supplier pair level reveals that politically connected suppliers offered lower trade credit to average buyers. Furthermore, suppliers' political connections reduced both the share of sales to their largest buyers and the concentration of their sales

among largest buyers. These findings indicate that political connections reduced suppliers' dependence on buyers, enhancing their overall negotiating leverage. Additionally, politically connected suppliers reduced trade credit extended to financially riskier buyers, or those with whom they had a shorter duration of transactional relationships, to a greater extent.

To the literature on the value-based view of buyer-supplier relationships (Chatain & Zemsky, 2007; Chatain, 2011; Jia, 2013; Obloj & Zemsky, 2015; Gans & Ryall, 2017), we contribute new insights into the significant role played by transactional partners' political connections in shaping their value appropriation. Our research demonstrates that within the value-based framework, political connections empower the focal firm to enhance its value capture by elevating its outside options. Moreover, our study unveils a "double win" outcome, wherein the politically connected firm not only diminishes its dependence on any single transactional partner, thereby bolstering its bargaining power across the board, but also gains the ability to reduce lending risks (via trade credit) to its financially more precarious transactional partners, thereby fortifying its own financial position. Consequently, considering political connections becomes pivotal when evaluating how firms manage their buyer-supplier relationships.

This paper also contributes to the literature on corporate political strategy (Wei, Jia, & Bonardi, 2023; Katic & Hillman, 2023). Researchers in the field of corporate political strategy, as well as those examining other forms of firm strategies within the nonmarket domain, have striven to demonstrate how these strategies can be integrated with a firm's market operations to influence the firm's overall performance (Baron, 1995; Holburn & Vanden Bergh, 2014; Jia & Meyer, 2017). Previous research has revealed that corporate political strategy can lead to various benefits for firms, including securing government contracts (Ridge et al., 2017; Kim, 2019; Abdurakhmonov, Hasija, Ridge, & Hill, 2023), gaining access to state-controlled financing (Claessens, Feijen, & Laeven, 2008; Haveman, Jia, Shi, & Wang, 2017; Chen, Yan, & Yang, 2020), and expediting regulatory approvals (Grandy & Hiatt, 2023; Katic & Kim, 2023). However, it is important to note that all these channels directly involve the government and indirectly shape firms' relationships with transactional partners. This paper provides a novel insight that significantly tightens the connection between a firm's political connections and its

market operations, by demonstrating that political connections directly impact the bargaining power vis-à-vis transactional partners in the market. Thus, a firm's nonmarket activities, such as building political connections, inherently shape their abilities to manage and capture value from their supply chain relationships.

2. POLITICAL CONNECTIONS AND VALUE APPROPRIATION

2.1 The value-based framework on buyer-supplier relationships: An overview

The value-based view provides an analytical framework for analyzing how much of the value generated in a transaction or collaboration can be appropriated by each partner involved (Chatain & Zemsky, 2007; Chatain, 2011; Jia, 2013; Obloj & Zemsky, 2015; Gans & Ryall, 2017). A commonly used visualization tool is the "value wedge," as illustrated in the left panel of Figure 1. For the focal firm, denoted as firm ***f***, the value wedge represents the entire value that can be created in the current transaction. This value is calculated as the difference between the total value generated in the transaction, denoted by ***VT***, and the opportunity costs of producing the focal products that is being transacted, or costs of materials and labor (which are typically normalized to zero, without loss of generality). Note that the total value created remains constant for the given transaction. In other words, it is identical whether we analyze the value wedge for the focal firm ***f*** or its partner (while the rest of the analysis may vary for the partners involved in the same transaction).

[INSERT FIGURE 1 HERE]

However, the focal partner may not be able to capture ***VT*** the entire value created. Instead, its ability to capture value falls within a specific range, which is often just a segment of the value wedge. First, the value-based framework proves that the *maximum* value that the focal partner can capture is determined by its "added value," which is defined as the value that would be lost to the world if the focal partner ceased to exist. More precisely, it represents the total value created in the focal transaction minus the highest value attainable if the transactional partner were to transact with any other firm, excluding the

focal firm. This concept helps measure the replaceability of the focal partner. Let $\boldsymbol{VA_f}$ denote the added value of the focal firm $\boldsymbol{f}$ in this transaction.

We highlight two important notes about the focal firm's added value. First, $\boldsymbol{VA_f}$ needs to be smaller than the total value created $\boldsymbol{VT}$, because otherwise, it indicates that the focal firm may not be the optimal choice for the transaction. In such cases, another firm could have potentially created more value with the partner, thus the transaction with the focal firm would not have taken place in the first instance. For this reason, we add the focal firm $\boldsymbol{f}$'s added value $\boldsymbol{VA_f}$ in Figure 1 below the total value, for illustration purpose. Second, the value added by the transaction partner does *not* need to be the same as that of the focal firm, as the partner may have different levels of replaceability compared to the focal firm, influenced by its own market competition. Therefore, it is necessary to use the notation $\boldsymbol{f}$ to indicate the added value of the focal firm.

Second, the value-based framework proves that the *minimum* value that the focal firm can capture is determined by its "outside options," which represent the value it could generate by walking away from the focal transaction. More precisely, it is the highest value that the focal firm could attain by transacting with any other firms, excluding the transactional partner involved in the focal transaction. Let $\boldsymbol{VO_f}$ denotes the value of the "outside options" of the focal firm $\boldsymbol{f}$ in this transaction.

Note that $\boldsymbol{VO_f}$ is higher than the costs of making the product (which is normalized to be zero); otherwise, the transaction would be too costly to make economic sense. Second, $\boldsymbol{VO_f}$ needs to be lower than the focal firm's added value, for the transaction to make economic sense for both parties. Finally, note that because the transactional partner may have different outside options, determined by the markets each partner can access, its outside option value does not need to be identical to that of the focal firm. Therefore, we use the notation $\boldsymbol{f}$ to index the outside option value for the focal firm. In Figure 1, we add $\boldsymbol{VO_f}$ for illustration purpose.

Any value within the range defined by the maximum (its added value, $\boldsymbol{VA_f}$) and the minimum (its outside options, $\boldsymbol{VO_f}$) is "feasible" for the focal firm $\boldsymbol{f}$, meaning that it makes economic sense. The point estimate of the focal firm's value capture is typically modeled as a weighted average between the

maximum amount (its added value) and the minimum amount (its outside options), with the weight $\boldsymbol{\alpha}$ influenced by non-economic factors such as negotiation skills, often denoted as the follows:

$$\text{Value Capture of Firm } f = \alpha VA_f + (1-\alpha)VO_f \quad (1)$$

An important clarification is that the original concept of the value wedge applies to each firm in every *transaction.* When the same firm engages in different transactions (even with the same partner), it may encounter distinct value wedges because outside the context of the given transaction, the total value created, the added value of the focal firm, and the outside options available to the focal firm can vary significantly. Within the same transaction, each transactional partner may have distinct value added and outside options, as discussed above, thus the feasible range of value capture by different partners in the same transaction may also differ markedly. Nevertheless, we can consolidate the analysis at the firm-transaction level into a more aggregated level, focusing on the relationship between the focal firm and a specific transactional partner. This aggregation is feasible when the transactions between them are relatively homogeneous, such as the exchange of similar products within a reasonably short time frame, ensuring that the market conditions for the product remain relatively stable. This discussion forms the basis for our empirical testing at the dyad-time level.

Next, we will employ this well-established theoretical framework to investigate how the political connections of one partner can influence its ability to capture value.

2.2 Role of corporate political connections in shaping value appropriation

Firms commonly establish relationships with political actors within various branches of governments, known as corporate political connections. How do political connections shape the value appropriation by the politically connected transactional partner in the focal transaction, within the value-based view framework?

To begin with, the political exchange theory posits that firms and connected politicians exchange favors, benefiting both parties (Shleifer & Vishny, 1994). For a politically connected firm, these benefits elevate its "outside options" in two primary ways. Firstly, some of these benefits *directly* expand the

demand for the connected firm's products. For instance, politicians may award connected firms with government contracts (Agrawal & Knoeber 2001; Ridge et al., 2017; Kim, 2019; Abdurakhmonov et al., 2023) or facilitate firms' entry into new markets (Grandy & Hiatt, 2023). These market opportunities constitute the "outside options" for the focal transactional partner. When these new opportunities generate more value than existing alternative projects, or existing "outside options" for the focal transaction partners, they increase the value of "outside options" facing the focal firm. (It is important to note, both here and in the next point, that the value of these new "outside options" does *not* need to exceed the value created by the focal transaction to change the focal firm's value capture in the focal transaction; they only need to exceed that of the *other* "outside options.")

Secondly, some benefits, while not directly expanding the market for the focal firm, enhance its financial stability and capabilities, leading to improved market competitiveness and firm performance. Politicians can provide preferential access to production factors, such as bank financing (Khwaja & Mian 2005), thereby strengthening the connected firm's financial position. They can also offer protection from failure, such as bailouts (Faccio et al., 2006), reducing the connected firm's failure rate. Additionally, connected politicians can confer favorable regulatory enforcement (Haveman et al., 2017), thereby lowering transaction costs for the firm. All of these mechanisms contribute to an overall enhancement in firm performance (Fisman, 2001). As a result, with political connections, the focal firm becomes a more attractive partner for a wider range of market participants outside the focal transactional relationship. This implies an increase in the "outside options" of the firm in the focal transaction.

Therefore, the opportunities to secure governmental contracts or expand into other market opportunities due to the focal firm's acquisition of political connections are likely to enhance the value of "outside options" for the focal transaction. In the right panel of Figure 1, for the same transaction, we elevate the position of the focal firm's outside option value to be higher, as indicated by $\boldsymbol{VO_f'}$.

The "outside option" value of the focal firm, however, is not the sole determinant of the focal firm's value capture. Recall that the expected value that a focal firm anticipates appropriating from a transactional relationship is essentially a weighted average of the value of the focal firm's "added value"

($\boldsymbol{VA_f}$) and that of its "outside options." This weight $\boldsymbol{\alpha}$ is typically associated with bargaining skills, such as the ability to exert psychological influence on others. Hence, to evaluate the impact of the focal firm's political connections on its value capture, we also need to consider their influence on the focal firm's "added value" and the weight.

Recall that the added value is defined by the focal firm's irreplaceability—how well its transactional partner in the focal transaction would fare without it. This, in turn, depends on the market structure and business opportunities present in the outside market that the *transactional partner* is exposed to. Importantly, the focal firm's political connections should *not* have any direct impact on the alternative market opportunities available to its transactional partners. Furthermore, there exists limited theoretical basis to believe that a focal firm's political connections should influence the weight which is more closely associated with soft skills in bargaining rather than economic leverage in negotiations.

As a result, a focal firm's political connections primarily serve to bolster its "outside option" value within the transactional relationship. This results in a higher minimum value that the firm can potentially attain from the transaction as indicated by $\boldsymbol{VO_f'}$ in the right panel of Figure 1, whereas $\boldsymbol{VA_f}$ and $\boldsymbol{\alpha}$ remain the same. Applying Equation (1), it means that the expected value that the focal firm can capture should increase, as indicated by the Inequation (2) below:

$$\alpha VA_f + (1-\alpha)VO_f{}' > \alpha VA_f + (1-\alpha)VO_f \quad (2)$$

As we hold features of the product being transacted constant, the total value created remains the same, suggesting that the focal firm appropriates a larger portion of the value created compared to its transactional partner.[1] Consequently, this implies that with political connections, the focal firm anticipates capturing a greater proportion of the value from the transactional relationship compared to a scenario where such connections are absent. This conclusion is captured by the following hypothesis.

[1] We clarify two key theoretical points arising from the value-based view in the above analysis. Firstly, our analysis does not require that firms sever ties with their focal transactional partners. Instead, the theory is that, the expansion of alternative partner networks through which firms can conduct business alone bolsters the bargaining power of the focal firm. Secondly, it is important to note that the alternative transactions do not necessarily need to be more lucrative or offer greater value than the focal one in order to enhance the focal firm's bargaining position.

Hypothesis 1 (main effect): *All else being equal, a politically connected firm captures a greater share of the value generated in transactions with a transactional partner compared to an unconnected firm.*

The preceding analysis regarding Hypothesis 1 draws a conclusion over how a politically connected firm fares in terms of value extraction in *transactions* with an average transactional partner. What are the implications at the focal *firm* level?

The specific mechanism by which the firm's political connections influence its ability to extract value in a given transaction is through the enhancement of its "outside options." These outside options grant the firm access to a wider range of alternative transactions beyond the one currently under consideration. Consequently, the firm becomes less reliant on a specific transactional partner for its business activities, leading to a decrease in overall *dependence* on that partner. When aggregated at the focal firm level, this implies that political connections reduce the firm's overall dependence on transactional partners.

This conclusion holds significant implications for firms, for two primary reasons. First, dependence is costly for firms by limiting its discretion and forcing it to align with the partner's desires, according to the resource dependence theory (Pfeffer & Salancik, 1978). By reducing this dependence through an expanded set of outside options, a firm becomes less vulnerable to potential risks associated with heavy reliance on a single partner, such as fluctuations in market conditions or changes in partner strategies.

Second, according to the conventional perspective in corporate political strategy literature, apart from the value-based view, political connections enable firms to secure more demand from a select few transactional partners, such as governmental customers (Ridge et al., 2017; Kim, 2019; Abdurakhmonov et al., 2023). In this scenario, while politically connected firms expand their market, they should become *increasingly* dependent on customers acquired through political connections. However, the theory derived from the value-based view suggests that expanding outside options elevates the minimum value a firm can capture from *any* transaction. This collective reduction in dependence on transactional partners is a

crucial implication for firms that cannot be drawn without first analyzing the role of political connections in the value-based view of buyer-supplier relationships. This conclusion is encapsulated by the following hypothesis.

Hypothesis 2 (firm-level implication): *All else being equal, politically connected firms exhibit a reduced overall dependency on transactional partners.*

2.3 Heterogeneity of transactional partners

It is crucial to recognize that in the original value-based view framework, each transactional partner possesses its own feasible range of value appropriation that is determined by its own added value and outside option value. That is, any value in that range is economically viable, thus acceptable to the corresponding transaction partner. Notably, there exists no guarantee that any given point within the feasible range for one partner also lies within the feasible range for the other partner. In other words, while the feasible range of value appropriation makes sense to the focal firm, not all the value in this range is economically viable, or agreeable, to its transaction partner. When the transaction partner disagrees with a proposition of value appropriation that is feasible for the focal firm, the collaboration or transaction would fall through. Consequently, the two parties need to find a point of value division that ensures that each partner captures a value within their respective feasible range, and that the combined value captured by the partners adds up to the total value created—indeed, the parties can only divide up the value "pie" that can be created). (The value-based framework, other than depicting the aforementioned two conditions that this outcome should meet, does not provide guidance on how to reach this acceptable point estimate.)

When political connections increase the value of outside options for the focal firm, it narrows the range of feasible value appropriation that the focal firm is willing to accept, by eliminating the lowest values. While this change strengthens the focal firm's bargaining position in the transaction, it also reduces the possibility of finding a value that is also acceptable to the transactional partner. Within the narrower range of feasible values, the focal firm then faces the question of how much lower it is willing to

accept in order to maintain business with a given transactional partner, in other words, to keep the partner's willingness to continue to transact with the focal firm.

We propose that when the focal firm perceives a transactional partner as more desirable, it may be more willing to sacrifice some value capture in order to maintain the transaction, all else being equal. One significant factor influencing the attractiveness of a transaction partner is the stability of their financial position, particularly in terms of the risk of default (Cohen & Li, 2020). Imagine a hypothetical scenario of comparing two transactional partners with equal demand for the products offered by the focal firm and same total value created through transactions with the focal firm. However, one of these partners carries greater uncertainty regarding its financial stability, which increases the risk of default and subsequently the possibility of the partnership falling apart. In this scenario, the focal firm, whose outside options increase in value as a result of its gaining political connections, might be more inclined to make concessions, such as yielding value, to retain the financially less risky partner, as opposed to the partner with higher financial risks.

When the focal firm has improved outside options due to political connections, it gains more flexibility and is not as dependent on the business with financially risky transactional partner. As a result, it becomes more inclined to capture a greater share of the value, as it is less concerned about the likelihood of the transactional partner discontinuing the partnership. Thus, we argue that the increase in value capture by politically connected firms is more pronounced in transactions involving partners with greater financial uncertainty, compared to when they engage with partners demonstrating strong financial stability. Consequently, we formulate the following hypothesis:

Hypothesis 3 (moderating effect): *All else being equal, a politically connected firm captures an even greater share of the value generated in transactions with a transactional partner that has a weaker financial standing.*

Another important indicator of uncertainties regarding the focal firm's willingness to maintain a transactional partnership is the history of operations with these partners. One perspective on understanding buyer-supplier relationships centers on the concept of trust between sellers and buyers.

According to this viewpoint, suppliers may place themselves in a potentially more favorable position when dealing with buyers they trust to a greater extent, often exemplified by the extension of trade credits (Uzzi & Gillespie, 2002; Poppo, Zhou, & Li, 2016).

Historical interactions are known to enhance the trust between two parties (Gulati, 1996). Many studies find that the duration of buyer-supplier relationships leads to various benefits such as enhanced survival (Hoetker, Swaminathan, & Mitchell, 2007; Dhaliwal, Michas, Naiker, & Sharma, 2019), mitigating hold-up problems and encouraging R&D investments (Krolikowski & Yuan, 2017), and facilitating knowledge transfer (Kotabe, Martin, & Domoto, 2003). Consequently, the focal firm is more inclined to sustain a transactional relationship with a partner with whom it has a longer history of prior transactions, even if this necessitates conceding a greater share of value (Doney & Cannon, 1997).

Conversely, when it comes to partners with shorter transactional histories, the focal firm may perceive a higher degree of uncertainty and a lower level of trust due to the limited history of interactions. This reduced trust may lead the focal firm to be less committed to the relationship and less willing to make concessions. Therefore, when political connections bolster the focal firm's bargaining position and increase the potential value it can capture, the focal firm becomes more inclined to seek greater value capture from transactional partners with shorter transaction histories. This conclusion is summarized by the following hypothesis:

Hypothesis 4 (moderating effect): *All else being equal, a politically connected firm captures an even greater share of the value generated in transactions with a transactional partner that has a shorter transaction history.*

3. RESEARCH CONTEXT: TRADE CREDIT IN TRANSACTIONS

One primary challenge in conducting empirical studies of the value-based approach is observing value appropriation by suppliers and buyers in transactional relationships. We overcome this challenge by leveraging the trade credit extended by suppliers to buyers. Trade credit enables buyers to procure goods or services on credit without the need for immediate payment. This arrangement enhances the flexibility

of buyers in managing their cash flow effectively. Suppliers offer trade credit for multiple reasons (Mian & Smith, 1992; Petersen & Rajan, 1997). For example, suppliers may have superior information about their trading partners, which often leads them to be more willing to extend trade credits as a form of financing high-quality customers (Biais & Gollier, 1997). Trade credit can also serve as a tool for firms to attract customers by giving them more value, but without engaging in ostensible price discrimination which faces legal restrictions (Petersen & Rajan, 1997). Trade credit may also be used to attract customers also because it allows customers to inspect product quality before making payment, thereby reducing transaction costs associated with concluding sales deals (Long, Malitz, & Ravid, 1993).

Despite the various benefits that trade credit arrangements may generate for suppliers, offering trade credit is costly (e.g., Emery, 1984). Granting trade credit involves an opportunity cost for the suppliers, which is the loss of capital opportunity during the credit period.[2] Trade credit is thus considered a type of loan provided by suppliers to buyers. The use of trade credit is prevalent, being the single largest source of firms' short-term financing in the United States (Klapper, Laeven, & Rajan, 2012). As of the end of 2022, the amount of trade credit owed by buyers to suppliers is 2.3 times as large as bank loans and 17.3 times as large as commercial paper on the aggregate balance sheet of nonfinancial U.S. businesses (Federal Reserve Board, 2023).

Consequently, when a supplier extends a greater amount of trade credit to a buyer, it results in the buyer gaining more value from the transaction. In accounting terms, when a supplier extends trade credit to a buyer, the supplier essentially creates an account receivable on its books (i.e., the amount owed by the buyer). Simultaneously, the same amount is recorded as an account payable on the buyer's books. This accounting rule provides an empirical opportunity for us to collect information on the relative value appropriation by buyers and suppliers in a comparable fashion at scale.

[2] In addition to the opportunity costs, trade credit also carries credit risks (i.e., the event in which the buyer is unable to make the required payments on her debt obligation) and may have a negative impact on the profitability and liquidity of the suppliers. Extending trade credit also incurs additional administrative costs for the suppliers because of the costly credit management activities (Mian & Smith, 1992).

4. METHODS

4.1 Sample and data sources

We compiled a novel database of trade credit at the level of buyer-supplier pair by year, which is more detailed than the aggregated firm-year level data typically used in prior studies (e.g., Levine, Lin, & Xie, 2018; Li, Ng, & Saffar, 2021). Public firms in the U.S. are required to disclose in their annual reports the information of their major customers (i.e., who account for 10% or more of the focal firm's annual sales) including trade credit extended to each. Appendix A provides example disclosures.[3] We thus focus on the focal public firm in its role as the supplier. It is important to note that our theoretical analysis is applicable to both sides of the transaction. We concentrate on the suppliers in the empirical test of the theory, as it aligns better with the empirical opportunities afforded in the data; however, the theoretical analysis is equally relevant to buyers.

Although firms disclose their pairwise trade credit balance with each major customer, this information is not disclosed in the same format. We thus hand-collect sales and trade credit information between suppliers and their major customers from suppliers' annual reports. Specifically, we manually search the SEC's Edgar database using the keywords "supply," "supplier," "customer," "supply chain," "supply chain contract," "buyer," and "seller." For each annual report, we require that both the sales amount and trade credit to major customers be reported. We also require each supplier and customer to have a unique identifier Global Company Key (GVKEY) in order to match this data with other financial and firm-specific variables necessary for performing the analyses.

[3] The Financial Accounting Standards Board (FASB) has issued two standards regarding the disclosure of customer sales information. The first is Statement of Financial Accounting Standard (SFAS) No.14 (incorporated into Accounting Standard Codification (ASC) Topic 280), which requires firms to disclose all customers comprising 10% or more of their total sales. These required disclosures form the data source for the Compustat Segment Customer database, which has been used in multiple studies to construct a supplier's total trade credit amount to all customers in the aggregate (e.g., Fabbri and Klapper, 2016; Campello and Gao, 2017; Chod, Lyandres, & Yang, 2019). The second standard is FASB No.105 (incorporated into ASC 825), effective June 15, 1990, which requires firms to disclose information about financial instruments with concentrations of credit risk. As a result of this standard, many firms disclose their pairwise trade credit balance with each major customer, making our pair-level analyses possible.

We obtain information on firms' political connections from the BoardEx database, which reports the working experience of top executives and board directors. Standard company accounting statistics are sourced from Compustat. We begin our sample period in 2003 to avoid the confounding effects of the Sarbanes-Oxley Act ("SOX") Sections 302 and 404 that imposed significant new disclosure requirements on companies listed on U.S. stock exchanges. We end the sample in 2019 to avoid confounding effects of the COVID-19 pandemic on supply chains and ensuing trade credit decisions. Firms in the financial or regulated industries are excluded.[4]

Our final sample consists of 8,280 observations from 2003 through 2019, involving 1,001 unique supplier firms and 564 unique buyer firms. The average trade credit granted by suppliers annually is USD33.264 million. Appendix B reports the sample selection process and the distribution of the sample by year and by industry.

4.2 Key measures

In our main dataset at the level of buyer-supplier pair by year, the main dependent variable, *CREDIT*, is the amount of trade credit (i.e., accounts receivable) granted to a buyer by a supplier each year scaled by the supplier's total trade credit provision in year *t*.

Testing H2 requires a dataset at the level of supplier by year. We construct two dependent variables to measure a supplier firm's overall dependence on its buyers based on the fine-grained data on the sales to each major customer. First, *Proportion of Sales to Major Customers* is the sales to all major customers divided by the firm's annual total sales. A higher *Proportion of Sales to Major Customers* indicates a greater significance of the focal firm's major customers, hence a greater degree of dependency of the focal firm on these customers. Second, *Sales Concentration HHI* is the Herfindahl-Hirschman Index (HHI) of all sales to major customers, summing the squares of the ratio of sales to each major customer in a given year. A higher level of *Sales Concentration HHI* indicates that the supplier depends

[4] We define firms as being in those industries if their first two digits of the SIC code are between 60-67 or 91-99.

on a relatively smaller number of large customers. Both are common measures of the concentration of power on the buyer side concerning the focal firm.

The key explanatory variable is the focal supplier firm's political connections, which we define based on whether its board directors or top management team members have working experience in the government, a common approach of measuring corporate political connections (e.g., Ridge et al., 2017; Haveman et al., 2017; Hawk et al., 2023). *Supplier's Political Connections (log)* is the natural logarithm of one plus the number of the supplier's board directors or top management team members who have governmental working experience in year *t.* At the firm-year level, 59 percent observations have at least one politically connected board director or top management team member. An average firm has about two politically connected board directors or top management team members in a given year.

Two key variables are relevant for testing the moderating hypotheses. To measure a firm's financial standing, we use the Altman's *Z-score*, the best-known predictor of a firm's default risk (Altman, 1968). It is based on five financial ratios computed as 1.2 × (working capital/total assets) + 1.4 × (retained earnings/total assets) + 3.3 × (earnings before interest and taxes /total assets) + 0.6 × (market value of equity/book value of total liabilities) + 1.0 × (sales/total assets). All variables are mandatorily reported on the balance sheet in annual reports. Firms with a low Z-score have higher likelihood of bankruptcy (Zmijewski, 1984; Chen, Martin, & Wang, 2013). We generate *Buyer Z-score* to represent the Altman's Z-score for the buyer in a given buyer-supplier pair.

Buyer-Supplier Duration is the natural logarithm of the number of years that the buyer-supplier relationship lasts until the end of year *t,* a variable commonly used in the literature to capture a supplier and its customer's history of interaction (Hoetker et al., 2007; Krolikowski & Yuan, 2017; Dhaliwal et al., 2019).

Following the literature, we control for a set of supplier characteristics that may affect a supplier's decision to grant trade credit. We control for supplier size (*Size*) because large firms have greater bargaining power, making them more reluctant to grant trade credit to their customers (Fabbri & Klapper, 2016). Garcia-Appendini & Montoriol-Garriga (2013) find that more liquid firms tend to extend

more trade credit to their clients, so we control for the supplier's liquidity using its cash holding (*Cash*) and the proportion of finished goods over total inventory (*Finished goods*). Garcia-Appendini & Montoriol-Garriga (2013) also find that firms with high proportions of short-term debt are less able to extend trade credit to their clients than those relying more in long-term debt, so we control for leverage of the supplier (*Leverage*) and debt capacity using asset tangibility (*Tangibility*). We control for whether the supplier and customer share the same industry (*Industry same*) to account for whether a supplier possesses better knowledge about a customer's underlying performance (Paul & Boden, 2008). In addition, we control for the supplier's profitability using the return on assets (*ROA*).

We also control for a similar set of customer characteristics that may also affect a supplier's decision to extend trade credit. Existing studies suggest that firm size, asset tangibility, external financing dependence, and profitability are all related to firms' access to external financing (e.g., Petersen & Rajan, 1997; Gianetti, Burkart, & Ellingsen, 2011). For example, larger firms tend to have better information environments or greater bargaining power and less information asymmetry. Firms holding more liquidity assets such as cash are more likely to obtain bank loans because their greater ability to repay. Firms with more tangible assets also have easier access to bank credit because these assets can be used as collateral. Less profitable customers' need for trade credit increases because their access to other long-term debts is constrained. We thus control for customer size (*Customer size*), cash holding (*Customer cash*), tangibility (*Customer tangibility*), and profitability (*Customer ROA*). In addition, suppliers have less advantage in liquidating assets and face higher liquidation costs if customers have transformed their inputs into output, so firms with a larger fraction of finished goods in their inventory may be granted less trade credit (Petersen & Rajan, 1997). We therefore control for the customer's ratio of finished goods over total inventory (*Customer finished goods*). We also control for a customer's leverage (*Customer leverage*) because prior studies show that trade credit serves as a certifier and helps firms obtain bank loans (Garcia-Appendini & Montoriol-Garriga, 2013). Appendix C lists the definitions of all variables used. Table 1 presents the descriptive statistics in Panel A and pairwise correlations of these variables in Panel B.

[INSERT TABLE 1 HERE]

4.3 Estimation method

To test our hypotheses that a politically connected supplier captures a greater share of value from the transaction with a given buyer by providing less trade credit to the buyer, we examine the data at the level of buyer-supplier pair/dyad by year. We employ the following two-way fixed effects model that controls for observable heterogeneity in supplier and customer' characteristics, unobservable time-invariant supplier and customer characteristics, and general time trend in providing trade credit:

$$CREDIT_{s,b,t} = \beta Supplier\ PC_{s,t} + \boldsymbol{X'}_{s,t}\boldsymbol{\gamma}_1 + \boldsymbol{Z'}_{b,t}\boldsymbol{\gamma}_2 + \varphi_{s,b} + \delta_t + \varepsilon_{i,t} \quad (3)$$

where *Supplier PC* is the placeholder for *Supplier's Political Connections (log)*. The *s* indexes the supplier, *b* indexes the buyer, and *t* indexes the year. The vector $\boldsymbol{X}$ includes supplier characteristics while $\boldsymbol{Z}$ includes buyer characteristics. φ indicates the buyer-supplier pair fixed effects, which captures all time-invariant characteristics of the buyer-supplier pair. δ indicates year fixed effects. The error term ε is two-way clustered by the supplier and year (Conley, Goncalves, & Hansen, 2018). Hypothesis 1 predicts a negative coefficient β on *Supplier PC*.

Our research design with fixed effects at multiple levels allow us to alleviate a series of endogeneity concerns. For example, the inclusion of the focal supplier firm's fixed effects allows us to exploit within-firm variations in political connections, thus effectively eliminating any sectoral differences in political connectedness and the provision of trade credit. Furthermore, the unique advantage of the pair-level data enables the inclusion of buyer-supplier pair fixed effects, which essentially allows us to capture dynamics between the *same* supplier and the *same* buyer. Thus, any systematic influence caused by changes in the customer composition can be addressed.

To test our Hypothesis 2, which posits that politically connected suppliers reduce their overall dependency on buyers, we conduct analysis at a more aggregated, supplier-year level:

$$Dependency_{s,t} = \beta Supplier\ PC_{s,t} + \boldsymbol{X'}_{s,t}\boldsymbol{\gamma}_1 + \varphi_s + \delta_t + \varepsilon_{s,t} \quad (4)$$

where *Dependency* refers to *Proportion of Sales to Major Customers* or *Sales Concentration HHI*. The vector $\boldsymbol{X}$ includes supplier characteristics. Following Leung & Sun (2020), we control for firm size (*Size*), firm age (*Age*), R&D intensity (*R&D*), ratio of selling, general, and administrative expenses over total

assets (*SG&A*), and asset tangibility (*Tangibility*). φ indicates the supplier fixed effects, and δ indicates year fixed effects. The error term ε is clustered by supplier. Hypothesis 2 predicts a negative coefficient β on *Supplier PC*.

5. RESULTS

5.1 Suppliers' political connections and trade credit extended to buyers

Table 2 reports the estimation results of Equation (3) at the level of buyer-supplier dyad by year. Columns (1) and (3) present the results with the fixed effects at the levels of the supplier, customer, and the year; columns (2) and (4) present the results with the fixed effects at the level of the buyer-supplier pair and the year. Columns (3) and (4) control for additional supplier and buyer characteristics. Across all models, we observe negative and significant coefficients of *Supplier's Political Connections (log)*. These results suggest that politically connected suppliers generally extend less trade credit to customers. In particular, this finding holds when buyer-supplier dyad fixed effects are included, indicating that for the *same* buyer-supplier pair, when the supplier increases the number of board directors or top management team members with governmental experience, the associated buyer receives less trade credit from the supplier. This is a highly conservative approach as it eliminates heterogeneity across transactional dyads. Based on the estimates generated in column (4), an increase in *Supplier's Political Connections (log)* by one standard deviation is associated with 1.4% decrease in a supplier's ratio of trade credit extended to a given buyer (or a reduction of trade credit by 3.8 million US dollars).

[INSERT TABLE 2 HERE]

The results on control variables are consistent with prior research on trade credit (Petersen & Rajan, 1997; Giannetti et al., 2008; Garcia-Appendini & Montoriol-Garriga, 2013; Fabbri & Klapper, 2016; Costello, 2019). For instance, larger suppliers (*Size*) extend less trade credit, potentially due to their greater bargaining power; symmetrically, larger customers (*Customer size*) receive more trade credit. More liquid suppliers (*Cash*) extend more trade credit provision to their customers, and customers with

greater liquidity (*Customer cash*) have greater access to trade credit granted by suppliers. Customers with high leverage (*Customer leverage*) use more trade credit as trade credit works as a quality certification provided by suppliers to customers. These results bolster confidence in our data and estimation method.

5.2 Supplier's overall dependence on buyers

Panel A of Table 3 presents the estimation results of Equation (4), at the level of supplier by year. Columns (1) and (2) report the results with *Proportion of Sales to Major Customers* as the dependent variable, and columns (3) and (4) present the results with *Sales Concentration HHI* as the dependent variable. We include firm and year fixed effects in all models.

Results in columns (1) and (2) show a negative correlation between a supplier's political connections and its *Proportion of Sales to Major Customers*. Taking the estimate in column (2) for example ($\beta = -0.011$, $p < 0.10$), a one-standard-deviation increase in a supplier's political connections is associated with a 0.7% decrease in the percentage of sales that major customers account for in the total sales. Similarly, results in columns (3) and (4) show that a supplier's political connections are negatively associated with its *Sales Concentration HHI*. The estimate in column (4) with control variables ($\beta = -0.014$, $p < 0.10$) indicates that, for a given supplier, a one-standard-deviation increase in its political connections is associated with 0.046 standard deviation decrease in the concentration of its sales among major customers, signifying a reduction in its dependence on large customers. These results are both consistent with our prediction in Hypothesis 2.

One might question whether, even though a supplier firm's dependence on major customers (i.e., who account for 10% or more of the focal firm's annual sales) reduces due to an increase in its political connections, the firm's reliance on smaller customers—whose sales fall below the 10% threshold for disclosure—might have increased. As a result, the overall dependence of the firm on buyers may not have decreased. If this speculated substitution effect exists, we should *not* expect the total trade credit extended to all customers to decrease when the supplier's political connections increase. To test this concern, we replace the dependent variable in Equation (2) by the supplier's total accounts receivable—which

encompasses total trade credit offered to all customers, including but not limited to major customers—deflated by sales (*AR*).

Table 3, Panel B reports the correlations between *AR* and *Supplier's Political Connections (log)*. The coefficients on *Supplier's Political Connections (log)* remain negative in both columns, suggesting that when suppliers become more politically connected, they offer less trade credit to buyers across the board. This evidence corroborates the finding that suppliers' overall dependence on buyers decreases as they develop more political connections.

[INSERT TABLE 3 HERE]

5.3 Moderating effects of buyer heterogeneity

To test Hypothesis 3 that a politically connected supplier can capture an even larger share of value from transactions with buyers who have a weaker financial standing, we split the sample based on the median value of *Buyer Z-score*. Firms with a low Z-score have higher likelihood of bankruptcy. We estimate Equation (1) using the partitioned subsamples and report the results in Table 4, Panel A. Estimates in both subsamples are negative and statistically significant; however, the estimate in column (1) ($\beta = -0.015$, $p < 0.10$) is only one half of the estimate in column (2) ($\beta = -0.029$, $p < 0.05$). An additional t-test suggests that the difference in the two estimates is significant at 5% level. The results suggest that political connections enable suppliers to capture more value by reducing trade credit primarily for buyers with weaker financial standing, thus supporting Hypothesis 3.

We adopt a similar method to test Hypothesis 4 that a politically connected supplier can capture an even larger share of value from transactions with buyers who have a shorter transaction history with the supplier. We partition the sample based on the median value of *Buyer-Supplier Duration.* Panel B of Table 4 report the subsample results. The coefficient on *Supplier's Political Connections (log)* is negative and significant ($\beta = -0.025$, $p < 0.050$) only in column (2) where the subsample consists of buyer-supplier dyads sharing a below-average transactional history (i.e., shorter than 4 years). Notably, this estimate is slightly bigger in magnitude than the average estimate ($\beta = -0.022$) in column (4) of Table 2. In sharp contrast, the coefficient of *Supplier's Political Connections (log)* does not differ from zero ($\beta = -0.007$,

$p > 0.10$) in column (1) where the subsample consists of buyer-supplier dyads sharing a transaction history longer than 4 years, meaning that suppliers with increased political connections would not decrease trade credit provision to buyers with a relatively long duration of transactional relationship. Therefore, Hypothesis 4 is also supported.

[INSERT TABLE 4 HERE]

5.4 Alternative explanations, endogeneity concerns, and robustness checks

A potential alternative explanation of our findings posits that an increase in the supplier firm's political connections might be associated with a decrease in the volume of sales to a given customer; even if the supplier firm's bargaining power remains constant, the mere contraction in the scale of bilateral sales might lead to a lower level of trade credit extended to that customer. We test this conjecture in Tables D1-D2 of Appendix D. First, we replace the dependent variable in Equation (3) with the amount of sales at the pair level. Table D1 reports the results. We find a negative estimate (significant at 10% level) of the coefficient of *Supplier's Political Connections (log)* in column (1), where we include supplier, buyer, and year fixed effects. However, the estimate becomes weaker and insignificant upon introducing pair fixed effects in column (2). Therefore, there is only weak evidence supporting the argument that bilateral sales would decrease as the supplier firm develops more political connections. Nonetheless, we bolster the robustness of our findings by including bilateral sales as an additional control variable in Table D2. Notably, the estimate of the main independent variable *Supplier's Political Connections (log)* barely changes, thus effectively ruling out this alternative explanation of our findings.

We adopt a range of approaches to mitigate remaining endogeneity concerns such as correlated omitted variables and functional form misspecification. First, to further assess the extent of potential omitted variable bias, we estimate the impact threshold of a confounding variable (ITCV) following prior research (e.g., Busenbark, Yoon, Gamache, & Withers, 2022). The purpose of the ITCV is "to calculate a single valued threshold at which the impact of the confound would be great enough to alter an inference with regard to a regression coefficient" (Frank, 2000). This statistical technique relies on the assumption that a confounding variable needs to be correlated with both the variable of interest and the dependent variable

to potentially overturn the results. Specifically, the ITCV is the lowest product of the partial correlations that an omitted confounding variable should have with the independent and dependent variables of interest to make a significant coefficient become insignificant. If an ITCV is high (low) in magnitude, the regression results are robust (not robust) to omitted variable concerns.

Appendix D, Table D3 reports the ITCV for *Supplier's Political Connections (log)* and the impact of the inclusion of each control variable on the coefficient on *Supplier's Political Connections (log)*. Columns (1) and (2) present the results based on the baseline regression model when including different fixed effects, respectively. We interpret the more conservative ITCV for *Supplier's Political Connections (log)* in column (1). The impact threshold of −0.0106 implies that the partial correlation of an omitted confounding variable with *Supplier's Political Connections (log)* and *CREDIT* should each be at least around 0.103 (= √ 0.0106) in magnitude to overturn the OLS correlation between *Supplier's Political Connections (log)* and *CREDIT* reported in Table 2. The negative ITCV implies that the confounding variable should also be associated with *Supplier's Political Connections (log)* and *CREDIT* in opposite direction. However, we find that only supplier size (*Size*) has a product of partial correlations with opposite signs that exceeds the ITCV; for the rest of the control variables, they either have a much smaller impact than the ITCV or have partial correlations of same direction. Thus, we conclude that it is not very likely that an unobserved confounding variable is strong enough to overturn our findings.

Alternatively, we adopt the entropy balancing approach to mitigate biases that arise from systematic differences in characteristics between firms with different degrees of political connectedness. As our main independent variable, *Supplier's Political Connections (log)*, is continuous, we transform it into a binary variable, *Supplier's Political Connections (dummy)*, which is equal to 1 if the supplier has at least one board director or top management team member who has governmental working experience, and 0 otherwise. This transformation allows us to partition the sample into the treated group (*Supplier's Political Connections (dummy)* = 1) and control group (*Supplier's Political Connections (dummy)* = 0). Following Hainmueller (2012) and Hainmueller & Xu (2013), this method enables us to create a counterfactual control

group in which we assign a weight (between 0 and 1) to each control observation, such that the variables we include as matching dimensions are balanced between firms with and without political connections.

Appendix D, Table D4 shows the pre- and post-balancing covariates between suppliers with and without political connections. The balancing approach reduces significantly the differences in means and variances of firm characteristics between the treated and control groups. Using the entropy balanced sample, we re-estimate the baseline regression models and present the results in Table D5. The coefficients on *Suppliers' Political Connections (log)* remain negative and significant. These results suggest that our findings are not driven by potential systematic differences in covariates between suppliers with and without political connections.

While our primary focus is the focal supplier firm's political connections, we also conduct a robustness check by controlling for the associated buyer's political connections. Some may concern that an increase in the supplier's political connections might prompt the buyer to develop more political connections, potentially to counteract the increased bargaining power of the supplier. This possibility, if valid, might dampen the direct impact of supplier's political connections on trade credit provision, leading our models to underestimate the direct impact. We test this possibility in Table D6, where we control the buyer's political connections. We find the estimate for the main independent variable, *Suppliers' Political Connections (log)*, remains unchanged, providing assurance that our findings are robust to this possibility.

5.5 Evidence on the proposed mechanism

The main hypothesis is developed based on the fundamental mechanism that political connections elevate the focal firm's "outside options," predicting that connected firms will receive more government contracts and improve their market attractiveness and thus acquire more non-governmental customers. We assess the validity of this mechanism in Table E1 in the Appendix.

We first collect data on revenue from the U.S. federal government customers from the Compustat Segment files. Using this information, we calculate the variable *Government contract revenue,* which is equal to the annual aggregated revenue from the U.S. federal government (million, log) for a focal firm in a given year. In column (1), we regress this variable on the focal firm's political connections, controlling

for firm and year fixed effects. The estimate of the main independent variable *Supplier's Political Connections (log)* is positively significant at 1% level, suggesting a firm's political connections are positively associated with its revenue from government procurement contracts.

We also collect the information on new customer acquisitions from the FactSet Revere Supply Chain database, which provides arguably the most comprehensive coverage of firm-level supply chain information and has been widely used in recent studies (Dai, Liang, & Ng, 2021; Gofman & Wu, 2021). Importantly, this database provides the start date for each recorded buyer-supplier relationship, allowing us to count the new customers acquired by a focal firm in a given year. In column (2), we regress the *Number of new customers* on the firm's political connections. We find a positive correlation ($\beta = 0.150$, $p < 0.05$) between a firm's political connections and its new customer acquisition. Thus, these evidence support the predictions derived from and thus strengthen the credibility of the proposed mechanism.

6. DISCUSSIONS

At the core of strategic business considerations lies the process of generating value through transactions and then determining how this value is distributed among the transactional partners, as highlighted by Brandenburger & Stuart (2007) and Gans & Ryall (2017). The value-based perspective has been instrumental in understanding how suppliers and buyers each claim their share of the created value, as explored by Chatain (2011), Obloj & Zemsky (2015), and Chatain & Plaksenkova (2018), among others. We extend this perspective by showing that a company's political connections, which refer to its relationships with government entities, can significantly increase the amount of value it retains from dealings with its commercial partners. By manually collecting data of trade credit at the buyer-supplier pair level for US listed companies, we find that an increase in a supplier's political connections reduces its trade credit provision to its buyers, particularly those who are financially uncertain or have only a short transactional history with the focal supplier. We also find that an increase in suppliers' political connections helps reduce their dependence on buyers, suggesting an improved negotiating leverage due to political connections. Notably, our findings are particularly striking given they pertain to publicly traded

firms in the U.S., where market forces are typically seen as the primary drivers of business (Fisman et al., 2012), over a comprehensive time frame from 2003 to 2019.

This study broadens the value-based framework, which serves as an effective tool for examining how value is created and appropriated among transactional partners (Brandenburger & Stuart, 2007; Chatain, 2011; Gans & Ryall, 2017). From a theoretical standpoint, this study illustrates the conceptualization of governmental influence within the framework of the value-based view. This bridges the gap between the value-based framework, which primarily focuses on analyzing transactional dyads, and the recognition that political factors often play a crucial role in shaping the broader business environment. On the empirical front, a notable challenge within the value-based view is the scarcity of data for analyzing value distribution between business partners. This paper addresses this by drawing from accounting research to highlight the significance of trade credit. Trade credit serves as a tangible metric to quantify the value suppliers offer to buyers, paving the way for new empirical investigations.

This study also contributes to the corporate political connection literature (for a review see Wei et al., 2023; Katic & Hillman, 2023). The effect of corporate political connections on businesses is far-reaching. While past research has centered on the direct benefits governments provide to firms—like bank financing, contracts, permits, and regulatory approvals—the influence extends further. We demonstrate that even in transactions with private entities where government interference is absent, a firm's political ties open up additional market opportunities for firms, as indicated by Haveman et al. (2017), enhancing a firm's outside options and thereby its bargaining power in business dealings *not* directly influenced by government actions. Although the mechanism through which corporate political connections affect a firm's value allocation is indirect, the resulting impact is substantial. These findings broaden the scope of advantages that corporate political connections can offer, adding depth to our understanding of the tangible outcomes corporate political ties can yield.

Furthermore, this study enhances our understanding of firms' supply chain strategies. Traditionally, the focus on supply chain strategies has emphasized the role of transactional hazards, learning, and resource flow in managing transactional partners (Cool & Henderson, 1998; Cheung,

Myers, & Mentzer, 2011; Short, Toffel, & Hugill, 2016; Alcacer & Oxley, 2014; Argyres, Bercovitz, & Zanarone, 2020; Chondrakis & Sako, 2020). However, recent years have witnessed a significant influence of governmental factors on supply chain issues. For instance, many current issues are related to geopolitical pressures influencing the selection of supply chain partners (Kobrin, 2017; Witt, 2019). Integrating political factors into supply chain analysis requires moving beyond the imposition of macro factors that shape parameters for all transactions. We demonstrate one approach to establish a "micro foundation" for conceptualizing political influence in the supply chain, drawing upon the value-based framework.

Finally, from a traditional perspective, trust plays a crucial role in determining how value is shared between transactional partners (e.g., Poppo et al., 2016). If the trust established between suppliers and buyers is the primary factor governing trade credit, it raises questions about why a supplier's political connections should *reduce* the value it offers to buyers. There is no theoretical basis to suggest that a supplier's acquisition of political connections erodes its trust in buyers. Instead, political connections appear to influence buyer-supplier relationships through mechanisms such as dependence and bargaining power. Nevertheless, trust still plays a significant role. Our findings indicate that sellers with political connections tend to offer less trade credit to newer buyers, with whom they have a limited transactional history, while preserving or even improving terms for longstanding customers. This pattern implies that political connections grant suppliers the leverage to extract greater value in engagements with relatively unknown buyers, possibly due to less established trust. Conversely, these connections seem to have minimal effect on transactions with trusted, familiar buyers.

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Figure 1. Illustration of Value-Based Framework: Role of Political Connections in Value Appropriation

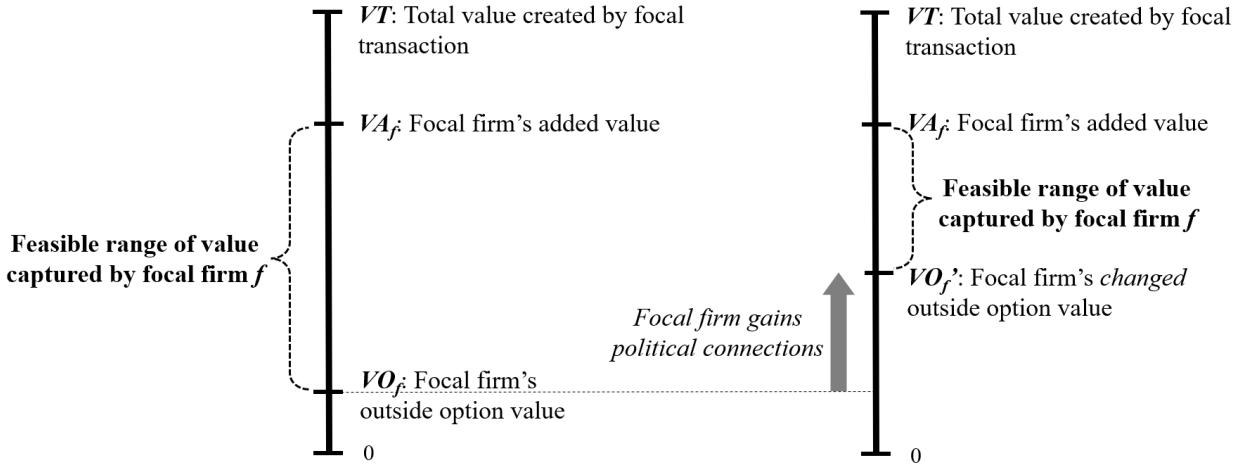

Table 1
Descriptive Statistics

This table reports descriptive statistics. Panel A reports summary statistics of variables in our main sample at the buyer-supplier-year level. Panel B reports pairwise correlations for these variables. Appendix C presents definitions of variables.

Panel A: Summary statistics (N = 8,280)

Variables	Mean	SD	P10	Median	P90
CREDIT	0.231	0.187	0.070	0.170	0.460
Suppliers' Political Connections (log)	0.669	0.655	0.000	0.693	1.609
Buyer Z-score	3.586	2.315	1.137	3.390	5.885
Buyer-Supplier Duration	6.130	6.238	0.000	4.000	15.000
Size	5.551	1.927	3.095	5.542	7.972
Cash	0.271	0.238	0.016	0.207	0.645
Finished goods	0.314	0.326	0.000	0.226	0.835
Leverage	0.168	0.219	0.000	0.079	0.480
Tangibility	0.191	0.210	0.020	0.113	0.495
ROA	-0.064	0.277	-0.324	0.018	0.119
Industry same	0.261	0.439	0.000	0.000	1.000
Customer size	10.340	1.680	8.205	10.570	12.160
Customer cash	0.122	0.117	0.018	0.086	0.282
Customer finished goods	0.276	0.347	0.000	0.000	0.882
Customer leverage	0.205	0.144	0.043	0.185	0.396
Customer tangibility	0.261	0.216	0.043	0.183	0.585
Customer ROA	0.045	0.078	-0.009	0.047	0.120

Panel B: Pairwise correlations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1.CREDIT	1.000																
2.Suppliers' Political Connections (log)	-0.086	1.000															
3.Buyer Z-score	-0.050	0.037	1.000														
4.Buyer-Supplier Duration	0.061	0.007	-0.053	1.000													
5.Size	-0.294	0.357	0.232	-0.024	1.000												
6.Cash	0.208	0.028	-0.177	0.083	-0.359	1.000											
7.Finished goods	-0.035	-0.090	0.022	0.087	0.043	0.004	1.000										
8.Leverage	-0.047	0.082	0.030	-0.057	0.258	-0.279	-0.034	1.000									
9.Tangibility	-0.043	-0.030	0.006	-0.154	0.139	-0.436	-0.244	0.251	1.000								
10.ROA	-0.196	0.045	0.148	-0.007	0.420	-0.186	-0.010	-0.074	0.100	1.000							
11.Industry same	0.111	-0.022	-0.017	-0.111	-0.032	0.042	-0.196	0.054	0.143	-0.033	1.000						
12.Customer size	-0.030	0.127	0.210	0.065	0.226	-0.078	0.096	0.069	-0.080	0.041	-0.209	1.000					
13.Customer cash	0.056	-0.074	-0.088	0.357	-0.096	0.199	-0.069	-0.128	-0.144	-0.068	0.225	-0.242	1.000				
14.Customer finished goods	-0.013	-0.038	0.036	0.028	0.003	0.047	0.074	-0.029	-0.103	-0.015	0.080	-0.030	0.206	1.000			
15.Customer leverage	-0.006	0.013	0.097	-0.459	0.063	-0.149	-0.072	0.141	0.149	0.062	-0.004	-0.068	-0.281	-0.006	1.000		
16.Customer tangibility	-0.026	-0.056	0.018	-0.143	0.078	-0.307	0.006	0.095	0.397	0.094	-0.060	0.096	-0.291	-0.221	0.274	1.000	
17.Customer ROA	0.000	-0.003	0.047	0.450	0.029	0.023	0.039	-0.032	-0.092	0.074	-0.055	0.248	0.105	0.028	-0.138	0.021	1.000

Table 2
Suppliers' Political Connections and their Provision of Trade Credit

This table reports the regression results of estimating the association between the suppliers' political connections and the trade credit they offered to individual buyers. The sample is at the buyer-supplier-year level. Fixed effects are incorporated at various levels, including the supplier firm, buyer firm, buyer-supplier pair, and year. Robust standard errors, shown in square brackets, are two-way clustered by supplier and year. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively, using two-tailed tests. Appendix C provides the definitions of variables.

DV: *CREDIT*	(1)	(2)	(3)	(4)
Supplier's Political Connections (log)	-0.027***	-0.026***	-0.022**	-0.022***
	[0.008]	[0.007]	[0.008]	[0.007]
Size			-0.027***	-0.026***
			[0.007]	[0.008]
Cash			0.055**	0.055**
			[0.022]	[0.021]
Finished goods			-0.014	-0.016
			[0.017]	[0.017]
Leverage			-0.013	-0.013
			[0.021]	[0.022]
Tangibility			-0.019	-0.02
			[0.051]	[0.050]
ROA			0.007	0.003
			[0.014]	[0.014]
Industry same			0.015	0.02
			[0.011]	[0.030]
Customer size			0.032**	0.030**
			[0.012]	[0.013]
Customer cash			0.091*	0.111*
			[0.049]	[0.052]
Customer finished goods			0.019	0.025
			[0.015]	[0.015]
Customer leverage			0.063*	0.077**
			[0.034]	[0.036]
Customer tangibility			-0.024	0.029
			[0.065]	[0.065]
Customer ROA			-0.029	-0.022
			[0.041]	[0.040]
Supplier FE	Yes	No	Yes	No
Customer FE	Yes	No	Yes	No
Pair FE	No	Yes	No	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	8,280	8,280	8,280	8,280
Adjusted R^2	0.607	0.661	0.615	0.668

Table 3
Suppliers' Political Connections and their Dependency on Customers

This table reports the regression results of estimating the association between the supplier's political connections and its proportion of sales to major customers (*Proportion of Sales to Major Customers*), sales concentration Herfindahl-Hirschman Index (*Sales Concentration HHI*), and total accounts receivable scaled by its total sales (*AR*). The sample is at the supplier-year level using the Compustat population, without requiring the buyer identity or buyer-supplier pair level trade credit data. Robust standard errors, shown in square brackets, are clustered by supplier. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively, using two-tailed tests. Appendix C provides the definitions of variables.

Panel A: Correlations with dependency on customers

	(1)	(2)	(3)	(4)
DV:	*Proportion of Sales to Major Customers*	*Proportion of Sales to Major Customers*	*Sales Concentration HHI*	*Sales Concentration HHI*
Supplier's Political Connections (log)	-0.013**	-0.011*	-0.016**	-0.014*
	[0.005]	[0.006]	[0.007]	[0.008]
Size		0.001		0.002
		[0.006]		[0.007]
Age		-0.017		-0.035**
		[0.012]		[0.014]
R&D		0.003		0.000
		[0.003]		[0.004]
SG&A		-0.011		-0.045**
		[0.018]		[0.020]
Tangibility		-0.040		-0.006
		[0.029]		[0.040]
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Observations	14,984	12,921	14,984	12,921
Adjusted R^2	0.748	0.745	0.748	0.745

Panel B: Correlations with total accounts receivable scaled by total sales (*AR*)

	(1)	(2)
DV:	*AR*	*AR*
Supplier's Political Connections (log)	-0.019***	-0.022***
	[-2.59]	[-2.99]
Size		0.010
		[1.27]
Cash		-0.198***
		[-5.49]
Finished goods		-0.048***
		[-2.83]
Leverage		-0.063***
		[-2.66]
Tangibility		-0.317***
		[-5.27]
ROA		-0.030*
		[-1.65]
Firm FE	Yes	Yes
Year FE	Yes	Yes
Observations	5,1911	5,1675
Adjusted R^2	0.725	0.725

Table 4
Analyses of Moderating Conditions

This table reports the regression results of estimating the association between the suppliers' political connections and the trade credit they offered to individual customers in subsamples partitioned by moderating variables. The sample is at the buyer-supplier-year level. In Panel A, the partitioning variable is the buyer's Altman Z-score. In Panel B, the partitioning variable is buyer-supplier relationship duration. Control variables are the same as those in Table 2 but are omitted from the table for brevity. Coefficient difference and its statistical significance based on *F*-test is reported. Buyer-supplier pair fixed effects and year fixed effects are included. Robust standard errors, shown in square brackets, are two-way clustered by supplier and year. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively, using two-tailed tests. Appendix C provides the definitions of variables.

Panel A: Buyer Z-score as the partitioning variable

	(1)	(2)
	Buyer Z-score	
DV: *CREDIT*	High	Low
Supplier's Political Connections (log)	-0.015*	-0.029**
	[0.008]	[0.011]
Test coefficient difference	difference = 0.013** (p = 0.04)	
Controls	Yes	Yes
Supplier FE	No	No
Customer FE	No	No
Pair FE	Yes	Yes
Year FE	Yes	Yes
Observations	3,732	3,745
Adjusted R^2	0.686	0.660

Panel B: Buyer-supplier relationship duration as the partitioning variable

	(1)	(2)
	Buyer-Supplier Duration	
DV: *CREDIT*	High	Low
Supplier's Political Connections (log)	-0.007	-0.025**
	[0.008]	[0.011]
Test coefficient difference	difference = 0.018*** (p < 0.01)	
Controls	Yes	Yes
Supplier FE	No	No
Customer FE	No	No
Pair FE	Yes	Yes
Year FE	Yes	Yes
Observations	3,903	3,068
Adjusted R^2	0.684	0.719

APPENDIX

Prepared for "Corporate Political Connections and Value Appropriation in Buyer-Supplier Relationships: A Value-Based Framework"

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Appendix A. Data on Trade Credit

We collected the buyer-supplier-level trade credit data from the notes of financial statements in the supplier firms' annual reports (i.e., 10-K, 10-K/A, 10-K405, 10-405/A, 10-KT405, and 10-KT405/A). Please see below two examples.

Example #1 (structured):
SM&A is a defense and aerospace consulting company. In its 2006 10-K, the firm disclosed the percentage of accounts receivable from each major customer (please see below the screenshot from the 10-K). We computed the amount of accounts receivable by multiplying the percentage of accounts receivable to a given major customer and SM&A's total accounts receivable.

Customers representing more than 10% of the Company's revenue and accounts receivable are as follows:

	Revenue Years Ended December 31,			Accounts Receivable at December 31,
	2006	2005	2004	2006
The Boeing Company	27.0%	27.4%	30.1%	24.8%
Accenture LTD	14.8	20.5	15.7	10.1
Lockheed Martin Corporation	*	14.6	22.7	*
Raytheon	13.5	*	*	*
Total	55.3%	62.5%	68.5%	34.9%

* *Did not meet 10% criteria.*

Example #2 (unstructured):
Celgene Corporation is a pharmaceutical company. In its 2006 10-K, the firm disclosed the percentage of accounts receivable from each major customer (please see below the screenshot from the 10-K). We computed the amount of accounts receivable by multiplying the percentage of accounts receivable to a given major customer and Celgene's total accounts receivable.

MAJOR CUSTOMERS: As is typical in the pharmaceutical industry, the Company sells its products primarily through wholesale distributors and therefore, wholesale distributors account for a large portion of the Company's net product sales. In 2006, 2005 and 2004, there were three customers that each accounted for more than 10% of the Company's total revenue. Total net sales to each such customer as a percent of total revenue in 2006, 2005 and 2004 were as follows: Cardinal Health 20.2%, 28.9% and 29.5%; McKesson Corp. 16.0%, 20.3% and 18.6%; and Amerisource Bergen Corp. 11.9%, 14.8% and 17.9%. These same customers accounted for the following percentages of accounts receivable for the years ended December 31, 2006 and 2005, respectively: McKesson Corp. 20.6% and 32.8%; Cardinal Health 23.0% and 30.0%; and Amerisource Bergen Corp. 10.5% and 13.2%.

Appendix B. Sample Description

Table A1 presents the sample selection procedure. Table A2 reports the sample composition by year. Table A3 reports the sample composition by the suppliers' industries based on the Fama-French 10 industry group.

Table B1
Sample selection process

Selection criteria	# Observations (Unit: buyer-supplier-year)
Firms with non-missing data on the buyer-supplier pair level accounts receivable disclosed in 10-K filings during 2003–2019	17,186
Less: Observations with missing customer identifiers	2,157
Less: Missing supplier or customer control variables	6749
Final sample	8,280

Table B2
Sample distribution by year

Year	Total
2003	433
2004	546
2005	552
2006	568
2007	539
2008	514
2009	514
2010	507
2011	497
2012	499
2013	489
2014	486
2015	459
2016	464
2017	452
2018	412
2019	349
Total	8,280

Table B3
Sample distribution by supplier industry

Fama-French 10 Industry Group	# Observations
Consumer Non-Durables	563
Consumer Durables	433
Manufacturing	1,180
Oil, Gas, and Coal Extraction and Products	327
Business Equipment	3,142
Telephone and Television Transmission	259
Wholesale, Retail, and Some Services	270
Healthcare, Medical Equipment, and Drugs	1,489
Utilities	101
Other	516
Total	8,280

Appendix C. Variables Definitions

Variable	Definition
Dependent variable	
CREDIT	Accounts receivable extended to a customer divided by the total accounts receivable of the supplier in year *t.*
Proportion of Sales to Major Customers	Percentage of the supplier's sales to major customers during year *t.*
Sales Concentration HHI	Herfindahl-Hirschman Index calculated as the sum of the squared share of sales by each supplier during year *t*, in a given industry.
AR	Total accounts receivable of the supplier scaled by its total sales at the end of year *t*.
Independent variables	
Supplier's Political Connections (log)	Natural logarithm of one plus the number of suppliers' board directors or top management team members who have working experience in government at the end of year *t*.
Moderating variables	
Buyer Z-score	Altman's (1968) Z-score, based on five financial ratios computed as 1.2 × (working capital/total assets) + 1.4 × (retained earnings/total assets) + 3.3 × (earnings before interest and taxes /total assets) + 0.6 × (market value of equity/book value of total liabilities) + 1.0 × (sales/total assets).
Buyer-Supplier Duration	Natural logarithm of the number of years that the supplier-customer relationship lasts until the end of year *t*.
Control variables-supplier side	
Cash	Supplier's cash and short-term investments scaled by total assets at the end of year *t*.
Finished goods	Finished goods scaled by total inventory at the end of year *t*.
Industry same	Indicator variable that equals one if the supplier is in the same industry as the customer in year *t*.
Leverage	Sum of long-term debt and debt in current liabilities scaled by total assets at the end of year *t*.
Tangibility	Total property, plant, and equipment scaled by total assets at the end of year *t*.
ROA	Income before extraordinary items scaled by total assets during year *t*.
Size	Natural logarithm of total sales in US dollars (millions) at the end of year *t*.
Control variables-buyer side	
Customer cash	Customer's cash and short-term investments scaled by total assets at the end of year *t*.
Customer finished goods	Customer's finished goods scaled by total inventory at the end of year *t*.
Customer leverage	Customer's sum of long-term debt and debt in current liabilities scaled by total assets at the end of year *t*.
Customer tangibility	Customer's total property, plant, and equipment scaled by total assets at the end of year *t*.
Customer ROA	Customer's income before extraordinary items scaled by total assets during year *t*.
Customer size	Natural logarithm of customer's total sales in US dollars (millions) at the end of year *t*.

Appendix D. Alternative Explanations, Endogeneity Concerns, and Robustness Checks

Table D1
Supplier's political connections and pair-level sales

This table reports the regression results of estimating the association between the suppliers' political connections and the amount of sales (log) from the focal supplier to the associated buyer. The sample is at the buyer-supplier-year level. Column (1) includes supplier firm, buyer firm, and year fixed effects. Column (2) includes buyer-supplier pair and year fixed effects. Robust standard errors, shown in square brackets, are two-way clustered by supplier and year. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively, using two-tailed tests.

DV: *log (Pair-level Sales)*	(1)	(2)
Supplier's Political Connections (log)	-0.152*	-0.093
	[0.084]	[0.073]
Size	0.754***	0.759***
	[0.061]	[0.055]
Cash	0.167	0.336*
	[0.188]	[0.168]
Finished goods	0.021	-0.029
	[0.124]	[0.113]
Leverage	0.066	-0.008
	[0.234]	[0.245]
Tangibility	0.077	0.436
	[0.506]	[0.464]
ROA	-0.057	-0.042
	[0.082]	[0.074]
Industry same	0.310	0.569*
	[0.184]	[0.310]
Customer size	0.457***	0.434***
	[0.112]	[0.132]
Customer cash	0.020	0.357
	[0.348]	[0.385]
Customer finished goods	0.063	0.026
	[0.153]	[0.151]
Customer leverage	0.147	0.207
	[0.328]	[0.313]
Customer tangibility	-0.789	-0.002
	[0.545]	[0.594]
Customer ROA	-0.035	0.052
	[0.385]	[0.372]
Supplier FE	Yes	No
Customer FE	Yes	No
Pair FE	No	Yes
Year FE	Yes	Yes
Observations	8,280	8,280
Adjusted R^2	0.681	0.740

Table D2
Re-estimating main effects by controlling for pair-level sales

This table reports the regression results of re-estimating the main effects in Table 2 by additionally controlling for sales at the pair level. The sample is at the buyer-supplier-year level. Column (1) includes supplier firm, buyer firm, and year fixed effects. Column (2) includes buyer-supplier pair and year fixed effects. Robust standard errors, shown in square brackets, are two-way clustered by supplier and year. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively, using two-tailed tests.

DV: *CREDIT*	(1)	(2)
Supplier's Political Connections (log)	-0.020**	-0.021***
	[0.007]	[0.007]
Log (Pair Sales)	0.016***	0.013***
	[0.002]	[0.002]
Size	-0.039***	-0.036***
	[0.007]	[0.008]
Cash	0.052**	0.050**
	[0.021]	[0.021]
Finished goods	-0.015	-0.017
	[0.017]	[0.017]
Leverage	-0.014	-0.012
	[0.022]	[0.022]
Tangibility	-0.015	-0.019
	[0.047]	[0.047]
ROA	0.008	0.004
	[0.013]	[0.013]
Industry same	0.010	0.012
	[0.011]	[0.030]
Customer size	0.025*	0.025*
	[0.012]	[0.013]
Customer cash	0.089*	0.105*
	[0.047]	[0.050]
Customer finished goods	0.017	0.024
	[0.014]	[0.014]
Customer leverage	0.064*	0.078**
	[0.032]	[0.034]
Customer tangibility	-0.001	0.040
	[0.063]	[0.064]
Customer ROA	-0.034	-0.028
	[0.039]	[0.038]
Supplier FE	Yes	No
Customer FE	Yes	No
Pair FE	No	Yes
Year FE	Yes	Yes
Observations	8,280	8,280
Adjusted R^2	0.627	0.675

Table D3
Impact Threshold of a Confounding Variable (ITCV) method

This method estimates the impact threshold of a confounding variable. The purpose of the ITCV is "to calculate a single valued threshold at which the impact of the confound would be great enough to alter an inference with regard to a regression coefficient" (Frank, 2000). Specifically, the ITCV is the lowest product of the partial correlations that an omitted confounding variable should have with the independent and dependent variables of interest to make a significant coefficient become insignificant. If an ITCV is high (low) in magnitude, the results of the baseline regressions are robust (not robust) to omitted variable concerns. This table reports the ITCV for *Supplier's Political Connections (log)* and the impact of the inclusion of each control variable on the coefficient on *Supplier's Political Connections (log)*.

DV: *CREDIT*	(1)	(2)
	Impact of the inclusion of other control variables	
Size	-0.0780	-0.0780
Cash	0.0175	0.0175
Finished goods	-0.0001	-0.0001
Leverage	-0.0002	-0.0002
Tangibility	-0.0007	-0.0007
ROA	0.0082	0.0082
Industry same	-0.0016	-0.0016
Customer size	0.0018	0.0018
Customer cash	-0.0012	-0.0012
Customer finished goods	0.0009	0.0009
Customer leverage	0.0002	0.0002
Customer tangibility	-0.0009	-0.0009
Customer ROA	-0.0001	-0.0001
Supplier FE	Yes	No
Customer FE	Yes	No
Pair FE	No	Yes
Year FE	Yes	Yes
Impact threshold (ITCV)	**-0.0106**	**-0.0135**

Table D4
Entropy balancing: Matching

This method takes an entropy balancing approach. Table D1 presents the pre-balancing covariates between the treated (*Supplier's Political Connections(dummy)* = 1) and control (*Supplier's Political Connections(dummy)* = 0) samples. Table D2 reports the regression results of estimating the baseline regression models using the entropy balanced sample. Robust standard errors are two-way clustered by the supplier and year. *t*-statistics are shown in square brackets. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively, using two-tailed tests. Appendix C provides the definitions of variables.

Before		**Treated**			**Control**	
	Mean	Variance	Skewness	Mean	Variance	Skewness
Size	5.93	3.57	0.02	4.99	3.41	-0.02
Cash	0.28	0.06	0.78	0.26	0.06	0.87
Finished goods	0.30	0.10	0.77	0.34	0.11	0.58
Leverage	0.18	0.04	1.44	0.15	0.05	1.79
Tangibility	0.18	0.04	1.84	0.20	0.05	1.57
ROA	-0.05	0.06	-3.39	-0.08	0.10	-3.46
After		**Treated**			**Control**	
	Mean	Variance	Skewness	Mean	Variance	Skewness
Size	5.93	3.57	0.02	5.93	3.57	0.02
Cash	0.28	0.06	0.78	0.28	0.06	0.78
Finished goods	0.30	0.10	0.77	0.30	0.10	0.77
Leverage	0.18	0.04	1.44	0.18	0.04	1.44
Tangibility	0.18	0.04	1.84	0.18	0.04	1.84
ROA	-0.05	0.06	-3.39	-0.05	0.06	-3.39

Table D5
Entropy balancing: Baseline results using the entropy balancing matched sample

This table re-estimates the main results in columns (3)-(4) of Table 2 using the entropy balanced sample. The sample is at the buyer-supplier-year level. Column (1) includes supplier firm, buyer firm, and year fixed effects. Column (2) includes buyer-supplier pair and year fixed effects. Robust standard errors, shown in square brackets, are two-way clustered by supplier and year. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively, using two-tailed tests.

DV: *CREDIT*	(1)	(2)
Suppliers' Political Connections (log)	-0.020**	-0.019**
	[0.008]	[0.007]
Size	-0.030***	-0.030***
	[0.008]	[0.009]
Cash	0.042	0.040
	[0.025]	[0.024]
Finished goods	-0.010	-0.009
	[0.015]	[0.016]
Leverage	-0.009	-0.002
	[0.027]	[0.027]
Tangibility	-0.053	-0.051
	[0.055]	[0.054]
ROA	0.020	0.020
	[0.016]	[0.016]
Industry same	0.016	0.014
	[0.011]	[0.029]
Customer size	0.025	0.023
	[0.015]	[0.016]
Customer cash	0.085	0.107*
	[0.052]	[0.053]
Customer finished goods	0.019	0.026
	[0.015]	[0.015]
Customer leverage	0.098**	0.116**
	[0.042]	[0.042]
Customer tangibility	-0.011	0.046
	[0.074]	[0.074]
Customer ROA	-0.021	-0.017
	[0.046]	[0.045]
Supplier FE	Yes	No
Customer FE	Yes	No
Pair FE	No	Yes
Year FE	Yes	Yes
Observations	8,280	8,280
Adjusted R^2	0.606	0.663

Table D6
Controlling for buyer's political connections

This table re-estimates the main results in columns (3)-(4) of Table 2 by including an additional control variable, *Buyer's Political Connections (log)*. The definition of this variable follows that of the main independent variable *Supplier's Political Connections (log)*. The sample is at the buyer-supplier-year level. Column (1) includes supplier firm, buyer firm, and year fixed effects. Column (2) includes buyer-supplier pair and year fixed effects. Robust standard errors, shown in square brackets, are two-way clustered by supplier and year. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively, using two-tailed tests.

DV: *CREDIT*	(1)	(2)
Supplier's Political Connections (log)	-0.022***	-0.022***
	[0.008]	[0.007]
Buyer's Political Connections (log)	-0.013	-0.022**
	[0.009]	[0.009]
Size	-0.027***	-0.026***
	[0.007]	[0.008]
Cash	0.054**	0.053**
	[0.022]	[0.021]
Finished goods	-0.015	-0.017
	[0.017]	[0.018]
Leverage	-0.012	-0.012
	[0.022]	[0.022]
Tangibility	-0.015	-0.015
	[0.050]	[0.049]
ROA	0.007	0.003
	[0.014]	[0.013]
Industry same	0.016	0.019
	[0.011]	[0.030]
Customer size	0.034***	0.033**
	[0.011]	[0.012]
Customer cash	0.091*	0.112**
	[0.048]	[0.051]
Customer finished goods	0.014	0.019
	[0.015]	[0.015]
Customer leverage	0.063*	0.077**
	[0.033]	[0.034]
Customer tangibility	-0.013	0.039
	[0.066]	[0.065]
Customer ROA	-0.033	-0.026
	[0.038]	[0.037]
Supplier FE	Yes	No
Customer FE	Yes	No
Pair FE	No	Yes
Year FE	Yes	Yes
Observations	8,280	8,280
Adjusted R^2	0.616	0.670

Appendix E. Evidence on the Proposed Mechanism

Table E1
Evidence on the proposed mechanism

The sample includes all listed U.S. firms from 2003 through 2019. The unit of analysis is firm-year. The dependent variable in column (1) is the annual amount of revenue from U.S. federal government customers. This variable is constructed using the Compustat Segment files. The dependent variable in column (2) is the annual number of newly acquired customers. This variable is calculated based on the information in the FactSet Revere Supply Chain database. Robust standard errors in square brackets are clustered at the firm level. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively, using two-tailed tests.

	(1)	(2)
DV:	**Government contract revenue**	**Number of new customers**
Supplier's Political Connections (log)	0.059***	0.150**
	[0.018]	[0.065]
Size	0.051***	0.179***
	[0.010]	[0.036]
Age	-0.011	-0.475***
	[0.026]	[0.109]
R&D	0.005**	0.021**
	[0.002]	[0.009]
SG&A	-0.026	-0.260***
	[0.017]	[0.086]
Tangibility	-0.039	-0.610***
	[0.052]	[0.203]
Firm FE	Yes	Yes
Year FE	Yes	Yes
Observations	51,878	51,878
Adjusted R^2	0.865	0.440