Master Thesis

The Impact of Diversification Relatedness on a Firm's Corporate Political Strategy

An empirical study of the United States Defence Industry

Author

Moritz Duevel
133525

Supervisor

João Albino-Pimentel

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MSc International Business and Politics

CBS COPENHAGEN BUSINESS SCHOOL
HANDELSHØJSKOLEN

Abstract

This thesis is an empirical study of the argument made by Hillman and Hitt (1999), who theorized that when firms aim to manage their regulatory environment by engaging in corporate political action, their choice between a relational and a transactional approach is, among other factors, determined by its extent of related diversification. While related firms are theorized to prefer to engage in a relational fashion, due to their opportunity to create "specialized political capital", unrelated firms are expected to only engage transactionally. By conducting an empirical analysis based on the US defence industry, known to be an active user of CPA due to its high dependency on public resources, I found evidence for the validity of the theory established by the authors.

Firm diversification relatedness is negatively correlated with expenditures on lobbying, a transactional form of CPA, while being positively correlated with former politicians on a firm's corporate board, a relational one. The findings provide managers with important insights on the allocation of resources on CPA activities, and provide policymakers with recommendations on increasing effectiveness of the public procurement processes.

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1 Introduction

Governments hold significant power over markets, in particular over its size and structure through among others, regulation and taxes (Hillman and Hitt, 1999). Firms, to different extents, view the government as a competitive tool to create an environment that is most suited to the firm's competitive efforts. This effort in engaging in action to manage the firms' institutional environment takes various forms and is summed up under the term corporate political action (CPA). However, a firm's decision to engage in CPA is also a strategic investment decision that comes at a hefty price tag. Being naturally limited in the resources they can spend (Shirodkar and Mohr, 2015), paired with the uncertainty of return, or even the quantifiability of corporate political action, the decision on *how* to build relationships with governmental and legislative stakeholder is of vital importance to company executives.

Academic literature differentiates CPA into transactional and relational CPA. Firms that participate in a transactional fashion engage in corporate political activities on an issue-by-issue basis, seeking to exert their influence only when necessary. Firms that use a relational way build long lasting relationships, in an effort to either exert constant influence, or being assured that structures are in place to shape legislation when the need arises. Hillman and Hitt (1999) propose that this decision is, amongst others, determined by the structure of the firm, in particular how related a firm's business units are - however, no scholarly evidence of the validity of this hypothesis exists.

Given that no empirical evidence has existed in the literature to prove the validity, Iwill empirically investigate the relationship proposed by the authors, to answer the research question:

"Does the extent of related product diversification affect a firm's decision of choosing between a transactional and a relational style of corporate political action?"

Hillman and Hitt (1999) theorize the higher the degree of a firm's related diversification, the more likely a firm is to engage in relational over transactional CPA. The authors argue that single unit businesses, or those that are more related, have a narrower scope on the policy domains they desire to manage, as the industry domains they operate in are narrow. These firms, according to the authors, have the opportunity to create *"specialized political capital"*, or in-depth relationships with policy makers and highly specialized knowledge of certain policy domains. Unlike widely unrelated conglomerates, who would need to cover a range of policy domains if they were to successfully shape the institutional environment of all the industries they are operating in, related diversified firms can concentrate their actions on such a limited domain.

Given that the establishment of specialized, or policy domain specific, political capital is costly, as it requires extensive resources over a prolonged period of time, the establishment of such is more suitable for companies that are affected by fewer policy domains. Firms that cover fewer policy areas are thus more likely to engage in relational CPA, as their return on investment is higher, as it covers most or all of their business units. Unrelated conglomerates on the other hand are more interested in managing their institutional environment sporadically, in a transactional manner, managing policy issues when the need arises.

Using the example of US defence companies focussed on the export of military equipment, firms that are very specialized on exporting defence equipment to other nations can establish deep knowledge and strong connections of the policy process revolving around foreign policy and arms exports approval. Their capital deployed on this issue covers all of their business segments, promising a high return of investment. Instead of just employing lobbying firms sporadically, these firms may, according to the

theory investigated, hire a former senator active in the United States Senate Committee on Foreign Relations. A defence firm that also covers unrelated, civil operations, would incur a higher economic cost when following this strategy, as its expenditures cover a lesser share of its revenue generating segments.

In this thesis, I will empirically analyse the example of CPA of firms operating in the US defence industry, an industry historically dependent on the institutional environment they are operating in. I will investigate if the degree of related horizontal product diversification affects the decision to choose between a relational and a transactional CPA approach in politically connected firms, hypothesizing that firms which are highly specialized, e.g. exhibit a related degree of diversification or are of highly specialized into a single business unit, tend to choose a relational approach, while widely diversified firms, exhibiting unrelated product diversification, prefer an issue-by-issue transactional approach.

To analyse this, the thesis looks at a sample of the top 49 companies that make up the majority of the US defence industry over a 10-year period from 2009-2019. The thesis uses their annual lobbying contributions to private lobbying firms, that voice the firms' concerns in the ongoing political process when the need arises, as a proxy to measure the firm's transactional political actions. A rare insight into a firm's effort to influence the policy process, these contributions are part of the public record, and are readily available for research. To proxy the firm's relational political engagement, the thesis looks at the political connections of a company's senior management team, as well as their board of directors.

The thesis will begin by outlining the current state of the literature on CPA and diversification, on the basis of which a theory will be developed. After that, the thesis will provide an elaborate discussion the industry investigated, the defence industry. This will be followed by outlining my methodology, after which the results will be presented and discussed.

2 Literature Review & Theory Development

In this section of the thesis, the current state of the academic literature will be discussed. This includes an introduction to the literature on corporate political action, continuing with an in depth look on the discussion of the sub-fields of transactional and relational CPA. Lastly this section will discuss the current state of literature on government resource reliance and firm diversification.
After providing an overview of the literature, the insights provided will guide the development of the theory that is being investigated and tested at a later point in the thesis.

2.1 Corporate Political Activity & Motivations

Corporations are a significant political player in capitals around the world, pushing their influence through various channels at their disposal: In Washington they employ 44% of all lobbyists (Hillman et al., 2004), their corporate donations fuel the campaign spending race on all political levels, and many of their executives can shape policy directly through seats on presidential advisory committees. Corporate funded NGOs, such as the World Economic Forum, further push their donors' economic objectives and organize meetings to smooth communication and build networks of influence. These various channels of corporate influence on to government and legislative bodies has been coined as *Corporate Political Action* by scholars such as Baysinger (1984).

In essence, corporate political action is a popular type of corporate strategy to manage stakeholders and the general environment a firm is operating in. Baysinger (1984) defines corporate political action as an attempt to shape government policy in ways advantageous to a corporation. CPA comes in different forms, including campaign contributions, lobbying, revolving door lobbyism and other public-private linkages, political action committees, and rarely, even bribes (Lawton et. al. 2012). This thesis

uses the distinction made by Hillman and Hitt (1999), grouping these activities into transactional and relational CPA.

Transactional contracts between firms and agents are defined as those that are short-term, that are more flexible and efficient in dealing with policy makers and are preferable under frequently changing political regimes (Sadrieh and Annavarjula, 2005). Firms can adjust their contracts if the political climate changes, and, given their short planning horizon and issue-by-issue nature, can be adjusted or terminated if the intended requirements of the relationship are not fulfilled by either party of the contract. If the firm finds that the agents' ability to provide resources for the firms has declined, either due to a change of the political climate or a change of the firm's internal priorities, they can freely move to find an agent that better suits their needs. Relational political connections on the other hand are, according to the authors, characterized by good faith and fair conduct, and both actors are motivated to sustain the relationship over time. The relationship is mutual.

Sadrieh and Annavarjula (2005) investigate the reasons why firms engage in corporate political activity, and address factors that influence the intensity of such efforts. They define CPA as an effort to build corporate political resources, a tool utilized to control the external environment of a firm, and to reduce the uncertainties that are created by institutional actors.
The authors argue that, given it requires a substantial amount of sunken costs, paired with a high threshold at which lobbying becomes an effective tool and the considerable uncertainty on the return of the investment, larger firms are more likely to engage in it: These firms are able to spread these costs over their sales volume. The authors find significant evidence that the size of annual sales increases the probability of a firm engaging in CPA.

Comparing the effectiveness of the two CPA approaches, Hutches et al. (2016) find that the returns of the two differ among industry. Employing a relational approach on issues related to tax, defence, federal budget and healthcare are positively correlated with

abnormal stock returns. Transactional lobbying on issues relating to healthcare and the environment leads to negative stock returns, letting the authors come to the conclusion that in most cases, transactional lobbying is less likely to enhance shareholder value than a relational approach.

These findings however raise the question as to why firms would choose the transactional approach in the first place, if it is indeed less likely to create value for the firm than the relational one. Figueiredo and. Kim (2008) provide some insights, arguing based on transaction cost theory. Based on corporate political activity of firms in the telecommunications sector directed towards the United States Federal Communication Commission, the authors find that firms use the incurrence of transaction costs to decide their strategy. When lobbying in the traditional sense, sharing information with regulatory bodies in order to influence their decision making, firms can incur transaction costs in the shape of information leakage. These firms risk confidential information, potentially even those that derive them a competitive edge, being shared with competitors. If the information shared is confidential, firms prefer to use their in-house relational capabilities, such as their connected board members or executives, to avoid having to share the information with outside lobbying firms to deliver them on their behalf. When the information is not confidential, firms prefer to hire outside lobbyists, as they can be used on a transactional basis, using less resources in the long run.

2.2 Transactional Corporate Political Action

Transactional corporate political actions are sporadic, short time horizon actions taken to influence public policy. The most notable representative of this type of political strategy is lobbying. The definition of the term lobbying varies between scholars; Milbrath (1965), as cited by Wise (2007) is viewed as having made the first academic attempt to define the term, defining it as "*the stimulation and transmission of communication, by someone other than a citizen action on his own behalf, directed to a*

governmental decision maker, with the hope of influencing his decision". Hojnacki and Kimball (1998) provide the most broadly accepted definition, defining lobbying as "*providing information directly to members of congress (or their staff) to further one of two goals: affecting legislation and coalition building"*.

When corporations choose to engage in lobbying, they hire lobby firms, who in turn represent the firm's interest with key policymakers. These firms then become advocates for the firms' interests in various political institutions. Their service is to act as an agent between firms and politicians; these firms commonly employ well connected former politicians who have both a thorough understanding of the political process and a broad network that gives them access to elected officials. The nature of this constellation makes lobbying transactional. These lobbyists serve as agents and are not a part of the firm they are advocating on behalf of. Firms can choose to hire lobbyists when the need arises, as for example to lobby for specific bill in congress; no long-term financial commitment is necessary, and the contract can be ended when the demand for influence on a specific issue no longer exists.

The academic opinion of the impact of lobbying activities on firm value is split, with some scholars finding that lobbying generally increases firm value (Hill et al., 2013, as cited by Hutches et al. 2016), some find that it decreases firm value (Coates, 2012), and some find that spending on lobbying activities is not associated with firm value at all (Chen, Parsley, Yang, 2015).

Faced with the ambiguity of previous studies, Hutches et al. (2016) investigate in what circumstances lobbying creates or destroys firm value. They distinguish between various factors that may have an effect on lobbying returns, including the industry a company lobbies for, the lobbying approach, and the potential value to be gained from lobbying. Fundamental to the payoff is the motivation the firm has to engage in CPA, with two competing views describing them. The first view, the strategic investment view, describes lobbying efforts as a strategic investment, meaning they are intended to create future economic benefits in the interest of the company and their shareholders. The

strategic investment view on lobbying predicts a positive impact of lobbying expenditures on firm value, unlike the second view, the agency view.

The agency view sees lobbying as being personally motivated by single managers, who benefit of the power and influence that is associated with lobbying activities, at the expense of their shareholders. Drawing on Jensen (1996), who finds that firms with a greater Free Cash Flow experience higher levels of agency problems, given their managers are put under less financials constraints, the authors find that firms with a higher Free Cash Flow experience a negative relationship between lobbying activities and abnormal stock returns, while firms with a lower Free Cash Flow experience a positive relationship. Therefore, the authors find that firms that have lower cash flows, e.g., more to gain from lobbying, are more successful in producing returns from lobbying.

2.3 Relational Corporate Political Activity

Relational CPA describes the establishment of a relationship between the firm and policymakers, that is mutual and is maintained over a long period of time, independent of the firms' current demand for political influence.

Strong ties between firms and politicians are common and widespread around the world, Faccio (2003) finds publicly traded firms in 35 out of a sample of 47 countries with a former politician on their board or in a senior executive position, accounting for 8% of worldwide stock market capitalization.

The value addition derived from these political connections takes various forms, such as lighter taxation, relaxed governmental oversight, and/or stiffer oversight of competing enterprises (Faccio et al., 2006), and preferential treatment by government owned businesses. Khwaja & Mian (2005) find that politically connected firms enjoy a lower cost of debt with nationally owned banks in India. During the 2008 financial crisis, US Banks were critized for being too closely connected to the White House; Faccio et al.

(2006) find that companies with strong political connections are more likely to be bailed out.

Academic literature suggests that that these benefits of relational CPA are well known both by senior management as well as the firms' shareholders. Faccio (2003) finds in a cross-national study that the announcement of a company's senior officer entering politics produces an abnormal stock return of 1.94% in the 5 days after the announcement, a senior executive named a minister produces an average abnormal return of 12.3%, leading to assume that shareholder expect an increase in profitability through the increase in political influence the firm experiences.

Faccio's (2003) findings also suggest that these abnormal returns differ from country to country, with abnormal returns being higher in countries that exhibit higher levels of corruption, than those that show lower levels of corruption. The author finds that firms in more corrupt countries have more connections to the government. This is particularly common in countries with high levels of corruption, and countries with more transparent systems. The latter however, as the author points out, might be misleading, as countries with more transparent institutions may simply provide more information on such conflicts of interest than others.

As more recent literature suggests however, the findings by Faccio (2003) should not suggest that political connections do not lead to significant returns in low corruption environments. In contrast to Faccio (2003), Amore and Bennedsen (2013) find that political connections can generate significant value to companies, even in a low corruption environment such as Denmark. Denmark ranks on the second place in 2020 and 2019 on Transparency International's corruption Perception Index, down from first place in 2018 (*Transparency International*, 2019). The authors study the effect of family ties between business and local elected officials. Using an event study, making use of an administrative reform implemented in 2005, that merged 238 municipalities into 65 new ones, and leaving 33 unchanged, granting significantly more power to remaining administrative officials in the 65 merged municipalities. The study finds that a doubling

in political power, as measured by constituents per politician, translates into a doubling of operating returns of firms that were politically connected before and after the merger through a family connection. In the control group, the unchanged municipalities, operating returns did not change significantly. This effect was larger for firms with higher revenues and firms that relied more heavily on public procurement contracts.

With the study having taken place in Denmark, one of the least corrupt countries according to Transparency International (2019), it is underlined that relational political ties are universally beneficial, in both countries with a weak *and* a strong institutional environment and corruption levels. Having established that firms benefit from their senior executives being connected to local politicians and benefit from their senior executives entering politics, the question remains if the opposite direction holds true as well: Do firms derive value from former politicians entering their corporate boards and top-level executive positions?

The CPA literature understands the appointment of politicians onto corporate boards or executive positions as a tactic to manage a company's dependency on government, (Lester et al, 2008, as cited by El Nayal et al, 2021), with the intention of transforming government representatives into agents of the company. This practice is commonly referred to as "Revolving Door Lobbyism" (Vidal et al., 2010).

According to El Nayal et al (2021), firms expect two types of resources from former politicians.
Firstly, the nature of their connections they established during their political careers allows for access to the policy process, long after they have left office, aiding to partake in shaping legislature that may benefit the firm's operations, or pushing legislature that may harm their competitors. In addition, former, yet still connected politicians can provide their firms with privileged access to valuable state-controlled resources, such as subsidies, tax reductions, and public procurement contracts (Bertrand et al., 2018). As the authors point out, this preferential access to the policy process helps firms to guard their monopoly position or weaken the competitive position of their competition.

Secondly, besides the active influence on the policy process, former politicians can contribute a more passive addition to a firm's corporate political strategy. As political processes are often complex, intransparent, and difficult to grasp for outsiders, "Political Executives" can supply firms with the valuable resource of non-public knowledge of the functioning of policy and government. This can include the sharing of loopholes in the bureaucracy (El Nayal et al. 2021) and the real-time insider view on the policy process. Therefore, even without direct political influence, political executives can aid firms in determining the likelihood of policy changes in order to manage their competitive implications - better than those executives that are not politically connected. In their study, Nayal et al. (2021) find that appointments to corporate boards of firms that rely strongly on their regulatory environment, such as the US defence industry, do not significantly affect investor reactions (increase in share price), however, the perception of a weaker institutional environment moderates this. In a weaker institutional environment, firms that rely on legislation and public contracts are incentivized to appoint senior board members and executives that have close ties to the government.

Given that former government officials only contribute value under certain conditions, with the institutional environment being identified as one moderator, the question remains if other moderators are at play. Lester et al. (2008) provide valuable insights, arguing that the type of political manager has a significant influence on whether his or her appointment will benefit the company employing them.

To differentiate between the quality of political managers, the authors use the two core elements they bring to the organization, human and social capital. Human capital refers to an individual's "*expertise, experience, knowledge, reputation, and skills"* (Becker, 1964, as cited by Lester et. Al, 2008), social capital refers to the accumulative resources that can be derived from relationships that individuals have. Lester et al. (2008) argue that the value added to firms by political managers results from a combination of the two types of capital.

The combination of these two can, in sum, reduce transaction costs in the interplay between firm and government. Lester et al. (2008) find that four characteristics

significantly determine the likelihood of a politicians joining the private sector as a director: The politician's tenure positively influences such probability, with every year spent in office increasing the chance of joining the corporate board of a corporation private sector by 3.9%. In addition to tenure, the breadth of experience plays an important role. Senators are more likely to join a corporate board (58.1 percentage points) than cabinet members are, as their experience in politics is broader, with a higher spread expertise around multiple policy issues- and consecutively more human capital available to share. The number of years out of office negatively influences the likelihood of joining a board, with the first year out of office being the most likely to join the private sector, and sharply declining thereafter, as their political network declines with former colleagues leaving office over time, and therefore their social capital declines. Similarly, a regime change decreases the likelihood, again due to a loss of connections, and therefore social capital.

To sum up, relational CPA literature finds that firms benefit from being closely connected to political institutions through current or former politicians in their executives and board positions, as it gives them the possibility to actively influence the policy process, allowing to manage the company's regulatory environment by receiving real time insights into the process, and taking indirect influence through the political managers' social capital. Studies show that this practice is especially valued in countries that have a weak institutional environment (Faccio, 2006), however there is reasonable evidence from Denmark (Amore and Bennedsen, 2013) that even in a strong institutional context, political connections can have a decisive impact to those firms that rely heavily on the reception of government resources, especially public procurement contracts.

2.4 Public Resources Reliance

A firm's dependency on public procurement contracts and other government resources to explain CPA behaviour is prominent within the CPA literature. Hillman and Hitt (1999) propose that if firms perceive a high reliance on regulation and government spending, firms will increase their lobbying intensity and opt for a relational approach,

as favourable government treatment is essential for business and justifies extensive investments on CPA, while those firms with a low public dependency may opt for the sporadic, transactional approach.

Commonly, the underlying theory used when explaining the relationship of public procurement on CPA is resource dependency theory (Hillman et al. 2004). RDT suggests that in order to sustain themselves, organizations depend on the access to resources held by external players, and the constraints associated with such a dependence can be absorbed, among other instruments, through CPA (Shirodkar and Mohr, 2015). Firms that operate in a highly regulated environment or rely on public spending as a significant revenue stream are highly motivated to manage their dependency by using CPA. With overwhelming evidence that the reliance on public resources is a significant indicator of a firm's decision to engage in CPA, it needs to be controlled for when analysing other factors.

2.5 Firm Diversification

A firm's choice of diversification brings valuable opportunities (Rumelt, 1982), such as synergies. When a firm diversifies into a related field, the company can use capabilities that are already widely available in other segments on the newly acquired segment, allowing revenue to increase over proportionally to costs, creating value for shareholders. Synergies as such include the lowering of fix costs, costs that remain even despite the expansion of a company's assets under management. Importantly to this study, these overhead costs can also include, among others, expenditure related to a company's corporate political activity. A review of literature related to diversification is therefore essential to understand the impact of diversification strategies on the firm's choice of engagement in CPA.

Synergies explain related diversification, as related segments use similar resources that can be shared among each other. Rumelt (1982) and Bettis (1981) find that related

diversified firms outperform unrelated ones by about three percentage points on Return on Assets. Bettis (1981) argues that the reason for this are Research & Development expenditures: Related firms show a higher return on R&D expenses, as more of their segments can profit from investments made into innovation. However, this raises the question why firms even engage in unrelated diversification.

Zhou (2011) finds that while related diversification allows for the harvesting of synergies, unrelated diversification does also follow economic motivations. To realize potential synergies, he argues, a firm has to actively manage the interdependencies between the existing and newly incorporated business segments, incurring additional coordination costs. Therefore, at an increasing level of related diversification, net synergies will decline as additional coordination costs increase, moderating positive synergy effects. The more segments a related firm adds to its portfolio, the more segments need to communicate with each other to, for example, coordinate what kind of input resources each segment needs. Coordination costs rise at a rate that is above linear, creating a ceiling level at which it becomes economically unfeasible to include more related business segments. At this level, it becomes more attractive for a firm to pursue unrelated diversification, as little synergies are possible, and integration therefore not as necessary. Zhou (2011) adds that firms may be able to add a related segment and simply choose not to integrate it in order to save coordination costs, however, he argues that this is usually not done because the achievement of synergies tends to be the justification of the merger in the first place and is thus expected by shareholders.

Similarly to the return on R&D expenses, CPA expenses should experience a higher return on investment in firms that exhibit related diversification, as, similarly to R&D, managing certain policy issues only benefits those segments that operate in that policy domain. Just like R&D, segments that are not related to the domain will experience no benefit. This logic implies that firms that follow a related diversification strategy, ceteris paribus, are more likely to invest more funds into CPA than a firm that is unrelated diversified.

This logic is also followed by Hillman and Hitt (1999). The authors differentiate between a relational and a transactional approach. The relational approach is the more resource consuming approach, requiring firms to build relationships with key political stakeholders over a prolonged period of time, to ensure mechanisms are in place to engage political circumstances before issues arise. This approach is more expensive than the transactional approach, as it involves continuous spending on the infrastructure required for such relations, such as an internal relations team, payroll for political managers, and offices in cities such as Brussels and Washington with the sole intention of influencing policy. The transactional approach on the other hand is less capital intensive, as issues are only dealt with once they arise, usually outsourced to a third party, such as a supplier lobbying activities, requiring little funds to maintain a costly infrastructure.

According to Hillman and Hitt (1999), this transactional approach is applied by unrelated diversified firms, as the return on investment of lobbying expenditure is lower, as discussed earlier. This view however stands in contrast to the argument of Sadrieh and Annavarjula (2005), who investigate the relationship between product diversification and lobbying activity. Using the argument of Zardhooki (1985) they argue that diversification increases likelihood of lobbying, given the existence of the "portfolio effect". The larger a firm's portfolio of business units, the higher the chance that any sort of corporate political activity will bear fruits in one of the firm's segments, no matter if the firms is relatedly or unrelatedly diversified.

The author finds statistical evidence for this; the degree of firm diversification does increase the probability of lobbying. However, the authors find that firm diversification does not increase lobbying intensity on a significant basis. The portfolio effect explains this partially, however not in the way they initially assumed. More diversified firms have a higher chance that one of their business units operates in an environment that is heavily reliant on governmental decision making, such as highly regulated industries, or those industries in which firms compete for public contracts and use their capabilities to gain a larger piece of the great pie of public spending.

2.6 Theory Development

This section will combine the findings of other authors, discussed above to develop the theory that is tested in this thesis.

Hillman and Hitt (1999) argue that firms that follow an unrelated diversification strategy are more likely to engage in a transactional approach, while firms that follow a related diversification strategy follow a relational approach. Objectively, the relational approach provides more benefits to the firm, as connections are already in place once regulatory difficulties occur and can be dealt with without a delay. However, the relational approach is not suitable for all firms.

There are two key reasons for this: Firstly, a relational approach is more costly. Maintaining relationships with political stakeholders requires constant investment of resources, regardless of if the influence provided by that relationship is demanded at the moment or not. A transactional activity however can be ended once the regulatory issue is dealt with.

Secondly, relationships to political stakeholders are not universal. Firms can establish relationships to key elected officials, however this individual will only be able to provide information or shape legislation in one particular policy domain, as politicians tend to be specialized on a single field of policy.

As related firms are only affected by the political impact of a few or even a single policy domain, as for example the defence industry is mainly concerned with the foreign policy domain, the creation of specialized political capital is economically effective for related firms. It is too costly for unrelated firms, as they would need to create costly specialized political capital for multiple policy domains.

The logic used by Hillman and Hitt is in line with firm diversification literature. Firms that practice related diversification tend to be more profitable than their non-related peers (Rumelt, 1982, Bettis, 1981). This is because related business segments allow firms to distribute some of its fixed costs to distribute it over a larger revenue. This reduces costs, increasing profitability. The costs that are named by Rumelt (1982) are

mainly the Research and Development Costs. However, similarly to those costs, expenses related CPA activities follow the same logic, as they, just like R&D costs, benefit every segment in a related segment group. Therefore, following the logic of Hillman and Hitt (1999), who argue that the establishment of specialized political capital is 1) preferable to sporadic CPA, 2) costly and 3) only applicable to one related segment group, firms that are closely related are more likely to follow a relational CPA approach, as it 1) brings more value to the firm, 2) the costs can be split over more segments, while 3) is applicable to more segments.

Because of that, a relational approach to CPA becomes unfeasible for unrelated firms. This leaves unrelated firms with two choices. Either they can engage in transactional CPA, or they can abstain from getting politically active at all, as sporadic transactional activities like lobbying are not guaranteed to add value (Chen et all, 2015, Coates, 2012). This choice is affected by Resource Dependency Theory. An unrelated firm will choose between engaging in transactional CPA, and not engaging at all, based on the resources it needs to secure to operate effectively (Shirodkar and Mohr, 2015). Firms that are highly dependent on public resources such as regulation and procurement contracts will absorb this dependency through strategic tools available to them. Transactional CPA is still an effective tool for that.

I argue that in the example of the US defence industry, firms that are unrelated diversified do not have an incentive create long lasting, resource intensive relationships to policymakers, as those relationships only add value to a limited number of the firms' segments. However, given the US defence industry is highly dependent on government resources, including regulation and procurement contracts, it will not disregard engaging in CPA in general, instead unrelated firms in the US defence industry will opt to adapt a sporadic approach to manage their political environment: They will decide to engage in transactional CPA. Therefore Hypothesis 1 states as follows:

H1: There is a negative relationship between the related diversification of a firm and the extent of its transactional CPA activities.

US defence firms that follow a related diversification strategy however profit from synergies (Rumelt, 1982, Bettis, 1981). Just like R&D expenses, they can distribute the costs for CPA over most, if not all of their segments, as they are within the same policy domain. As a relational approach is generally more effective than a transactional approach (Hillman & Hitt, 1999), and is economically affordable and feasible to them, these firms will prefer to engage relationally. Thus, hypothesis 2 states:

H2: There is a positive relationship between the related diversification of a firm and the extent of its relational CPA activities.

Following the establishment of the two hypotheses, the thesis will continue by reviewing the industry that these hypotheses will be tested in, the US defence industry.

3 Industry Review

3.1 Choice of Industry

The Stockholm International Peace Research Institute (SIPRI) defines arms producers as a firm that devotes a significant share of its activities to the design, manufacture, and selling of products and services intended specifically for military use. Arms producers include organizations that produce rocket launchers, battle tanks, aircraft, marine vessels, combat helicopters, cruise missiles and ammunition, and those firms that provide services such as cyber-warfare capabilities, training programs, mercenary services, and battlefield infrastructure and logistics (SIPRI, 2019). The United States is the world's largest producer of such defence equipment and services; the US defence industry had an annual turnover of $909Bn in 2019, equivalent to 4% of the US GDP in that year.

I focus on the US Defence Industry, because it is extremely careful in managing its external environment. The industry relies on the US government on substantial parts of its revenue as a client, prompting it to use corporate political action as a viable tool to increase its market share. Successful use of CPA can increase the number of contracts given to industry members, by influencing government defence policy in general, or establishing relations with singular powerful individuals in government or senate committees. In addition to public procurement contracts, the US government plays a crucial part in determining the size of the defence market through legislation. Uniquely in the defence industry, the US government can limit the market, as it needs to approve exports to non-NATO countries, and it can expand the market, by using arms sales to foreign countries as a tool of diplomacy. For example, President George W. Bush has hindered US arms sales to Saudi Arabia, amounting to a total of $16Bn USD under his presidency, while Barack Obama has encouraged them, amounting to $48Bn under his (SIPRI, 2019).

This high dependency on Washington policy makes the US defence industry an excellent setting to analyse the use of political strategies by US corporations.

3.2 History of the US Defence Industry

The origins of the US defence industry lie in World War II, after which it became apparent that simply turning a civil manufacturing industry into a defence industry would not cohere with the specialization that the advanced weapon systems of the second half of the 20th century needed to have to compete in an ideological arms race with the Eastern Bloc. Nations needed to be vigilant, as engagement in armed conflict seemed to be inevitable at all times, leading to the creation of an elaborate network of highly advanced defence firms and their suppliers throughout the United States. With the collapse of the Soviet Union and the subsequent end of the Cold War, defence budgets across the world were cut down by around 30% in the 1990s (SIPRI, 2019) as public support for defence spending declined. The industry adapted by completing a series of mergers during that time, reducing the group top 100 US defence companies to

just 74. This so called “peace dividend” only lasted for a decade; spending recovered in the early 2000s, as the attack on the World Trade Centre ended the illusion of post-Cold War peace. Subsequently, the US, along with its NATO allies began to engage in multiple low intensity conflicts in Afghanistan and Iraq, and more recently Syria, Somalia, Mali, and other African countries.

Alongside with Russia’s regained strength, demonstrated in Syria and in the annexation of the Crimea in 2014, the US and NATO increased their military budgets to all-time highs in the mid 2010s. In 2020, the US spent $732Bn of its annual budget on defence (*SIPRI*, 2019). Most of the investments in defence systems is contracted to the domestic US defence industry, which relies heavily on US federal spending.

3.3 Corporate Political Behaviour

The top 49 US defence firms that were sampled for this thesis, derived on average 53% of their total 2019 sales from just the US Department of Defence (DoD) as well as other US government agencies. The incentive for these firms to influence key decision makers in both the government and also defence budget committees in the US Senate is therefore immense. Not only do US defence companies hope to increase domestic sales by engaging in CPA- US foreign policy is critical in promoting US arms sales around the world, recently showcased when the US government applied sanctions onto Turkey in 2020, after the NATO ally chose the Russian S-400 missile defence system over US Raytheon’s Patriot system. In addition, exports to non-NATO allies need to be individually approved by the US congress.

Smiley (2013) finds that a US defence firms willingness to lobby is highly cyclical. In the aerospace defence sector, he finds that a firm’s cash flow per share is *negatively* correlated with lobbying expenditures in the following year, while a firm’s inventory turnover is *positively* correlated with lobbying expenditures in the next year. Cash Flow per share (net income + depreciation & amortization per share) is an indicator for a

firm's financial performance in a given year, the inventory turnover is an indicator of a company's contract flow. A high inventory turnover means that the firm serves only few, large clients, and is therefore reliant on securing contracts when it can, while a low inventory turnover means numerous, smaller clients are served, with a steady pipeline of new contracts aligned.

The findings by Smiley (2013) reveal an interesting pattern of CPA activity in the US defence industry. Once a firm receives a new contract, its cash flow rises. With less urgency to be awarded a new contract, the firm's lobbying activity decreases. Finishing a contract, e.g., shipping the physical goods, is indicated by a decrease in inventory turnover, which prompts the need for additional contracts, leading the firm to enhance its lobbying activities in the consecutive year. These findings not only are a good indicator to predict the CPA activities of US defence contractors, but they also underline how reliant the US defence industrial complex is on CPA to fuel its growth.

Additionally Smiley (2013) finds that US defence companies use CPA as a tactic to reduce risks arising from public exposure. He finds a positive relationship between a US defence firms exposure in the media, measured by the annual number of mentions in the Wall Street Journal, and a firms' lobbying intensity.

This suggests that within the US defence industry, heavily reliant on government contracts to fuel growth, use of CPA is an essential part to avoid a loss of public contracts due to reputational damages caused by public scrutiny.

3.4 Motivations for CPA and Diversification

Uniquely, the defence industry uses diversification not only out of financial considerations, but also as a mean to manage its reputation. Public scrutiny, in the shape of media attention, can incur a heavy economic cost on firms in general, but in particular those that manufacture weapon systems, given these firms already operate on the "legal, but repulsive" side of the public opinion spectrum (Durand & Vergne, 2015). Attacks from the media incur costs, regardless of whether or not social norms where actually

violated. Firms that are targeted by media attacks may lose, besides reputation, their legitimacy, important to have in order to be granted contracts by the federal government. According to Durand and Vergne (2015), these firms face difficulties acquiring resources, sustaining relationships with politicians and connected board members, and may lose suppliers and customers, as connected parties will aim to avoid negative spill overs, related to the mere association of the targeted firm. In addition to that, defence firms face increased scrutiny from additional stakeholders, such as activist investors, disarmament focused NGOs, and institutional investors, such as the mighty Norwegian Norfund, the largest pension fund in the world, which is known to divest from mischievous defence firms even at alleged misconduct (Vergne, 2012, as cited by Vergne & Durand, 2015).

While other morally dubious organizations are not constantly perceived being harmful, such as the oil industry, that is usually only under scrutiny in the event of an ecological catastrophe, such as an oil spill, the defence industry is far more exposed to reputational damage, as the authors point out, given their sole existence is morally ambiguous, given their "raison d'etre" is the manufacturing of goods with the purpose to kill.

Their strategy to avoid negative consequences from media is therefore not solely transactional, they cannot rely on managing reputational risk once a crisis occurs but needs to be more profound. Strategic acquisitions and/or divestiture, for the main purpose of avoiding negative press coverage are a common tactic in the defence sector. Therefore, the theme of reducing the consequences of reputational damages is not just prevalent in the explanation of the industries' CPA behaviour, but also its diversification strategies.
Media reports on ethical misbehaviour, such as when their products are found in non-UN sanctioned conflicts are almost impossible to mitigate:

> *"Heckler & Koch Fined $4.2 Million Over Assault Rifle Sales in Mexico" (NPR report on illegal H&K rifle sales to Mexican drug cartels via local governments, 2019)*

"Made in America: Shrapnel found in Yemen ties US bombs to string of civilian deaths over course of bloody civil war" (CNN Report on Raytheon precision laser-guided ammunition sales to Saudi Arabia, 2018)

Whether proven or not, reputational damages from such media attention are difficult to manage for defence firms, as they are taken at face value by the general public, given the stigmatized nature of their industry (Durand &Vergne, 2015). As rhetorical ways of managing such reports are limited, defence firms need to use other, more credible ways to manage stakeholder concerns. Divestiture from the scrutinized part of the business, the authors argue, is an effective way to credibly signal shareholders, the media, and the general public, that the firm is taking steps to change its business practices onto more ethically compliant ways and renew its long-term reputation. As this change happens not on a superficial, but on a resource level, that even may have a short term negative financial effect, the act of divestiture can be taken as *credible* by the media and general public. This divestiture does not need to be however, financially impactful. It just needs to be sufficient enough for management to believably argue that the firm is redefining itself.

Durand &Vergne (2015) find significant evidence that media attacks on entities increase the chance of divestiture, with each additional attack increasing this probability by 8%, additionally the authors find that the probability of divestiture also increases, to a lesser extent, if an industry peer is targeted by the media.

To sum up, the members of the US defence industry make use of an elaborate toolbox of CPA strategies that allows its firms to sustain and enhance its market positions in a strongly contested market. The industry is relying on a single buyer for most of its revenue, the DoD. This has made it a necessity for the industry to carefully work its non-market environment. Given the main client, the DoD, and those who decide on its budget, the US congress, are subject to intense public scrutiny, US defence firms need to manage reputational damages, as public pressure can decrease the flow of public contracts that they so desperately rely on. They do so, among others, using diversification strategies. Divesting from scrutinized business segments sends credible

signals to the general public, rebuilding the firm's legitimacy, and therefore reducing the risk of being overseen in the distribution of contracts by the DoD and US Congress. In addition to diversification strategies, US defence firms use CPA strategies to gain government contracts. Their increased spending on CPA activities once a current contract is completed indicates that defence firms see CPA as a valuable tool to acquire market share.

4 Methodology

4.1 Research Philosophy

Following the research model proposed by Saunders et al. (2007), this thesis is grounded in a positivistic research philosophy. The research performed in this thesis is of empirical nature, and all interpretations of the results are logically derived from them. In line with positivism, the research is conducted in isolation of cultural and other contextual factors. To answer the research question, this thesis chooses to use a deductive approach. The theory that has motivated this paper was proposed by Hillman and Hitt in 1999, however, no deductive research to test its validity has been published in notable journals since. The research strategy is an empirical approach, using the mono method; only quantitative data is used in the analysis. The data is collected in a cross-sectional style, with data being extracted from 37 firms in the US defence industry, over a limited time period of 10 years, from 2009 to 2019.

4.2 Data

To study the use of transactional and relational CPA, this thesis uses a sample of the US defence industry, for reasons discussed above, mainly because their high dependency on government resources such as contracts, regulation, and the need to shape their competitive environment and public opinion makes this industry a strong user of CPA.

This thesis derives its sample from the 2019 SIPRI annual list of the top 100 arms manufacturing companies in the world, of which 49 were US based. Of these 49 companies, the sample was reduced to 37, as given the private, or non-stock exchange listed nature of some, made the companies too untransparent to derive reliable information on financials, diversification, and/or senior leadership information from them. Of those firms, data over the period of ten years was used, from 2009 to 2019, the most recent available annual data. Therefore, the sample size is n=370.
All 37 firms where actively pursuing a corporate political strategy as is defined in this thesis.

Only one country out of many represented on SIPRIS's 2019 list was chosen for this analysis, for two reasons. First, countries differ in their disclosure laws. In order to be able to obtain the same data for each observation, it is crucial all companies are governed under the same jurisdictions, minimizing the amount of missing data points, as they need to disclose the same type of information.

Second however, it is preferable to choose one country, as this naturally controls for the institutional and market environment. The communication and cooperation between the state and interest groups differs widely between countries, such as between corporatist and pluralist systems. If both a pluralist and corporatist country were represented in the study, it may be the case that firms in corporatist countries simply employ more connected board members, because their access to government is more limited than those firms in pluralist countries.

From the market perspective, a firm operating in a more crowded domestic market may be more inclined to use CPA in order to gain a competitive advantage over its rivals, then in a market in which little competitive pressure exists. For example, in the US, both Boeing and Lockheed Martin have the internal capabilities to develop and manufacturer advanced fighter aircraft domestically, which made them competitors to develop the F-35 program. Firms from countries with multiple competing manufacturers may be more

likely to use CPA as a tool to compete, whereas firms in countries with a single supplier of military jets are expected to make less use of this, such as Brazil's Embraer. Thus, a sample with firms from a single country naturally controls for institutional and market factors that affect a firm's decision to engage in CPA.

The country chosen for this study is the United States, as US based publicly traded firms underly a strict regulatory disclosure regime by the Securities Exchange Commission (SEC), requiring them to disclose the same type of information in every fiscal year. Besides economic data, the United States has one of the most stringent disclosure rules regarding transactional lobbying activities. Contributions towards campaign financing, PACs, and crucially for this thesis, any contributions towards lobbying firms need to be made part of the public record and are made available for research by anti-corruption NGOs.

4.3 Independent Variable

Hillman and Hitt (1999) use the extent of related/unrelated diversification in their theory. The independent variable in this thesis is therefore related diversification- it measures the extent to which a firms business segments are related to one another. Crucially, related diversification does not measure the extent of diversification itself. A firm can be highly diversified into several business units, yet if all segments produce very similar goods, this indicator will still treat it as if the firm was made up of a single business unit, producing a single good. To quantify the related diversification of a business, its SIC code(s) are used. Using the SIC code as a classifier is common standard in diversification literature, Rumelt (1982) used it in his pioneering work to link business diversification to profitability. The SIC system classifies any type of economic output by a four-digit code, with the first two digits specifying the overall industry, and the last 2 digits narrowing down the field.

Example of the SIC classification for the manufacturing of aircraft turbines:

SIC 37- Transportation equipment
SIC 372- Aircraft and parts
SIC 3724- Aircraft engines and parts

For each of their segments, firms have an SIC code to categorize their economic activity. With single unit firms having one code, and widely diversified conglomerates using multiple codes, allowing not only to measure the extent of their overall diversification, but also how related their segments are.
To quantify related product diversification, product count measures, such as the *entropy measure* are a popular tool in contemporary literature (Robin and Wiersma, 2003). These measures do not just consider how closely different segments are related to one another, but also include variables to capture the proportion of revenue derived from each segment. This is important, as a firm that produces mostly a single good, and only a small quantity of an unrelated good, should be classified as more related than a firm that produces two unrelated goods evenly. In addition, the two information needed for these indices are readily available for this thesis: SIC codes and revenue of the last 10 years for each firm in the sample were retrieved from the Compustat database.

I therefore use the entropy measure, in line with Robin and Wiersma (2003). The entropy measure defines that that a firm's total entropy is made up of its related entropy and its unrelated entropy. With the information available, the total diversification (DT) and the unrelated diversification (DU) of an individual firm can be calculated, which can then be used to compute the related component (DR), following Robin and Wiersma (2003):

$$DR = DT - DU$$

Total entropy (DT) is given by:

$$DT = \sum_{i=1}^{N} P_i \; ln \; (1/P_i)$$

in which P_i is the proportion of sales in a given SIC code i, for a company with N different 4-digit SIC codes.

Unrelated diversification (DU) is calculated in the same fashion, using 2-digit SIC codes:

$$DU = \sum_{i=1}^{N} P_i \; ln \; (1/P_i)$$

in which P_i is the proportion of sales in a given SIC code i, for a company with N different 2-digit SIC codes. Using this formula, the level of related diversification for all firms in the sample can be computed. In my sample, a value ranged from 0 to 1.33, with 0 being having no relation. If none of the companies' segments are related, Unrelated Entropy equals the Total Entropy, with Related Entropy being 0. The company Textron Inc. has the highest value in the sample, 1.33.

More related than this are only single SIC code businesses, which are specialized in producing a single product. These cases however show a limitation of the entropy index. P_i measures the percentage of revenue derived from segment i, however if this 100%, ln $(1/P_i)$ equals zero, setting the entire equation to zero. The entropy for the two extremes, single segment business, and completely unrelated diversification, is both zero. To overcome this issue, it was necessary to manually change the data. Single segment firms therefore receive the entropy of 1.5, just above the most related diversified multi-segment business.

The main issue arising when using one of the common revenue weighted measures, such as the entropy measure, is that it is binary in deciding whether SIC codes are related or not, it does not consider how far apart the SIC codes are. For example, a firm having

half of its operations in SIC 24 - lumber and wood products and half in SIC 25- furniture and Fixtures, would be considered as unrelated as a firm operating in SIC 45- transportation by air, and SIC-71, Architectural Activities.

4.4 Dependant Variables

The objective of this thesis is to empirically investigate the relationship proposed by Hillman and Hitt (1999), that firms that practice unrelated diversification are more likely to engage in transactional CPA, while firms that practice related diversification prefer to use relational CPA.

The diverse forms that CPA can take however make it difficult to analyse the causality. Therefore, a single strategy within CPA needs to be selected to proxy overall intensity of CPA for a given corporation, both for transactional and relational activities. As was established, the most notable examples of CPA are campaign contributions, the hiring of lobby firms, hiring politicians to corporate positions ("revolving door"), political connections, and rarely, bribery. Out of all these possible pathways for political action, two dependent variables need to be defined, one for transactional and one for relational CPA.

4.4.1 Transactional CPA

The best of those strategies to choose as a proxy for transactional CPA is the contributions made to lobbying firms to lobby congress and the US government itself. This is because it is the easiest to quantify; in the US, firms need to disclose all financial contributions through lobbying organizations, making the data accessible for research. Contributions through lobbying firms, who are paid to use their contacts to influence legislation, do not require the firm to establish a long-lasting relationship with insiders, the service is provided for them by the lobby firm itself. The service can be used whenever a political issue arises and needs to be managed, making it transactional by nature.

For this reason, the dependant variable for transactional CPA will be defined as the annual contributions made to lobby firms in an effort to affect legislation. The data has been extracted from the website Lobbyview.org, a database that automatically pulls lobby reports once they are filed and become part of the public record. Since legislature on lobbying transparency was passed in the US Congress in 1995, US lobby firms have to disclose each individual transaction between them and their clients, including the clients name, the individual bill that is to be lobbied, and the amount of the contribution made. Out of those reports, the total lobbying expenditure of each of the companies in this sample can be recorded for the years 2009-2019.

Crucially, these payments only include contributions to lobby firms for individual bills, not payments towards special interest groups or contributions to parties and individual candidates as part of a campaign funding event. This is important, as lobby firms provide transactional services; essentially political connections are rented for a short period of time, a substitute for actually establishing relations themselves. Campaign contributions are not included in the dataset either, this is good as well, as they can be considered relational, as firms tend to donate to campaigns of a party regularly, establishing a relationship in the process.

Given the accessibility of the data and the deeply transactional nature of it, contributions to lobbying firms is the first dependent variable to proxy transactional CPA. The variable is measured in relation to total annual sales. The variable is represented as: Total Lobby Expenditure/ Annual Sales. Therefore, it describes the percentage of revenue dedicated to lobby expenditures.

Based on this, Hypothesis 1 one is tested as follows:

Hypothesis 1: There is a negative relationship between the related diversification of a firm and its contributions made to lobbying firms.

4.4.2 Relational CPA

The most applicable way to proxy for the extent of a firm's commitment to relational CPA is to measure the extent to which it has absorbed former politicians into its company structure to gain their social and human capital.

The literature remains undecided on which position these individuals should be placed in within the organization to benefit it most. Hillman (2005) argues that this happens either through direct employment, such as a senior management position, or through the appointment on the firm's corporate board. Given both of these options are reasonable based on the theory reviewed in this paper, and there is no previous work that will allow to judge if firms prefer to place former politicians on executive teams, or rather corporate boards to establish an interconnection to the institutional environment, I will use both as two separate variables to test the relationship: Connected Executives and Connected Directors.

4.4.2.1 Connected Executives

The first variable I am using to proxy for relational CPA revolves around the top executive positions of a firm, namely the position of "General Counsel", and "Vice President of Government Relations". The General Counsel, or Chief Legal Officer, guides the company along the legal boundaries of the institutional environment, but also deals with issues revolving around stakeholder management. Both of these traits make this position interesting for firms to be staffed with former politicians. The second position that is included in the analysis is the VP of Government Operations, also often referred to as Washington operations. The tasks of this position, and the department it is heading, is solely to monitor, and if possible, intervene any regulation that may affect the competitive position of the firm. In addition, this department aims to establish relationships with key stakeholders in public positions, and to provide written testimony for public hearings on bills discussed in legislative branches of government on both national and state levels (*Lobbyview.org*, 2020). The department may even oversee a staff of lobbyists employed by the company. In essence, solely the presence of this

department in a company allows to classify the firm as engaging in relational CPA, as it employs significant resources to create relationships to politicians. This thesis is even stricter with the definition, classifying a company only as relational if the department is headed by a former politician or senior staff member.

To gather the data, for each year from 2009 to 2019, the individuals occupying the two positions were determined, by using the Compustat Execucomp database, and checking each annual statement for the given year for each firm. Then, the career history of each individual is scanned, and, if the person was a member of the US Government, senate, house of representative, including their staff, or was a high-ranking civil servant in a US federal agency, was classified as connected. This provided two binary data points for each year, connected or not connected. After that, each firm received a score from a 3-point scale: 100% connected, if both were former politicians, 50%, if one was, and 0%, if none were connected.

Hypothesis 2 is therefore tested as follows:

Hypothesis 2a): There is positive relationship between a firm's degree of related diversification and the % of connected senior executives in the position of General Counsel and Senior Vice President of Government Relations.

4.4.2.2 Connected Board Members

In addition to senior management, the literature has shown that firms use the staffing of their supervisory boards as an opportunity to engage in CPA (Pfeffer and Salancik, 1987).

The second dependent variable I am using is therefore the percentage of board members that, prior to joining the board of the firm, held a role in the US Government, Senate,

House of Representatives, including their staff, or was a high-ranking civil servant in a US federal agency.

Board members, "directors", while traditionally viewed as being shareholder watchdogs to monitor the alignment of shareholder interest with the actions of senior management (Jensen 1993), also act as an advisor to the company's senior management (Raheja, 2005). More recently however, light has been shed by authors such as Goldman et al. (2013) that directors can take on the additional role to use their personal connections, in other words their personal capital that they have acquired over their professional careers, to further shareholder interest.

As discussed by Hillman (2005) resource dependency theory underlines the role of the corporate director as a supplier of key firm resources. Pfeffer and Salancik (1987), as cited by Hillman (2005) find that directors provide four key resources that provide economic benefit to the firm: advice and counsel, channels of communication and information between the firm and external organizations, preferential access to commitment or support from important elements outside the firm, and legitimacy. In addition to that, boards aid in the attainment of resources, often even at more favourable terms.

The benefits named by Hillman (2005) cover all important aspects that a firm looks when appointing a former politician on their board: regulatory insights, the ability to communicate with external organizations, preferential access to institutions, legitimacy, and the attainment of resources at favourable terms. It is therefore reasonable to assume that if firms aim to engage in relational CPA, they are likely to staff chairs on their board with former politicians that can provide these lucrative resources. It is therefore chosen as one of the dependent variables to proxy the extent of a firms relational CPA engagement.

The question remains if the variable should be of a binary or an interval nature. In other words, should the mere existence of one connected board member lead to the firm be classified as connected, or are does having more connected members on a board lead to a greater benefit for the relational CPA activities of the company? If the latter were true,

an interval variable that allows judgement of the extent of is relational efforts would be more appropriate. Haynes and Hillman (2010) shed light on this, finding that board members are valued for their ability to provide linkages with the external environment. She finds that especially firm operating in uncertain environments benefit from larger boards, as the sheer increase in headcount allows the firm to cover a greater extent of access points to stakeholders, decreasing uncertainty. Based on this, I argue that an interval scale should be used; a company with a board of many politically connected board members can be considered more relational than a company with few politically connected board members.

To sum up, the possibility that firms prefer to have connected board members to acquire political capital instead of connected senior management members cannot be ignored: In addition to using the extent of senior management connections, this thesis will use the share of connected directors on a company's board as a proxy to measure relational CPA, reflected in Hypothesis 2b:

Hypothesis 2b): There is a positive relationship between the related diversification of a firm and the % of connected board members of a firm.

Including a company's board composition in this analysis yields however a classification difficulty that is particular for the defence industry: Their boards seem to look different. In civilian industries, it would be sufficient to apply the same definition to classify board members as "connected" as was used to classify connected senior management members: former legislative or executive politicians and their senior staff. In the US defence industry however, it is very common to find former high-ranking members of the US Military and/or the US intelligence services on corporate boards. Notably, they are almost exclusively former top military officials, such as former Generals, Admirals, Members and Chairman's of the Joint Chiefs of Staff, US Commanders of NATO Missions, and Directors of US Intelligence Agencies.
They are exclusively found on company boards, not in senior management positions. The case can be made for both sides when considering if these officials should be

included as “political insiders” in the analysis: On the one hand, they have not exerted direct political power in the executive or legislative branch of government, meaning they cannot provide the “real time” insights into the policy process. In addition, given they have not held political office in the legislative or executive branch, their connections to those politicians that have decision making power over regulations that affect US defence companies, their social capital, is limited. While it may be argued that senior members of the US military often act as a liaison between the military and the US government, routinely working in both the DoD and the White House and therefore having *some* social capital, it can be assumed that if political access was the firm’s goal when making these board appointments, they could have simply opted for former *civil* members of the Senate, House of Representatives, or the White House.

The purpose of military officials on board in the context of CPA is unclear, it is scarcely discussed in CPA literature. Flynn (2014) provides some insights, arguing that due to the increasing sophistication of military capabilities, and an increasing “militarization” of American foreign policy (Bacevic, 2004, as cited by Flynn, 2014), US military leaders have become political insiders into US foreign policy. In addition to that, he finds evidence that senior military officials play as strong role in the distribution of funds between branches of the US Military. Between those branches of the US military, rivalry of resources exists. Military leaders occupying influential positions have a strong influence on how these resources are distributed between their branches, acquiring more resources for their branches and units helps to advance their programs, and in return their professional prestige. It can be assumed that strong ties between active and former officials exist.

Therefore, I argue that high ranking military officials have significant *human* capital, as they participated in shaping US foreign policy, and can consecutively provide the private sector within depth knowledge to the policy process. In addition, they have significant *social* capital, as they are well connected to military officials that can shape the distribution of resources allocated to matters of defence (A former admiral has influence

to organize the allocation of additional resource towards the navy, crucial for firms operating in the space of ship building).

Thus, in addition to political connected civilians, I use the number of connected high ranking military officials, both in combination with civilians, as well as a separate measure. There is no previous literature on the reasons for former high ranking military officials on corporate boards, but as discussed earlier, they are well connected to the legislative and executive branch of government, and during their active service, played a significant role in the distribution of funding between the branches of the military, and should therefore be considered as a separate tool of relational CPA of firms operating in the defence industry.
Given the two opposite views on the value of former military on corporate boards, this thesis will analyse them independently:

Hypothesis 2 b): There is a positive relationship between the related diversification of a firm and the % of total connected board members of a firm.

Hypothesis 2 c): There is a positive relationship between the related diversification of a firm and the % of civil connected board members of a firm.

Hypothesis 2 d): There is a positive relationship between the related diversification of a firm and the % of connected former high-ranking military and former high-ranking intelligence community board members of a firm.

To collect the data, the biographies of all current board members of the sampled firms are analysed. They qualified as connected if they formerly held a position as member of the US Government, Senate, House of Representative, including their staff, or a high-ranking civil servant in an US federal agency. In addition, a person was classified as a non-civilian connected director if they formerly held the position of a General, Admiral, Members and Chairman's of the Joint Chiefs of Staff, US Commanders of NATO

Missions, and Directors of US Intelligence Agencies, or a member of such organizations whose rank suggests a close professional connection to such individuals.
Given the lack of data available on this information in the commonly used databases, acquiring the data by hand is a timely process, therefore, the data is only recorded for the current year, and it is assumed that this level of connection remained more or less constant over the past 10 years.

4.5 Control Variables

To increase credibility of the results, I am introducing further variables to be controlled for in the model. As transactional to relational CPA can be understood as low intensity CPA to high intensity CPA, the control variables used in the study include those that CPA literature has identified to be the most applicable to explain the intensity of CPA.
Hillman and Hitt (1999) propose that the decision whether a firm engages in relational or transactional CPA depends on 3 factors: whether it is engaging in related or unrelated diversification, its degree of perceived or actual government policy dependence, and if the firm operates in a more pluralist or more corporatist country. Given all firms in this sample are domiciled and derive a majority of their annual revenue from the same country, the United States, the difference between pluralism and corporatism does not need to be controlled for. Therefore, the most important variable that needs to be controlled for is a firm's reliance on government resources.

The first control variable used is the extent to which a firm relies on government on resources for its business activities. The necessity for controlling for regulatory dependence comes from the authors of the very theory being tested in this thesis. In the same paper, Hillman and Hitt (1999) not only theorize that an increase in related diversification leads to an increase in relational lobbying, but also that an increase in regulatory dependency leads to an increase in CPA. In addition, Shirodkar and Mohr (2015) argue that firms that rely on resources that are controlled by external players, and

the constraints associated with such a dependence can be absorbed, among other instruments, through CPA.

The US defence industry is arguably one of the industries that is most dependent on the US government for its activities. The US government controls the export of defence equipment and services to non-allied countries, actively uses defence exports as a tool of international diplomacy and is by far the largest customer for most of the firms of the sample, accounting for an average of 53% of sales made of the sampled firms in the year 2019. To control for the reliance on its external environment, the paper is therefore going to use the control variable % of revenue derived from government sales, *SALES_GOV*. With firms deriving half their sales from the US government, it is fair to assume that this indicator is by far the most explanatory to judge a firm's reliance on decisions made in Washington.

Besides reliance indicators, there are multiple financials metrics that have been shown to explain lobbying intensity. The most notables among them are firm size and profitability. Sadrieh and Annavarjula (2005) find that more profitable firms are willing to commit more funds to lobbying activities. The authors find that of the three commonly used profitability measures, Gross Profit Ratio, Return on Asset and Return on Equity, Gross Profit Ratio is the only one that significantly predicts lobbying intensity. The authors argue that this is because GPR is the cleanest of the three, ROA and ROE go through a sequence of technical manipulations and adjustments before being presented to stakeholders, diminishing their potential to effectively predict lobbying intensity. Thus, Gross Profit Ratio, *GPR*, is calculated by

$$Gross\ Profit\ Ratio = \frac{Net\ Sales - Cost\ of\ Goods\ Sold}{Net\ Sales}$$

individually for each year from 2009 to 2019 and is included as a control variable.

Firm Size, as measured by the annual revenue, has been named by various scholars to have a positive influence on CPA intensity. Larger firms tend to dedicate more resources to CPA activities, as they aim to become "leaders" in their industries, which requires an

elaborate CPA strategy (Sadrieh and Annavarjula, 2005). In addition, larger firms are able to spread fix costs of establishing connections over a larger revenue base. Therefore, this thesis will control for firm size, as measured by annual revenue, for each year from 2009-2019.

4.6 Regression Models

As I expect all hypothesized relationships to be linear, I created five linear regression models, following the structural formula:

$$Y_{i,t} = a_1 + \beta_1 \times X_{it} + \varepsilon_{1,i,t}$$

In which Y is the predicted value of the independent variable, α is the intercept, β is the regression coefficient, describing the slope of the regression, and the error term ε, describing the variation of the regression coefficient. The term i represents the company, and t the year. The intercept and the error term are represented by the terms $\alpha_{\mathbb{Z}}$ and $\varepsilon_{\mathbb{Z},i,t}$, with $\mathbb{Z} = [1,5]$, depending on the regression models M1 to M5.

Model 1: Related diversification and transactional CPA

To test the first hypothesis, which predicts a negative relationship between related diversification and transactional CPA, I estimate the following regression model.

$$LOBBY\_EXP_{i,t} = \alpha_1 + \beta_{1,1} DIVERS_i + \beta_{1,2} SALES\_GOV_i + \beta_{1,3} SIZE_{i,t} + \beta_{1,4} GPR_{it} + \varepsilon_{1,i,t}, \quad \text{(M1)}$$

where the dependent variable $LOBBY\_EXP_t$ which captures the firms lobbying expenses, for every year *t*, the independent variable *DIVERS,* which measures the related diversification of each company, and is held constant over the ten-year period. The control variables are $SALES\_GOV$, which captures the percentage of sales made to the US government and is held constant over the 10-year period, $SALES$, which captures annual sales, and *GPR*, which captures the profitability for each year. Variables with a t are specified on an annual basis, those without are held constant, as their determination for each individual year are not within the scope of this thesis.

Model 2: Related diversification and relational CPA

To test the hypothesized positive relationship between related diversification and relational CPA, the following model is used, where $BOARD\_TOTAL$ is used as the dependent variable, defining relational CPA as the percentage of total connected board members.

$$BOARD\_TOTAL_{i,t} = \alpha_2 + \beta_{2,1} DIVERS_i + \beta_{2,2} SALES\_GOV_i + \beta_{2,3} SIZE_{i,t} + \beta_{2,4} GPR_{i,t} + \varepsilon_{2,i,t} \quad \text{(M2)}$$

The independent variables are the same as for Model M1.

Model 3: Related diversification and relational CPA, connected civilian members

To test the hypothesized positive relationship between related diversification and relational CPA, the following model is used, where $BOARD\_CIV$, is used as the dependent variable, defining relational CPA as the percentage of civilian connected board members.

$$BOARD\_CIV_{i,t} = \alpha_3 + \beta_{3,1} DIVERS_i + \beta_{3,2} SALES\_GOV_i + \beta_{3,3} SIZE_{i,t} + \beta_{3,4} GPR_{i,t} + \varepsilon_{3,i,t} \quad \text{(M3)}$$

Model 4: Related diversification and relational CPA, connected former military members

To test the hypothesized positive relationship between related diversification and relational CPA, the following model is used, where $BOARD\_MIL$ is used as the dependent variable, defining relational CPA as the percentage of former high-ranking military or intelligence service board members.

$$BOARD\_MIL_{i,t} = \alpha_4 + \beta_{4,1} DIVERS_i + \beta_{4,2} SALES\_GOV_i + \beta_{4,3} SIZE_{i,t} + \beta_{4,4} GPR_{i,t} + \varepsilon_{4,i,t} \quad \text{(M4)}$$

Model 5: Related diversification and relational CPA, connected executives

In addition to board seats, the hypothesized positive relationship between related diversification and relational CPA is tested using the number of connected executives in general counsel and head of government relations, the following model is used, where $CONNECTED\_EXEC$ is used as the dependent variable.

$$CONNECTED\_EXEC_{i,t} = \alpha_5 + \beta_{5,1} DIVERS_i + \beta_{5,2} SALES\_GOV_i + \beta_{5,3} SIZE_{i,t} + \beta_{5,4} GPR_{i,t} + \varepsilon_{5,i,t} \quad \text{(M5)}$$

5 Results

Before introducing the results presented in table 3, the dataset is tested for multicollinearity. Multicollinearity may appear if two or more variables are highly linearly related. To do that, the variance inflation factor is considered for each model. The mean variance inflation factor is below 1.5 in each model, indicating that

multicollinearity is not an issue to be considered. Using the Breusch-Pagan test to analyse the possibility of the sampled data to for a change in the scatter pattern around the mean, it becomes evident that the sample violates the homoscedastic assumption. Therefore, all t statistics of the Models 1 through 5 are adjusted using the White (1980) standard error to account for heteroscedacity.

5.1 Description of the data

Table 1: Statistics of the dependent variables

Statistic	*LOBBY_EXP*	*BOARD_TOTAL*	*BOARD_CIV*	*BOARD_MIL*	*CONNECTED_EXEC*
N	321	311	311	311	321
Mean	0.021	0.193	0.116	0.070	0.403
St. Deviation	0.028	0.141	0.121	0.081	0.366
Min	0.000	0.000	0.000	0.000	0.000
Max	0.162	0.500	0.400	0.25	1.000
Median	0.009	0.200	0.083	0.077	0.500

5.1.1 Dependent Variables

LOBBY_EXP , e.g., the amount of cash spent on lobbying activities through lobby firms, was on average 0.021% of the annual revenue derived of the sampled firms. 6 of the 37 firms in the sample did not record any lobbying expenditures in the years 2009 to 2019,

the highest annual spender was the rocket and ballistic missile manufacturer Aerojet Rocketdyne, which spent 0.16% of its revenue on lobbying expenses in 2016. The distribution is positively skewed, with the median at 0.009 and the mean at 0.02, suggesting that the lobby spending of the firms in the sample is not normally distributed. Most companies in the sample spend only moderately on lobbying expenditures, and only a few invested strongly.

When it comes to the total connected board seats, *BOARD_TOTAL,* the companies sampled have an average of 19.3% of connected board members on their seats; this includes both civil and military members. When breaking the variable down into *BOARD_CIV* and *BOARD_MIL*, 11.6% of the average board has a background working in a civilian position in Washington, 7.7% has held a senior military position. Of the sample, some firms had no connected directors sitting on their boards, neither civilian nor military, and one company had as many as 50% of their seats filled with connected directors. The maximum number of military directors on the board is 25%, and the maximum number of civilian directors on the board is 40%.

For *BOARD_TOTAL* and *BOARD_MIL,* the mean and the median are relatively close together, suggesting a normal distribution of the data, *BOARD_CIV* is positively skewed, suggesting that few firms have more civilians on their board then the majority of the firms.

Table 2: Statistics of the independent variables

Statistic	*DIVERS*	*SALES_GOV*	*SIZE*	*GPR*
N	311	321	321	299
Mean	0.688	0.479	16.185	-742.912
St. Deviation	0.556	0.361	18.341	180.817
Min	0.000	0.000	1.392	-1180.526
Max	1.500	0.980	84.818	-5.559
Median	0.541	0.350	7.630	-785.209

5.1.2 Independent Variables

Related Diversification (*DIVERS*) has a mean of 0.688, on the scale of 0 to 1.5. The variable is positively skewed, indicating the majority of firms are rather unrelated diversified. 7 companies have an entropy of 0, e.g., are unrelated diversified, and 8 have an entropy of 1.5, meaning they are a single segment business. The firms in the sample derived an average of 47.9% of its revenues from sales to the US government. ManTech International, an IT provider for security and combat application, tops the list at 98%. At the low end, the firm Arconic on derives 3% of its revenue from the US government.

The largest discrepancy between the mean and the median is visible for the annual revenue variable. On average, the annual revenue of the firms in the sample is $16.2 Bn. The distribution is positively skewed, the standard deviation is relatively large, with a few big firms pushing the right tail of the distribution out, such as Lockheed Martin

(2019: $59.8Bn), Raytheon (2019: $77.0Bn), and Boeing (2019: $84.8Bn), with Boeings 2019 results representing the largest annual revenue recorded in this sample. These values push the mean to the right.

Table 3: Regression Output

		Model 1	Model 2	Model 3	Model 4	Model 5
Intercept	Beta	0.0029***	0.0589***	-0.0079	-0.0668***	0.0132
	St. Error	0.0034	0.0153	0.0147	0.0092	0.0373
Related Div.	Beta	-0.0131*	0.0325**	0.0874***	-0.0548***	0.0245
	St. Error	0.0061	0.0104	0.0117	0.01161	0.0394
Sales to Govt.	Beta	0.0427***	0.2037***	0.0927***	0.1109***	0.3534***
	St. Error	0.0090	0.0237	0.0225	0.1629	0.0627
Annual Sales	Beta	0.0000	0.0015***	0.0002	0.0012***	0.0101***
	St. Error	0.0000	0.0003	0.0003	0.0001	0.0008
GPR	Beta	0.0285***	-0.0180	0.0616**	-0.0796***	0.1494*
	St. Error	0.0072	0.0255	0.0184	0.0162	0.0743
R^2		0.206	0.403	0.364	0.311	0.338
Observations		289	289	289	289	289

*p<0.05, **p<0.01, ***p<0.001

5.2 Description of the Results

Table 3 presents the results of Models 1 through 5. The independent variable and the control variables are held constant throughout the Model, they are listed on the top of the table, each row represents one model, which differ only in the dependent variable used: Model 1 (Lobby Expenditure per sales), Model 2 (% total connected board), Model 3 (% connected civilians directors), Model 4 (% connected military directors), and Model 5 (% connected executives).

Hypothesis 1 hypothesized a negative relationship between related diversification and lobbying expenditures. This tests significant and cannot be rejected at the 95% confidence level (p=0.032). The coefficient for diversification indicates that a 1 unit increase in related diversification leads to a 1.3ppt decrease in lobbying expenditures per sales. This relationship remains significant despite controlling for government reliance, size and profitability. These control variables mostly perform as predicted. A 1 ppt increase in government contract reliance increases lobbying expenditures per sales by 0.043ppt (p=0.000). Annual sales tests insignificant, provides no explanatory power for the relationship. Profitability has a significant positive impact on the relationship (p=0.000). A 1 unit increase of the Gross Profit Ratio increases lobbying expenditure per sales by 2.85 ppt.

Hypothesis 2 a) predicted a positive relationship between related diversification and the percentage of total connected directors on a firm's board. This relationship also tests significant (p=0.002) and cannot be rejected at the 99% confidence level. A one unit increase in related diversification increases the percentage of total connected directors by 3.3ppt. The control variable reliance on government sales is significant (p=0.000), so is the control variable annual sales (p=0.000); a 1 ppt increase in sales to government increases the percentage of connected board members by 0.2ppt, an increase in annual sales by 1Bn USD increases the % of connected board members by 0.15ppt. GPR tests insignificant, has no effect on the dependent variable.

Hypothesis 2b) hypothesized a positive relationship between related diversification and connected civilian directors on a firm's board. The relationship tests significant, it cannot be rejected at the 99.9% confidence level (p=0.000). A one unit increase in related diversification translates into an 8.7ppt increase in % of civil directors on a firm's board. The control variables sales to government and GPR test significantly as well (p=0.000 and p=0.001, respectively). A 1 ppt increase in government sales increase the number of civilian connected directors by 0.09ppt, a one unit increase in GPR increases the dependent variable by 6.16ppt. Annual sales is not significant.

Hypothesis 2c) predicts a positive relationship between related diversification and connected former military members on a firms' board of directors. This relationship is negative with a coefficient for *divers* of -0.054, and significant (p=0.000), the hypothesis is therefore rejected as no positive correlation was found. A one unit increase in related diversification decreases the amount of connected former military directors by 5.55ppt. All control variables test significantly (all p=0.000). A one ppt increase in Government Sales increases military directors by 0.11ppt, an increase in revenue by $1Bn increases military directors by 0.12ppt, and a one unit increase in GPR increases military directors by 7.96 ppt.

Hypothesis 2d) predicted a positive relationship between related diversification and connected executives. The hypothesis is rejected (p=0.534). However, the control variables were all significant, and therefore have a greater explanatory power in the relationship. A 1 ppt increase in government sales increases connected executives by 0.35ppt (p=0.000), a $1Bn increase in annual sales increases connected executives by 1.01ppt, and a one unit increase in GPR increases connected executives by 14.9 ppt.

5.3 Robustness

To verify the robustness of the results, several scenarios were created in which the research design was altered.

First, the windsorizing of the *Sales* variable was adjusted to a 95% confidence interval. This did not change the relationship between the independent and dependent variables but reduced the R-squared of the different regression models. Secondly, the average of the independent variables was taken. This reduced the sample size but did not change the nature of the relationship. Thirdly, the control variables were removed. This did not change the result, however the explanatory power of the models declined.

6 Discussion & Implications

This section will provide a summary of the results of the thesis and discuss the results by providing explanations grounded in academic literature. In the second half, the transferability of the results to other industries will be addressed. This section will also discuss what implications these findings have for both firms and policymakers, before addressing limitations of the study. Table 4 provides an overview of the decision made for the hypothesis developed in the thesis.

Table 4: Summary & Decisions of the Hypothesis

	Hypothesis	Decision
H1	*There is a negative relationship between the related diversification of a firm and ist contributions made to lobbying firms.*	**Not Reject**
H2a)	*There is a positive relationship between the related diversification of a firm and the % of total connected board members of a firm.*	**Not Reject**
H2b)	*There is a positive relationship between the related diversification of a firm and the % of connected civil board members of a firm.*	**Not Reject**
H2c)	*There is a positive relationship between the related diversification of a firm and the % of connected military board members of a firm.*	**Reject**
H2d)	*There is a positive relationship between the related diversification of a firm and the percentage of connected managers occupying the positions of both Vice President for government Relations and General Counsel is occupied by a well-connected former member of the US Government, senate committee, or senior staff member of such.*	**Reject**

The results confirm 3 out of 5 of the hypotheses made, and therefore provide evidence that closely related firms do tend to engage in a more relational style of CPA, while those that are more unrelated diversified prefer to engage in transactional CPA. Model 1, which tested the relationship between related diversification and a firm's tendency to engage in transactional CPA, returned a significant negative coefficient, while those that tested the extent of related diversification and a firm's tendency to engage in relational CPA returned a significant positive coefficient, with the exception of Model 4, that unexpectedly returned a negative coefficient and Model 5, which did not return significant results. With the exception of Model 4 and 5, the results provide evidence for the validity of the theory on the choice of a corporate political activity made by Hillman and Hitt (1999).

6.1 Model 1

As suggested by the results of the testing of Model 1, an increase in related diversification decreases the amount of expenditure per sales firms allocated to lobbying activities. These findings are in line with the theory of Hillman and Hitt (1999) who theorize that an increase in related diversification would lead a firm to allocate its resources towards relational means of CPA, away from transactional manners such as lobbying. In line with the theory presented by the authors, I speculate that this occurs because related firms are not interested in allocating significant resources on sporadic political action. Rather, they are interested in establishing long lasting, capital intensive political connections, that make transactional lobbying activities unnecessary. In essence, they do not need to buy influence through lobbying firms, as for them it is economically feasible to establish "specialized political capital" themselves.

While related diversification is negatively correlated, firm profitability, as measured by the Gross Profit Ratio, correlated positively with lobbying expenditures. This finding is in line with the study of Sadrieh and Annavarjula (2005), who found that more profitable firms exhibit a higher intensity in their lobbying activities. This positive relationship provides interesting insights, as it allows for speculation that firms spend more resources on lobbying when they are more flexible in their budget, such being the case when the firm is profitable. A less, or even unprofitable firm may spend less funds on lobbying activities because it experiences higher scrutiny by its shareholders, or the directors representing them, on what non-core expenses the firm can afford to incur.
This result also clears up the common understanding of lobbying, which is often viewed as an unprofitable firm's approach to activate institutional support to get rid of unwanted competition, such as through the establishment of entry barriers by introducing regulation (Sadrieh & Annavarjula, 2005). Lobbying seems to be a tool made use of preferably when resources are plentiful, not when they are scarce.

6.2 Model 2

Model 2 finds that firms that follow a related diversification strategy have more connected directors on their boards than those that follow an unrelated diversification strategy. This finding provides additional evidence for the for the validity of the theory made by Hillman and Hitt (1999), as it shows the tendency of related firms to engage in relational CPA. This result is in line with expectations. Firms that operate in multiple, yet closely related industries are more incentivized to invest in specialized political capital, as their investment covers a larger part of their operations, than are their less related peers. Besides the related diversification variable, government sales provides explanatory power in this relationship. I am speculating that a company that is more dependent on public resources, such as favourable regulation or procurement contracts, will appoint more connected directors onto their boards, as they hope that these will facilitate the transfer of information and favours between the government and the firm. It should be pointed out that the direction of causality of this relationship is rather unclear: A firm may recognize its high dependency on a single client, the government, as a risk, and therefore appoints politically connected directors on its board in an effort to manage this risk, e.g., maintain its good relationship with the government. On the other side, a firm may have a long history of appointing well-connected politicians on its board and has managed to increase its sales to the government through its connected directors, who served on the board in a primarily resource provisionary role. While this thesis cannot entangle the direction of causality of this relationship, it is fair to assume that both of these directions are valid and occur simultaneously in many firms of the defence industry.

These results are in line with the findings of Goldman et al. (2013) who find evidence that a connected board matters. If a firm in the US is connected to a political party through its board members, it sees an increase in procurement contracts following a midterm election win of that party; those firms connected to the losing party experience a decrease.

6.3 Model 3

The findings by Goldman et al. (2013) also provide insights into the results of Model 3. The results of Model 3 show that an increase in related diversification increases the percentage of former civilian politicians on the board, however, also decreases the percentage of former military members on boards. The increase in civilian board members was expected. Former politicians on corporate boards provide value for the company (Goldman et al., 2013), firms that are closely related aim to create specialized political capital; the social and human capital that former politicians bring with them fits well into this strategy: Former politicians have an elaborate understanding of the policy process, can provide real time insight to the decision-making process of the government, essential for firms that aim to exert influence.

6.4 Model 4

An increase in related diversification however decreases the number of former members of the military on corporate boards. This result is unexpected, as former high-ranking members of the military should be able to provide similar resources as civilian politicians, such as insights into the (foreign) policy process and access to individuals that decide on the allocation of public resources.

However, other factors may be at play. While the academic literature provides no insights into this relationship, I am speculating that there two possible reasons for this. Firstly, a firm that is part of the 50 largest US defence companies *and* is highly related will most likely derive the vast majority of its revenue from exclusively defence equipment. That being the case, it can be assumed that these firms have the resources that board members are expected to bring the firm, human and social capital specialized for the defence industry, already widely available, as their core business activity is focussed on defence. These firms can be expected to have an in-depth defence and procurement knowledge, personal access to high-ranking active military and government members, and a precise understanding of the demands of national militaries,

as this knowledge is woven into the organizational fabric of any specialized defence firm. These firms are likely to have connected former military members on every organizational level, each staff member is well informed and understands the needs of the US military through constant exchange of information between the US Military and the private company, and many senior executives are likely to be well connected as they have a long history of cooperation on procurement projects with the DoD. Given the resources a former General can bring to a specialized defence company are needed less, they are more likely to fill these positions with board members that can bring other resources to the firm.

Unrelated firms on the other hand have less of this knowledge available. They are likely to have a significant part of their operations in a civilian industry, manufacturing civilian equipment sold to private parties. In these firms, knowledge, or specialized human and social capital (specialized on the policy domain of defence and foreign policy) is not widely disbursed throughout the organisation, senior executives have gathered their experience in civilian industries, topics discussed in board meetings are most often of civilian nature. These firms have to account for the fact that part of their business, their defence segment, is not well understood by most of its senior staff members, relatively little links between the firms and the military exist. A good example of such a firm is Boeing. In 2019, the firm had revenues of $92.3Bn, of which 49% came from commercial aircraft sales, 21% from global maintenance services, and 30% from their Defence, Space and Security Systems segment. A firm like Boeing, in which specialized knowledge on the needs of the military, personal access, and real time insights into the procurement processes of the DoD are relatively undisbursed throughout the firm and the senior management ranks, has a high incentive to use its vacant board positions to employ former high ranking military officers to provide these needed resources. This seems to be the case, given Boeing, while only deriving 30% of its revenue defence activities, has the highest percentage of former military members on its board, at 25%.

A second possible explanation for the negative relationship of related diversification and military directors on their boards is the firm's effort to manage its public reputation. As

was discussed in the review of the defence industry earlier, defence firms face the constant threat of reputational damages. Given the operate on the "legal, yet repulsive" (Durand & Vergne, 2015) side of the public spectrum, any news coverage can put the company into a negative light, which can threaten the firm's legitimacy that it needs to attract investment and secure public procurement contracts. Defence firms therefore go to great lengths to operate outside the public eye, including divesting from scrutinized business units, and investing into civilian sectors, to reduce the public perceiving a firm as part of the defence industry. Board members not only provide resources to a firm, but they are also very visible to the public and journalists reporting on these firms. It is therefore possible that related defence companies, in addition to having less demand for connected former military members, actively try to avoid appointing former senior military members onto their boards, as this would underline which industry the company is operating in. Firms that are mostly unrelated diversified are more likely to have civilian business units and need to worry less about being associated with the defence industry, as the public only associated them with their civilian segments, for example firms like Boeing and General Electric. These firms can afford to have the specialized resources of former Generals and Admirals on their boards, as it will do little to change their public image.

Sales to Government positively correlates with former military directors on the board. This result was expected and is in line with the argument made by Flynn (2014). US Military Leaders have significant influence over the allocation of funds between the branches of the military, a higher allocation of funds helps to develop military programs within their branch, helping to further their personal prestige consequentially their career objectives. The results suggests that firms are aware of this influence and appoint former high-ranking members of the military onto their boards in the hope of gaining access to current generals and admirals influencing these budget allocation decisions.

6.5 Model 5

Unexpectedly, related diversification has no explanatory power on connected executives. Sales to government, firm size and profitability are however significant, indicating that these factors play a more important role in describing the factors that lead firms to determine their executive staffing decisions.

Notably, *Sales Gov* corelates positively with all types of CPA. While, as discussed, this finding by itself does not prove that contracts are awarded because of the corporate political action done by firms, this finding is in line with other authors, such as Brown and Huang (2017), who find that federal government contracts awarded are correlated with visits at the White House in Washington by company and lobby firm representatives, ergo, connections, whether they are transactional or relational, matter.

To sum up, the results provide evidence for the validity of the theory presented by Hillman and Hitt (1999). Firms that engage in an unrelated diversification strategy are more likely to follow a transactional approach political strategy- as the degree of related diversification increases in the sample, the lobbying expenditure decreases. On the other hand, firms that follow a related diversification strategy prefer to conduct relational CPA; they have a higher percentage of former politicians on their board. This relationship however cannot be found when relational CPA is defined by the number connected executives holding key management position and is even negative when only those board members are considered that have a military background.

6.6 Implications

6.6.1 Policymakers

All firms in the sample where active in some form CPA, and in all models, government sales correlated positively and highly significantly with the extent of CPA activities. This implies that firms benefit from CPA by being awarded more government contracts, or at its least, feel the need that an increasing reliance on government contract makes a

greater extent of political engagement necessary. These results are noteworthy for policymakers and taxpayer representation groups, as preferential access by some firms in public tenders distorts market mechanisms, with the buyer, the government, taking a loss in utility. In an ideal public tender process, only the value the product brings to the user, and its price, among certain other factors, should be considered as a criterion when making the purchasing decision. Granting some firms inside information of intimate process details, requirements and protocols of the DoD, the Senate and the White House, that former Generals and politicians certainly had, or still have access to, potentially gives preferential treatment to tenders made by companies that are well connected to individuals within the organisation. Such customs create economic efficiencies by harming competition, a loss carried by the government.

The United States already has, in comparison to other Western democracies, relatively stringent disclosure rules on political Activities conducted by private organizations. However, these rules only cover activities that, within the context of this thesis, are classified as being transactional. US federal law requires lobbying firms to disclose who they are lobbying for, what they are lobbying for, and how much compensation they received for doing. Relational actions, however, due their intransparent nature, as it involves personal knowledge and the use of personal networks that are difficult to quantify and disclose, receive little oversight. Policymakers should put regulation in place that requires corporate board members, or senior executives of companies, to publicly disclose professional interactions with active elected officials, so that the impact of such contacts on procurement decisions and legislation can be analysed and sanctioned. The methods used by Brown and Huang (2017) show the need for availability of such data on relational political action. As one of the only studies to empirically provide evidence for the positive relationship between personal meetings with politicians and the awarding of procurement contracts, they needed to rely on the White House Guest Register to quantify those interactions.

6.6.2 Firms

The data suggests that unrelated firms prefer transactional CPA, and related firms prefer relational CPA, this however does not provide evidence for the economic efficiency of this choice.

Despite that, given that sales to government positively correlates with *all* types of CPA addressed in the models, it is reasonable to assume that many firms derive some value from CPA activities, including through an expansion of government procurement contracts awarded to them (Brown and Huang, 2017) and including as a result of such, an increase in shareholder returns. However, firms need to refine their strategy on how to allocate CPA resources, given under some conditions, the economic benefits of CPA can be outweighed by its economic costs (Coates, 2012).

When assuming however that the majority of firms make rational economic decisions, and finding that in general, related firms do relational CPA, while unrelated firms engage in transactional CPA, it can be deducted that the theory proposed by Hillman and Hitt (1999) is an effective guideline on how to efficiently allocate resources on corporate political activities, helping firms to avoid the CPA "efficiency trap" outlined by Coates (2012).

Following this logic, firms that follow a related diversification strategy should use their resources on building specialized political capital that gives them access to policymakers and provides them with inside knowledge on the processes that distribute government resources, such as legislation and procurement contracts. This can take the form of appointing politically connected directors on the firm's supervisory board.

In essence, the choice of between transactional and relational CPA is a classic example of a decision that every firm makes on a constant basis: Choosing to build capabilities in-house or outsourcing their needs to an external provider. Firms that follow an unrelated diversification strategy should allocate their resources towards a transactional strategy. For them, building up specialized political capital is costly, and as the utility of

such decreases with a decreasing level of related diversification. This can lead to its costs outweigh its benefits. These firms should invest into sporadic lobbying when the need for this arises in one of the industries they are operating in. The only exception to this are unrelated firms that derive a majority of their revenue from civilian industries, yet also have a significant stake in industries that supply military equipment. These firms can benefit from appointing a limited number of former high-ranking members of the military onto their corporate boards, as they can provide the firm with critical resources that are needed to compete in the defence industry, uniquely known to be historically dependent on government resources.

6.7 Limitations and further Research

This thesis aims to contribute to the understanding of the relationship of the fields of diversification and corporate political activity. Little prior literature or empirical evidence is available that sheds light on the factors that determine a firm's choice to pursue a relational or a transactional political strategy. With no studies investigating the relationship proposed by Hillman and Hitt (1999), this thesis is an attempt to explore the validity of the theory proposed by the authors. A possible reason why the authors only established the theory without pursuing an empirical analysis of it following its publication in 1999, is that the concepts of transactional and relational CPA are difficult to quantify, and there is no doubt that companies have no incentive to allow researchers a detailed view on the political strategies they pursue, as company interference in political matters is highly scrutinized by the public eye, and the sheer existence of such a strategy would likely be denied.

Therefore, this thesis uses proxies, such as board memberships and executive positions, that scholars have found useful in describing a firm's political efforts. Given proxies can only estimate the existence of a firm's strategy, any results found in the thesis should only be viewed as an indication for the existence of a causal relationship, not as prove.

In addition to that, some of the primary variables used in this study, such as the extent of related diversification, and the extent of political connection exhibited by members of the firms sampled, were computed for one point in time and assumed constant over the entire sample period of 2009-2019. It is unlikely that they remained constant, given firms practice change through strategic acquisition and divestiture, and update their board and senior management appointments to accommodate their ongoing change in organisational needs.

It should also be noted that the sample may suffer from a selection bias. The firms in the sample were extracted from the SIPRI list of the top 100 arms producing companies in the world in 2019. The 37 firms in the sample therefore represent, in part, the largest defence companies in the United States. As firm size has shown to significantly explain the CPA engagement, it can be expected that if the firms were sampled randomly among all US defence companies, the average engagement in both transactional and relational CPA of the sample would have been lower. In addition, data availability is naturally greater for publicly traded firms, as they have stringent disclosure laws. Private companies were therefore mostly excluded from the analysis. However, these disclosure rules may make it more attractive for private companies to engage in CPA, as they have limited public accountability, which could skew the sample.
To avoid a sampling bias, further research should randomly select firms from the entire US defence industry, not just its top representatives, and should include both publicly traded and private companies, if the availability of data allows this.

Further research should address the limitations of the thesis, computing variables such as the diversification entropy and the board composition on an annual basis, instead of keeping it constant over the 10-year period.
As this thesis focussed on firms operating US defence industry, it is unclear whether the results are transferable to other industries and other countries. While I am speculating that similar results can be expected in industries that show similar levels of government dependence, and countries that have a political system that is similar to the United States,

future research should address the transferability by using a cross-national, cross-industry research design.

While this study has provided some evidence for the validity of parts of the theoretical framework established by Hillman and Hitt (1999), as it has shown that firms tailor their CPA strategies in accordance with the extent of their related diversification, this thesis can only assume that firms derive an economic benefit from this distribution of funds. Additional research should investigate whether the decision to structure a firms CPA with its extent of related diversification in mind serves the purpose of increasing profitability, or if other objectives are pursued.

7 Conclusion

The aim of this thesis was to test the theory of Hillman and Hitt (1999), who provided a theoretical framework that explains the political action behaviour of firms. In particular, a part of their framework predicted that firms following an unrelated diversification strategy are more likely to choose to manage their political environment using a transactional approach, while those firms following a related diversification strategy prefer to manage their political environment in a relational manner. With no prior evidence for the validity of this theory available in wider literature, this thesis asked the research question:

> *"Does the extent of related product diversification affect a firm's decision of choosing between a transactional and a relational style of corporate political action?"*

This thesis provided empirical evidence in favour of the research question and therefore for the validity of the theory made by Hillman and Hitt (1999). By studying the US

defence industry, it found that related diversification is negatively correlated with a firm's transactional political efforts and positively correlated with its relational political actions. These results remained largely significant while controlling for a firm's government resource dependence, its profitability and its firm size. These findings suggests that managers consider the type of diversification of their business when designing a corporate political strategy to manage their regulatory environment. While the thesis did not and did not intend to prove that the approach to CPA suggested by Hillman and Hitt (1999) is profitable, the fact that it is applied by managers suggest that it may provide value to firms. As corporate political action comes at a cost, it can guide executives on how they should allocate their resources effectively: Highly related firms should create specialized political capital through relational CPA, while unrelated firms should only engage in a transactional fashion, else they are risk of destroying value.

8 List of References

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