# ACQUISITION RESEARCH SPONSORED REPORT SERIES

**Political Connections of the Boards of Directors and Defense Contractors' Excessive Profits**

**2 January 2013**

**by**

**Dr. Chong Wang, Assistant Professor**

Graduate School of Business & Public Policy

**Naval Postgraduate School**

# Abstract

A growing body of literature concerning the *political connections* of either private-sector firms or states has gained much momentum in the last two decades. Despite the fast-growing interest in the research of political connections, most of the papers belong to the economics or public administration fields. There are few studies, if any that look into the role of firms' political connections in the defense acquisition area, which provides another proof of the alleged disciplinary disconnect that has existed for a long time between public administration, economics, and defense-related research. This paper makes an effort to bridge this gap by investigating the impact of political connections on the excessive profitability of defense contractors.

Wang and San Miguel (2012) document that defense contractors earn excessive profits relative to their industry counterparts. This study extends Wang and San Miguel (2012) and examines whether defense contractors' political connections (as measured by the prior employment histories of the board directors) influence contractors' excessive profitability. We find that, in contrast to the prediction of "corruption hypothesis", the excessive profits are less (more) pronounced for those contractors with politically connected (non-connected) boards. This casts doubt on the preconceived notion that those politically connected board members are corrupt in nature, rather, our findings suggest that they may use their experience to serve a benevolent role to the public in keeping defense contractors from opportunistic profit-seeking behaviors that could reach or even cross the federal government's regulatory redline.

**Keywords:** political connections, defense contractors, excessive profits, the board of directors

THIS PAGE INTENTIONALLY LEFT BLANK

# Acknowledgments

THIS PAGE INTENTIONALLY LEFT BLANK

# About the Author

**Dr. Chong Wang,** Assistant Professor of Accounting, received a PhD in economics and an MS in statistics from Iowa State University, and a bachelor's degree in management science from University of Science & Technology of China. He joined the NPS faculty in 2007. His working experience includes predictive modeling for the banking industry and financial consulting in public accounting firms.

Wang's research interests relate to financial and managerial accounting, corporate finance, and macroeconomics. The common theme that underlies and integrates his research is an economics-based approach, which builds on investigation of various agents' incentives (e.g., defense contractors, government, executives, financial institutions, and entrepreneurs).

Professor Wang's work has been published in *California Management Review, Journal of Public Procurement, Journal of Business Research, Journal of Financial Economics*, *Advances in Management Accounting*, and *Accounting and Finance.* His latest coauthored working paper appears in the prestigious National Bureau of Economic Research (NBER) working paper series. He has presented his various working papers in a number of academic conferences, including selective American Accounting Association Annual Meeting and Western Finance Association Annual Meeting.

In addition to his various private-sector economics and accounting studies, Dr. Wang is doing research dealing with defense procurement. With the financial sponsorship from the Acquisition Research Program, Dr. Wang has produced two peer-reviewed journal publications (with colleagues Professors K. J. Euske and Joseph San Miguel), two NPS technical reports, and one working paper, all of which relate to the various issues in defense procurement. Those issues include optimal contracting type and contract design, the cost performance of various services and contractors, the excessive profits of defense contractors, and the consequences of

defense contractors' fraud. Professor Wang is the co-recipient (along with Professor Joe San Miguel) of the third place best paper award in 2012 5th International Public Procurement Conference.

Chong Wang, PhD, Assistant Professor
Graduate School of Business and Public Policy
Naval Postgraduate School
Monterey, CA  93943-5000
Tel: 831-656-2665
Fax: (831) 656-3407
E-mail: cwang@nps.edu

# ACQUISITION RESEARCH SPONSORED REPORT SERIES

**Political Connections of the Boards of Directors and Defense Contractors' Excessive Profits**

**2 January 2013**

**by**

**Dr. Chong Wang, Assistant Professor**

Graduate School of Business & Public Policy

**Naval Postgraduate School**

THIS PAGE INTENTIONALLY LEFT BLANK

# Table of Contents

THIS PAGE INTENTIONALLY LEFT BLANK

# I.  Introduction

*Political Connections*[1] of either private-sector firms or public states has increasingly become a popular research topic among economists, business and public administration scholars, and political scientists. For example, in regard to states' political connection as measured by representation in the U.S. Congress, scholars have documented that per capita federal expenditures at the state level are positively related to per capita Senate representation, which gives rise to a small state advantage (Atlas, Gilligan, Hendershott, and Zupan, 1995). No similar advantage is found if data is restricted to earmarks secured in House appropriations bills[2] (Hoover and Pecorino, 2005; Knight, 2008). This seems to suggest that political connection does matter from a state's perspective.

Naturally, a similar research question exists for private-sector firms: that is, do politically connected private-sector firms derive economic benefits from such a relation? Most studies intended to answer this question somewhat support this conjecture. For instance, Goldman, Rocholl, and So (2009) demonstrate that the market responds positively (i.e., a positive abnormal stock return is observed) to the announcement of the nomination of a board member who is politically connected from his or her prior employment history in the federal government, military services, or as a former representative of the U.S. Congress. Duchin and Sosyura (2012) investigate application data for Troubled Asset Relief Program (TARP) funds and find that those firm applicants with political connections[3] are more likely to be funded. Correia (2012) finds that for firms with irregular accounting practices, those with political connections are less likely to become the target of Securities and

---

[1] There is no consensus regarding the definition of *political connection.* Definitions vary with specific studies.

[2] Note that each state has two senators, regardless of the population of the state. The representation in the U.S. House, however, is based on state population.

[3] The definition of political connection in Duchin and Sosyura (2012) takes several forms including lobbying, campaign contributions, and employment history of directors.

Exchange Commission (SEC) investigation, and if they are indeed investigated, they face lower penalties on average than non-connected firms. Khwaja and Mian (2005) use Pakistan banks' corporate lending data to show the rent-seeking behavior of politically connected firms. In particular, they find that "political firms borrow 45 percent more and have 50 percent higher default rates. Such preferential treatment occurs exclusively in government banks—private banks provide no political favors" (p1371). It is also worth mentioning that these studies not only document the real impacts of political connections, but they also share a common theme suggesting that political connections are a source of corruption and underlie various rent-seeking behaviors. Simply put, political connections matter in a negative way.

Despite the fast-growing interest in the research of political connections, most of the papers belong to the economics, political science, or public administration field. There are few studies, if any, that look into the role of firms' political connection in the defense acquisition area, which provides another proof of the alleged disciplinary disconnect[4] that has existed for a long time.

The objective of this paper is twofold. First, we attempt to bridge the gap that exists between defense acquisition study and other relevant research fields, such as economics and public administration. As observed by many academicians and practitioners, such a disengagement of defense acquisition research (with other fields) is both unfortunate and unjustified. The society will be better served if such a disconnection is mitigated. Toward this goal, we build on the extant literature and

---

[4] Such disconnect exists between public administration and military administration (Albano, Snider and Thai, 2012), and more generally, between economics and military-related research (Rogerson, 1994). Rogerson (1994) stated: "Defense procurement is unique among regulated industries in the United States in that economists have played virtually no role in helping shape its regulatory practices and institutions. Perhaps this is due to the barrier to entry created by the need to first learn about procurement practices or to a lingering distaste for military matters among academics. Whatever the reason, this lack of economic input is unfortunate, because many of the regulatory and policy issues in defense procurement involve the types of incentive issues that economists are very good at analyzing. My own hope is that economists are on their way to colonizing this new policy frontier and that some of the ideas discussed in this article will play a role in shaping policy debates over the next decade" (p.87).

aim to investigate the impact of political connections (an established concept in non-defense research) on a very important topic in defense acquisition: that is, the excessive profitability of defense contractors. Specifically, Wang and San Miguel (2012) document that defense contractors earn excessive profits relative to their industry counterparts. This study extends Wang and San Miguel (2012) and examines whether defense contractors' political connections (as measured by the prior employment histories of the board directors) influence contractors' excessive profitability.

Our second goal is to test the "corruption hypothesis of political connections" that has been suggested by existing literature in a very particular and essential setting; that is, the nation's biggest defense contractors' excessive profitability. If the results support the corruption story, then political connections would become a very serious concern of policy-makers because defense spending is a substantive portion of government expenditures. On the other hand, if such a conjecture is not grounded, what are the findings and what is the explanation?

The remainder of the paper is organized as follows. Section 2 describes our sample. Section 3 introduces the measure of political connections, followed by the hypotheses development on the relationship between excessive profitability and political connections, based on extant literature and observations. Empirical results and findings are in Section 4. Section 5 concludes.

THIS PAGE INTENTIONALLY LEFT BLANK

# II.    Sample

We start with the same sample used in Wang and San Miguel (2012). Specifically, they use "fedspending.org" as the data source to identify the top 500 recipients of defense contracts for 2008. Out of these top 500 firms, 112 are traded on public stock exchanges. These 112 public firms become the main sample of their analyses. Our sample is a reduced version of Wang and San Miguel (2012) in that we delete 16 firms that are missing from the Corporate Library database, which we use to identify the political connections of each firm's board members. Table 1 lists the name, dollar awarded, rank, stock ticker, SIC code, and public stock exchange code for these 96 public firms.

**Table 1.    Firms in the Main Sample: 96 Public U.S. Firms From the 2008 Top 500 List**

| Company Name | Contracted_dollars_2008 | Rank | Stock Ticker | SIC | EXCHG (11=NYSE, 12=AMEX, 14=NASDAQ) |
|---|---|---|---|---|---|
| LOCKHEED MARTIN CORP | $29,363,894,334 | 1 | LMT | 3760 | 11 |
| NORTHROP GRUMMAN CORP. | $23,436,442,251 | 2 | NOC | 3812 | 11 |
| BOEING CO. | $21,838,400,709 | 3 | BA | 3721 | 11 |
| RAYTHEON CO. | $13,593,610,345 | 6 | RTN | 3812 | 11 |
| GENERAL DYNAMICS CORP. | $13,490,652,077 | 7 | GD | 3790 | 11 |
| UNITED TECHNOLOGIES CORP. | $8,283,275,612 | 8 | UTX | 3720 | 11 |
| L-3 COMMUNICATIONS HOLDINGS | $6,675,712,135 | 9 | LLL | 3663 | 11 |
| KBR INC. | $5,997,147,425 | 10 | KBR | 1623 | 11 |
| NAVISTAR INTERNATIONAL CORPORATION | $4,761,740,206 | 11 | NAV | 3711 | 11 |
| ITT CORPORATION | $4,355,423,578 | 13 | ITT | 3812 | 11 |
| SCIENCE APPLICATIONS INTL CORP | $3,885,932,047 | 14 | SAI | 7373 | 11 |
| GENERAL ELECTRIC COMPANY | $3,518,136,891 | 15 | GE | 9997 | 11 |
| COMPUTER SCIENCES CORP. | $3,230,197,590 | 16 | CSC | 7370 | 11 |
| HUMANA, INC. | $2,952,008,623 | 18 | HUM | 6324 | 11 |
| TEXTRON, INC. | $2,827,900,303 | 19 | TXT | 3721 | 11 |
| HEALTH NET, INC | $2,438,349,117 | 21 | HNT | 6324 | 11 |
| URS CORP. | $2,402,033,979 | 22 | URS | 8711 | 11 |
| HEWLETT-PACKARD CO. | $1,938,638,634 | 26 | HPQ | 3570 | 11 |
| ALLIANT TECHSYSTEMS, INC. | $1,928,045,694 | 27 | ATK | 3480 | 11 |
| OSHKOSH TRUCK CORP. | $1,863,726,822 | 30 | OSK | 3711 | 11 |

| | | | | | |
|---|---|---|---|---|---|
| HARRIS CORP. | $1,841,470,263 | 31 | HRS | 3663 | 11 |
| HONEYWELL, INC. | $1,721,547,997 | 33 | HON | 3728 | 11 |
| FORCE PROTECTION INDUSTRIES, (INC) | $1,360,427,189 | 36 | FRPT | 3790 | 14 |
| CACI INTERNATIONAL INC | $1,324,104,004 | 37 | CACI | 7373 | 11 |
| AMERISOURCE BERGEN CORP | $1,298,059,841 | 38 | ABC | 5122 | 11 |
| ROCKWELL COLLINS | $1,290,813,364 | 39 | COL | 3728 | 11 |
| SHAW GROUP, INC. | $1,162,267,243 | 40 | SHAW | 8711 | 11 |
| VALERO ENERGY CORPORATION | $1,043,869,551 | 43 | VLO | 2911 | 11 |
| JACOBS ENGINEERING GROUP INC | $951,295,410 | 45 | JEC | 1600 | 11 |
| VSE CORP. | $910,970,473 | 47 | VSEC | 8711 | 14 |
| MCKESSON CORPORATION | $903,799,326 | 48 | MCK | 5122 | 11 |
| CARDINAL HEALTH INC | $856,333,988 | 50 | CAH | 5122 | 11 |
| DELL COMPUTER CORPORATION | $852,813,703 | 51 | DELL | 3571 | 14 |
| EXXON MOBIL CORP. | $836,548,150 | 52 | XOM | 2911 | 11 |
| MANTECH INTERNATIONAL CORP | $655,579,972 | 61 | MANT | 7373 | 14 |
| FLIR SYSTEMS, INC | $507,944,847 | 71 | FLIR | 3812 | 14 |
| GOODRICH CORPORATION | $487,753,671 | 73 | GR | 3728 | 11 |
| TETRA TECH, INC. | $472,960,770 | 77 | TTEK | 8711 | 14 |
| IBM CORP. | $438,446,918 | 81 | IBM | 7370 | 11 |
| PERINI CORP. | $436,363,793 | 82 | TPC | 1540 | 11 |
| FLUOR CORP. | $430,878,065 | 84 | FLR | 1600 | 11 |
| CERADYNE INC | $417,616,849 | 86 | CRDN | 3290 | 14 |
| AECOM TECHNOLOGY CORPORATION | $380,250,228 | 91 | ACM | 8711 | 11 |
| AT&T INC. | $371,099,463 | 95 | T | 4813 | 11 |
| KRAFT FOODS INC | $367,840,952 | 97 | KFT | 2000 | 11 |
| OWENS & MINOR INC | $365,861,498 | 99 | OMI | 5047 | 11 |
| CUBIC CORP. | $354,623,567 | 102 | CUB | 3812 | 11 |
| GREAT LAKES DREDGE & DOCK CORPORATION | $324,475,211 | 113 | GLDD | 1600 | 14 |
| CATERPILLAR, INC. | $323,676,276 | 114 | CAT | 3531 | 11 |
| PROCTER & GAMBLE CO. | $321,983,149 | 115 | PG | 2840 | 11 |
| TYSON FOODS INC | $319,486,334 | 117 | TSN | 2011 | 11 |
| VERIZON COMMUNICATIONS | $319,365,283 | 118 | VZ | 4812 | 11 |
| CHEVRONTEXACO CORPORATION | $310,558,853 | 122 | CVX | 2911 | 11 |
| SRA INTERNATIONAL, INC. | $297,913,799 | 128 | SRX | 7370 | 11 |
| GRANITE CONSTRUCTION CO. | $292,263,100 | 131 | GVA | 1600 | 11 |
| ACCENTURE | $288,517,607 | 132 | ACN | 8742 | 11 |
| JOHNSON CONTROLS, INC. | $285,123,825 | 134 | JCI | 2531 | 11 |
| EXPRESS SCRIPTS | $215,750,049 | 162 | ESRX | 6411 | 14 |
| CONOCOPHILLIPS | $206,348,789 | 167 | COP | 2911 | 11 |
| TYCO INTERNATIONAL LTD | $202,567,751 | 172 | TYC | 9997 | 11 |
| COMTECH TELECOMMUNICATIONS CORP. | $202,082,670 | 173 | CMTL | 3663 | 14 |

| | | | | | |
|---|---|---|---|---|---|
| GENERAL MILLS, INC. | $200,017,932 | 176 | GIS | 2040 | 11 |
| TESORO HAWAII CORPORATION | $199,447,230 | 177 | TSO | 2911 | 11 |
| AEROVIRONMENT INC | $192,462,098 | 182 | AVAV | 3721 | 14 |
| AAR CORP. | $187,717,969 | 187 | AIR | 5080 | 11 |
| SYSCO CORPORATION | $179,074,006 | 195 | SYY | 5140 | 11 |
| REFINERY HOLDING COMPANY L P | $177,749,226 | 198 | WNR | 2911 | 11 |
| DEERE & CO. | $164,340,456 | 206 | DE | 3523 | 11 |
| VIASAT, INC | $156,815,300 | 217 | VSAT | 3663 | 14 |
| ORBITAL SCIENCES CORP. | $153,884,356 | 223 | ORB | 3760 | 11 |
| PEPSICO INC | $149,527,183 | 231 | PEP | 2080 | 11 |
| UNISYS | $142,990,124 | 239 | UIS | 7373 | 11 |
| BALL CORP | $131,696,095 | 259 | BLL | 3411 | 11 |
| CONAGRA, INC. | $125,264,234 | 270 | CAG | 2000 | 11 |
| ORACLE CORP. | $122,646,803 | 274 | ORCL | 7372 | 14 |
| GENERAL MOTORS CORP. | $120,929,817 | 279 | GM | 3711 | 11 |
| EATON CORP. | $117,792,917 | 286 | ETN | 3620 | 11 |
| UNILEVER NV | $112,089,508 | 292 | UL | 2000 | 11 |
| MOOG, INC. | $111,608,841 | 293 | MOG.A | 3728 | 11 |
| ALON USA L.P. | $111,102,800 | 296 | ALJ | 2911 | 11 |
| COCA-COLA ENTERPRISES INC | $93,991,833 | 343 | CCE | 2086 | 11 |
| XEROX CORP. | $91,275,424 | 356 | XRX | 3577 | 11 |
| JOHNSON & JOHNSON | $89,990,235 | 363 | JNJ | 2834 | 11 |
| CAMPBELL SOUP CO. | $88,645,010 | 367 | CPB | 2030 | 11 |
| INTERMEC CORPORATION | $83,566,808 | 388 | IN | 3577 | 11 |
| CAE CORP | $83,563,697 | 389 | CAE | 3690 | 11 |
| DEL MONTE FOODS COMPANY | $77,962,809 | 419 | DLM | 2000 | 11 |
| AMERICAN SCIENCE AND ENGRG | $76,545,302 | 429 | ASEI | 3844 | 14 |
| MICHAEL BAKER CORP. | $74,263,592 | 437 | BKR | 8711 | 12 |
| KIMBERLY-CLARK CORP. | $69,832,351 | 454 | KMB | 2621 | 11 |
| ESTERLINE TECHNOLOGIES CORP | $68,716,933 | 462 | ESL | 3823 | 11 |
| INTEGRAL SYSTEMS, INC. | $67,261,245 | 473 | ISYS | 7373 | 14 |
| MINE SAFETY APPLIANCES CO. | $67,166,647 | 474 | MSA | 3842 | 11 |
| WORLD FUEL SERVICE CORP. | $66,258,375 | 478 | INT | 5172 | 11 |
| SARA LEE CORPORATION | $65,361,053 | 482 | SLE | 2000 | 11 |
| WILLIAMS COMPANIES INC | $65,024,852 | 483 | WMB | 4922 | 11 |
| HORIZON LINES LLC | $65,008,856 | 484 | HRZ | 4400 | 11 |

Table1 shows that most of the firms in our sample are listed on the NYSE or NASDAQ, indicating that big defense contractors are likely to be established companies. For each of the 96 firms, we use their stock ticker to map into the

Compustat database and extract various accounting variables across a three-year range of 2007–2009. Note that our base year is 2008. The reason we include two additional years of data (i.e., 2007, one year prior, and 2009, one year after) is to expand the sample size and simultaneously ensure that the status of the top 500 defense contractors in 2008, as well as the political connections of the board members in 2008, can be assumed to be stationary and be passed onto 2007 and 2009 for the same firm, due to a short elapse of time. Expanding our sample to a three-year range yields a total of 276 firm-years, with 93 each for 2007 and 2009 and 90 for 2008. Following Wang and San Miguel (2012), we denote the excessive profit of a particular firm-year as the difference between this firm-year's return on assets (ROA)[5] and the ROA of an "industry-year-size" matched benchmark firm that is not on the 112-firm list.[6]

Table 2 presents basic statistics of descriptive accounting measures for the 90 sample firms in Fiscal Year 2008.[7] In particular, we report total assets, total sales (revenue), dollar awarded as percentage of revenue, and excessive profit as measured by the matched ROA. The mean values of total assets and total revenue were $35 billion and $33 billion, respectively. The government contracts contributed about 18% of these firms' 2008 revenue on average.[8] Overall, these firms earned an

---

[5] To keep the paper concise, we exclusively use ROA as the profitability metric in this study. Other alternative profit measures yield similar results.

[6] "The benchmark firm-year is selected based on a three-dimension match on industry, year and size. Specifically, we go to the same industry-year where industry membership is defined as four-digit SIC codes, and identify the non-defense (i.e., not on our 112-firm list) firm that has the best size match with our defense firm-year. The difference between the profit of the firm-year investigated and the profit of the benchmark firm-year will be the measure of 'excessive profit.'" (Wang & San Miguel, 2012, p. 397)

[7] We lost six firms for Year 2008 due to missing data from Compustat.

[8] A concern that has been raised here is that a significant portion of our sample firms may have a much lower-than-18% of their total revenue that is attributable to DoD contracts, and hence, are not really "defense contractors" as the term is generally understood. Consequently, if Sara Lee had only 1% of 2008 sales from defense contracts, one cannot attribute much if any of Sara Lee's excessive profits to their defense contracts. We provide a few arguments to address the aforementioned concern. First, our sample focuses on DoD contractors, a much broader concept than a few prominent major weapon manufacturers. In that regard, an average 18% revenue from DoD is a

excessive ROA of 3%, which is statistically significant at a 5% significance level, confirming Wang and San Miguel's (2012) findings that top defense contractors receive excessive profits relative to their industry peers.

**Table 2.   The Basic Statistics of 90 Sample Firms in Year 2008**

|  | Mean | Median | Min | Max | Std Dev |
|---|---|---|---|---|---|
| Total Assets (millions) | 34,962 | 7,242 | 147 | 797,769 | 94,895 |
| Total Sales (millions) | 32,656 | 12,542 | 160 | 425,071 | 59,570 |
| Dollar awarded as percent of sales (%) | 17.56 | 6 | 0.06 | 103.00 | 22.79 |
| Excessive ROA | 0.03 | 0.02 | -0.18 | 0.32 | 0.10 |

reasonably decent number. Second, the central metric of our analysis is the excessive profit, and because profit is only a small portion of revenue, a relatively small percentage of DoD revenue could have a much larger impact on profit if firms do derive larger profits from DoD contracts than they can generate from their non-DoD business. Third, it is worth mentioning that the specific concern as expressed by using the Sara Lee example above is already addressed, if not completely removed, by our definition of the three-way industry-year-size matched excessive profit measure. In particular, if Sara Lee had a super good year for whatever reason that is non-DoD related, we expect that its benchmark firm, i.e., the firm that is in the same industry and has similar size (but without federal contracts), would also be impacted in a similar way and display a superior profit likewise in the same year. Hence, the excessive profit of Sara Lee, which is the difference between Sara Lee's profit and its benchmark firm's profit, would be only attributable to the fact that Sara Lee has DoD contracts while its benchmark firm has not. Last but not least, despite that we believe our current full-sample approach is sound, we nevertheless proceed to perform a robustness analysis which only includes the subsample that consists of only those firms with at least 25% of total revenue generated from DoD contracts. Untabulated results show that all our findings are intact.

THIS PAGE INTENTIONALLY LEFT BLANK

# III. Measuring Political Connections & Hypotheses Development

## A. Measuring Political Connections

There is no unanimously agreed-upon definition of the term *political connection*.[9] Scholars have used various forms of concepts in different research settings. For example, Mara Faccio, in a series of her solo or coauthored papers,[10] defines a firm's political connection as follows: "A company is defined as being connected with a politician if at least one of its largest shareholders (anyone controlling at least 10 percent of voting shares) or one of its top officers (CEO, president, vice-president, chairman, or secretary) is a member of parliament, a minister, or is closely related to a top politician or party" (Faccio 2006, p. 369). This definition by Faccio is not appropriate for any U.S.-based study because U.S. regulations pretty much rule out the possibility of anybody simultaneously serving a high-rank public service role and a top executive role in a private-sector firm. In the United States, if a present executive of a private-sector firm is appointed as a high-rank government official, he or she must quit his or her current job. As a testimony of this fact, Faccio (2010) finds that under her definition, only 13 out of the 6,007 U.S. firms in the Worldscope database can be labeled as "politically connected firms." In short, this first definition applies more to international countries, such as Indonesia, Malaysia, or Italy.

The second definition of *political connection* focuses on campaign contributions and lobbying activities. For instance, Correia (2012) finds that firms' political connections established by contributions to congressmen and by lobbying the SEC, reduce those firms' enforcement costs by the SEC. Specifically, those

---

[9] From this point on, we restrict our attention on political connections to private-sector firms rather than public states. One example of a public state's political connection was introduced previously.

[10] See Faccio (2006), Faccio (2010), Faccio, Masulis, and McConnell (2006), and Chaney, Faccio, and Parsley (2011).

firms are less likely to be investigated by the SEC, and even if they are investigated, the average penalty is lower for them. Other studies that adopted this definition include Roberts (1990), Kroszner and Stratmann (1998), and Ang and Boyer (2000). The problem with this definition is the low explanatory power. For instance, Goldman et al. (2009) find that controlling industry effect significantly reduces the explanatory power of campaign donation. Moreover, Jayachandran (2006) questions the causal effect of firms' donations on firm value. To recap, the second definition, based on campaign donation or lobbying expenditure, at most provides a noisy measure of political connection.

The third alternative definition of *political connection* is derived from board directors' prior employment history in the federal government, including in the legislative, executive, and judiciary branches, and in the military Services. Since in the U.S., congressmen, government executives, and military generals are allowed to serve on the boards of private-sector firms after their retirement from public service (and they frequently do so), firms' political connections through board members receive substantial attention. Many U.S.-based studies follow the suit of this particular definition. To name a few, Agrawal and Knoeber (2001) find that firms for which politics plays a more important role tend to be more "politically connected" (i.e., they tend to have more politically experienced directors on their boards). Goldman et al. (2009) show the market value relevance of the addition of a newly appointed, politically connected board member. Moreover, they differentiate between political connections to the Republican versus Democratic parties and provide evidence that the market values of these two different types of politically connected firms responded differently to George W. Bush's 2000 presidential win.

Since our sample is strictly U.S. based, it is natural to follow the third definition of *political connection*. Specifically, we use the 2008 Directorships database that is provided by Corporate Library LLC. In this annual directorship dataset, Corporate Library records each individual director's information through compiling data from firms' publicly disclosed proxy statements. One key field in this

database is a director's biography, including detailed employment history. We use a series of keywords to search each individual director's biography statement and identify whether this particular director is politically connected. The keywords we use are very comprehensive to ensure a maximum catch of politically connected directors. The complete list of our search keywords is as follows: *senator, congressman, congresswoman, congress, representative, federal, secretary, admiral, general, army, navy, air force, department of defense, DoD, commissioner, ambassador, administrator, attorney general, governor, director, council.*

We apply this keyword search to the biography statement as of Year 2008 for each director who sits on the board of any of our 96 sample firms. Once we find a "hit" of a keyword, we read the biography and make sure this particular director is correctly flagged as one who is politically connected[11]. At Year 2008, our 96 sample firms have 989 directors in total, indicating an average board size of 10.3 directors. Out of these 989 directors, 923 are unique individuals, of which 157 are identified as politically connected directors. Put simply, 17% of the directors have prior employment history with the federal government or military Services. The data also indicates that 77 out of 96 firms have at least one politically connected director on their board; that is, 80% of our top defense contractors have some degree of political connection through the board of director(s). To get a benchmark sense, it is worth mentioning that Goldman et al. (2009), using a very similar definition of *political connection* as our study, document that at Year 2000, 153 of the S&P 500

---

[11] An example of a politically connected director's profile is General John M. Shalikashvili, who served as a board director of L-3 Communications Holdings, Inc. at Year 2008. The following excerpt was from the company's proxy statement: "General John M. Shalikashvili, director since August 1998 and member of the Compensation and Nominating/Corporate Governance Committees. General Shalikashvili (U.S. Army—Ret.) is an independent consultant and a Visiting Professor at Stanford University. General Shalikashvili was the senior officer of the United States military and principal military advisor to the President of the United States, the Secretary of Defense and the National Security Council when he served as the thirteenth Chairman of the Joint Chiefs of Staff, Department of Defense, for two terms from 1993 to 1997. Prior to his tenure as Chairman of the Joint Chiefs of Staff, he served as the Commander in Chief of all United States forces in Europe and as NATO's tenth Supreme Allied Commander, Europe (SACEUR). He has also served in a variety of command and staff positions in the continental United States, Alaska, Belgium, Germany, Italy, Korea, Turkey and Vietnam."

companies (i.e., 31%) had at least one board member with a political connection. Therefore, the main message is that top defense contractors are much more likely to have a politically connected board than non-contractor firms.

## B.    Hypotheses Development

In this section, we derive alternative hypotheses on the relationship between defense contractors' excessive profitability and their political connections, based on extant literature and observations. Most of the prior literature suggests the "corruption" role of political connection (i.e., the firms with political connections opportunistically take advantage of this favorable relation and inappropriately derive private benefits for the firm at the sacrifice of social welfare). For example, Duchin and Sosyura (2012) find that politically connected firms are more likely to get TARP funds, yet their performance was inferior to that of unconnected firms. This clearly indicates that political connection is a source of "corruption" and "inefficiency." Correia (2012) presents evidence showing that firms use their political influence to avoid the scrutiny of the SEC or mitigate the punitive damage in the case of financial reporting irregularity. Faccio et al. (2006) analyze a unique dataset that covers 35 countries during 1997–2002 and find that those politically connected firms are far more likely to be bailed out during financial distress than non-connected firms in a similar economic crisis. Moreover, after bailout, those firms with political connections significantly underperform unconnected firms.  Chaney et al. (2011) document that politically connected firms have poorer earnings quality than their non-connected counterparts. All of the studies mentioned previously collectively convey a consistent message: that is, political connection is associated with various rent-seeking behaviors. Applying this corruption proposition of political connections to the defense contractors' excessive profit, we have the following hypothesis:

> **Hypothesis (H):** The defense contractors' excessive profitability is more pronounced for those with political connections. Non-connected firms should exhibit a less excessive profit.

While this hypothesis sounds like a reasonable conjecture given all evidence in the extant literature, an alternative hypothesis nevertheless could exist. In particular, if defense contractors, a unique subset of universal firms, have different and non-opportunistic motives for establishing political connections, then the story could be very different. Given the unique nature of the defense procurement business, it is quite likely that commonality may not prevail here. For instance, one distinctive feature of defense-related business is the complexity of regulation, which oftentimes requires substantive professional and inside knowledge to truly understand. The Federal Acquisition Regulation (FAR) alone consists of thousands of pages full of government-specific terminologies. Further, a firm that is doing business with the Department of Defense (DoD) is under the scrutiny of various government agencies, such as the Government Accountability Office (GAO), the Defense Contract Audit Agency (DCAA), and others. There is a high cost of non-compliance. A defense contractor that is found to engage in misconduct could face various penalties including settlement with fine, civil or criminal investigation, suspension, or even debarment. If defense contractors believe that these redlines are costly to cross, they may have incentives to hire the best talent with professional and/or institutional knowledge to help them avoid such behavior. For example, a March 22, 1991, article in *The Wall Street Journal,* titled "Northrop Nominates Three for Its Board," reported that

> "The nominees are Joseph A. Califano Jr., 59 years old, a Washington attorney and former Secretary of Health, Education and Welfare under President Jimmy Carter; Jack Edwards, 62, a Washington lawyer and formerly the ranking Republican congressman on the Defense Appropriations Subcommittee; and retired Gen. John T. Chain Jr., 56, a 35-year Air Force veteran who this year retired as commander-in-chief of the Strategic Air Command to become executive vice president of operations of Burlington Northern Railroad Co"

A company spokesman said in the news announcement, "(these) board members are chosen for the breadth of their experience and counsel" ("Northrop Nominates," 1991). Moreover, Kent Kresa, then Northrop president and chief executive officer, further commented, "These men bring to Northrop unsurpassed

experience and knowledge in their own fields, and a diversity that will serve us well as we shape the company to match the changes taking place in the country and the world" ("Northrop Nominates," 1991). Note that two of the individuals are attorneys and all three of them had extensive and high-profile government or military experiences. Their expertise and experience, if used under good intention, would greatly help Northrop comply with the regulatory and executive rules. Recognizing this potential competing theory, we offer the following alternative hypothesis:

> **<u>Alternative Hypothesis (AH)</u>:** The defense contractors' excessive profitability is less pronounced for those with political connections. Non-connected firms should exhibit a more excessive profit.

Both H and AH have reasonable justifications. Which one is factually supported? Our next section empirically investigates this issue.

# IV. Empirical Results and Findings

## A. Univariate Analysis

We first report the univariate statistics of key variables. Recall from Section 2 that we have 276 firm-years in a three-year range of 2007–2009. We classify each of these 276 firm-years into one of the two mutually exclusive groups. The first group, labeled as "non-politically connected" firms, consists of all firm-years for which none of this firm's Year-2008 board members had political connection through his or her prior employment. All of the other firm-years that are not in the first group had at least one of the firm's board members being classified as a "politically connected director" and hence belongs to the second group called "politically connected" firms. Out of the 276 firm-years, 54 are politically non-connected and 222 are connected.

**Table 3. The Univariate Comparison of Key Variables Between Politically Connected and Non-Connected Firm-Years**

| Group | N | Variable | Mean | Std Dev |
|---|---|---|---|---|
| Politically non-connected | 54 | Total Assets (millions) | 13,535 | 23,945 |
| | | Total Sales (millions) | 22,754 | 30,769 |
| | | Dollar awarded as percent of sales (%) | 8.52 | 11.73 |
| | | Excessive ROA | 0.04 | 0.09 |
| Politically connected | 222 | Total Assets (millions) | 41,339 | 103,331 |
| | | Total Sales (millions) | 33,060 | 56,377 |
| | | Dollar awarded as percent of sales (%) | 21.59 | 28.00 |
| | | Excessive ROA | 0.01 | 0.08 |

We have several immediate observations from Table 3. First, politically connected defense contracting firms are much bigger than non-connected ones.

Measured by assets (revenue), a typical politically connected firm is three (one-and-a-half) times as big as a typical non-connected firm. Second, defense contracts account for a much bigger portion of total revenue for politically connected contractors than for non-connected ones. Specifically, about 21.6% (as opposed to 8.5%) of total revenue is generated by defense contracts for politically connected firms (as opposed to non-connected firms). This particular evidence is consistent with Agrawal & Knoeber (2001), who find that for those firms in which sales to government plays a more important role, the presence of politically connected directors on the board is greater as well. It is also in line with the finding of Goldman, Rocholl & So (2012) that political connections affect the allocation of procurement contracts. Nevertheless, we would like to stress that just because there is a positive association between the political connection and the defense contract dollar as a percentage of revenue does not necessarily indicate a rent seeking or corruption story. It is plausible that the hiring of political experience is well intentioned and that those valuable experiences are legitimately used to compete for government contracts in a lawful and ethical way. Last but not least, a univariate comparison on excessive profits (as measured by excessive ROA) between politically connected and non-connected groups demonstrates that the former displays a much less pronounced excessive profit than the latter (4% versus 1%). This suggests that preliminary evidence casts doubt on the corruption (or rent-seeking) hypothesis and favors our alternative hypothesis, which supports the non-opportunistic motives for establishing political connections. That said, a more sophisticated approach (beyond univariate analysis) is needed to provide more convincing evidence.

## B.    Multivariate Analysis

In this section, we use a multivariate regression method to examine whether the evidence against the corruption hypothesis in a univariate context persists in a multivariate setting. Put another way, we want to inspect whether our preliminary finding based on a univariate relation is robust to controlling all known determinants of defense contractors' excessive profits. Needless to say, our dependent variable

(i.e., the left-hand-side variable) is the firms' excessive profits, and our main variable of interest on the right-hand side is the firms' political connections. To ensure that the impact of political connection on excessive profit is incremental to the effects of all the other known determinants of excessive profits, we need to include a set of control variables on the right-hand side of the regression. Wang and San Miguel (2012), a recent work on defense contractors' excessive profits, provided us with a reference for that purpose.

Wang and San Miguel (2012) not only confirm the existence of defense contractors' excessive profits but also they document two determinants of excessive profitability. In particular, by showing defense contractors' excessive profits being more pronounced after 1992, they argue that the post-1992 significant industry consolidation improved the bargaining power of the newly combined firms and, in turn, amplified these firms' profitability. This basically indicates that the degree of industry concentration is a key determinant of excessive profit. The second determinant documented by Wang and San Miguel (2012) is the quality of corporate governance, as measured by the duality of the chief executive officer (CEO) and the chairman of the board. The main justification behind this relation is that poorer corporate governance exacerbates firms' rent-seeking behavior that arises from substantial information asymmetry between the government and defense contractors.

In addition to the two determinants from Wang and San Miguel (2012), that is, the degree of industry concentration and the quality of corporate governance, we also include the size of the firm as a third control variable. There are two reasons for doing that. First, firm size is a commonly used control variable in empirical corporate finance studies. The justification is that size is such a "composite" variable that incorporates so many characteristics and information that for any particular study, it is a noisy measure of the particular variable of interest yet a universal and perfect control variable that is nice to be included on the right-hand side. Secondly, our Table 3 clearly shows that there is a negative correlation between the size of the firm

and the firm's excessive profitability, and a positive correlation between the size of the firm and the firm's political connection; that is, smaller defense contractors tend to exhibit more pronounced excessive profits and less political connection relative to bigger ones. Hence, it is appropriate to include the size of the firm as a control to avoid the potential correlated omitted variable problem that could damage the statistical inferences of the multivariate regression model.

So our multivariate regression includes three control variables besides the variable of interest (i.e., political connection). The dependent variable is, of course, the excessive profits as defined by a three-way industry-year-size matched excessive ROA,[12] as elaborated in Wang and San Miguel (2012). The empirical proxies for the three control variables are as follows: we use a logarithm of total revenue as "firm size," the duality of CEO and chairman of the board as a binary measure of "corporate governance," and the percentage of industry revenue represented by the largest four firms within the industry as a gauge of the degree of industry concentration. Same as Wang and San Miguel (2012), we extract total revenue from Compustat and assess whether the CEO is also the chairman of the board from firms' proxy statements. Regarding the proxy for the degree of industry concentration, we use the Year-2007 "Concentration Ratios" published by the Census Bureau of the U.S. Department of Commerce. Table 4 reports the regression results.

---

[12] Where industry is defined as 4-digit SIC code, size is defined as total assets. Alternative definitions yield similar results.

**Table 4.   Multivariate Regression: The Excessive Profitability and Firms' Political Connections**

| Independent Variables | Dependent Variable: Industry-Year-Size Matched Excessive ROA | |
|---|---|---|
| | Excessive ROA = a + b * political connection + c * corporate governance + d * firm size + e * industry concentration | |
| | Political connection measured by a dummy indicator | Political connection measured by the percentage of politically connected directors on the board |
| Intercept | 0.05 | 0.04 |
| Political Connection (p-value) | -0.04 **(0.01)*** | -0.07 **(0.04)** |
| CEO-Chairman Duality Dummy (p-value) | 0.01 (0.29) | 0.01 (0.31) |
| Firm Size (p-value) | -0.08 **(0.05)** | -0.08 **(0.05)** |
| Industry Concentration (p-value) | 0.10 **(0.03)** | 0.11 **(0.02)** |

*Notes.* * indicates 10% significance level, ** indicates 5% significance level, and *** indicates 1% significance level. The CEO-chairman dummy takes a value of 1 if the CEO is also the chairman; firm size is defined as a logarithm of total revenue; industry concentration is defined as the percentage of industry revenue represented by the largest four companies within the industry.

Table 4 shows that excessive profitability is lower for those firms with political connections, regardless of whether political connection is measured as a binary indicator variable or as the percentage of politically connected directors on the board. The magnitude of the impact is both statistically and economically significant. Moreover, this result holds after we control other known determinants of excessive profits. The signs of all the control variables are as expected, and the magnitudes of the coefficients of control variables are significant except for the corporate governance proxy. Overall, the multivariate regression results reject the corruption or rent-seeking hypothesis and suggest a non-opportunistic motive of establishing political connections through board directors' prior experience.

THIS PAGE INTENTIONALLY LEFT BLANK

# Conclusion

Using a slightly reduced sample from the one used by Wang and San Miguel (2012), we investigate the impact of political connections on excessive profits of defense contractors. We measure political connections by searching the biographies of board directors in the firms' proxy statements. We find that defense contractors are more likely to have politically connected director(s) in their board; moreover, among defense contractors, those with a politically connected board tend to have a higher percentage of revenue from defense contracts than those without political connection. While these evidence may suggest that defense contractors have stronger incentives to establish political connections through the recruitment of board directors, and those directors may indeed help the firm to compete for government contracts, they do not necessarily support a "rent-seeking" or "corruption" hypothesis. In fact, in testing the "corruption hypothesis" versus an alternative "non-opportunistic motive hypothesis" in the setting of defense contractors' excessive profits, we find strong evidence refuting the former and in favor of the latter. This suggests that defense contractors may hire those politically connected directors and use their experience to serve a benevolent role to the public. For instance, one legitimate use of the political experience is to keep defense contractors from opportunistic profit-seeking behaviors that could reach or even cross federal government regulatory redlines.

THIS PAGE INTENTIONALLY LEFT BLANK

# List of References

Agrawal, A., & Knoeber, C. R. (2001). Do some outside directors play a political role? *Journal of Law and Economics, 44*(1), 179–198.

Albano, G. L., Snider, K. F., & Thai, K. V. (2012). *Charting a course in public procurement innovation and knowledge sharing*. Boca Raton, FL: PrAcademics Press.

Ang, J., & Boyer, C. (2000). *Finance and politics: Special interest group influence during the nationalization and privatization of Conrail* (Economics and Financial Studies Working Paper No. A-4). Potsdam, NY: Clarkson University.

Atlas, C. M., Gilligan, T. A., Hendershott, R. J., & Zupan, M. A. (1995). Slicing the federal government net spending pie: Who wins, who loses, and why. *American Economic Review, 85*, 624–629.

Chaney, P. K., Faccio, M., & Parsley, D. (2011). The quality of accounting information in politically connected firms. *Journal of Accounting and Economics*, *51*, 58–76.

Correia, M. (2012). *Political connections, SEC enforcement, and accounting quality* (Rock Center for Corporate Governance at Stanford University Working Paper No.61). Stanford, CA: Stanford University.

Duchin, R., and Denis Sosyura, 2012, The Politics of Government Investment, *Journal of Financial Economics*, forthcoming.

Faccio, M. (2006). Politically connected firms. *American Economic Review, 96*(1), 369–386.

Faccio, M. (2010, Autumn). Differences between politically connected and con-connected firms: A cross-country analysis. *Financial Management*, 905–927.

Faccio, M., Masulis, R. W., & McConnell, J. J. (2006). Political connections and corporate bailouts. *Journal of Finance*, *61*(6), 2597–2635.

Goldman, E., Rocholl, J., & So, J. (2009). Do politically connected boards affect firm value? *Review of Financial Studies*, *22*(6), 2331–2360.

Goldman, E., Rocholl, J., and So, J., 2012, Politically Connected Boards of directors and the Allocation of Procurement Contracts *Review of Finance*, forthcoming.

Hoover, G. A., & Pecorino, P. (2005). The political determinants of federal expenditure at the state level. *Public Choice, 123*, 95–113.

Jayachandran, S. (2006). The Jeffords Effect. *Journal of Law and Economics, 49*, 397–425.

Khwaja, A. I., & Mian, A. (2005). Do lenders favor politically connected firms? Rent provision in an emerging financial market. *Quarterly Journal of Economics, 120*(4), 1371–1411.

Knight, Brian, 2008, Legislative Representation, Bargaining Power, and the Distribution of Federal Funds: Evidence from the U.S. Senate, *Economic Journal* 118, 532(October): 1785-1803.

Kroszner, R., & Stratmann, T. (1998). Interest-group competition and the organization of Congress: Theory and evidence from financial services' political action committees. *American Economic Review*, 88(5), 1163–1187.

Northrop nominates three for its board. (1991, March 22). *The Wall Street Journal.* Retrieved from http://online.wsj.com/home-page

Roberts, B. (1990). A dead senator tells no lies: Seniority and the distribution of federal benefits. *American Journal of Political Science, 34*(1), 31–58.

Rogerson, W. (1994). Economic incentives and the defense procurement process. *Journal of Economic Perspectives, 8*(4), 65–90.

Wang, C., & San Miguel, J. (2012). The excessive profits of defense contractors: Evidence and determinants. *Journal of Public Procurement, 12*(3), 386–406.