# Executive Compensation in Corporate Lobbying Firms

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**ABSTRACT**

Executives’ networks and corporate lobbying affect financial performance of firms and financial performance affects executives’ compensation. However, there is a lack of evidence in the academic literature where the researchers examine the effects of executives’ network and corporate lobbying on executive compensation in existing lobbying companies. In this paper, we investigate the effects of executive networks and corporate lobbying on executive compensation in the US lobbying companies. In particular, we examine the executives’ professional and educational networks and the lobbying expenses as our dependent variables and executive compensation terms as our independent variable. We use a sample of 952 US companies with 76,981 executive-year observations from 2005 to 2015. We find a negative relationship between executives’ compensation and executive networks (professional and educational networks) in the US lobbying companies, whereas we find a positive relationship between executive compensation and corporate lobbying. Our study expends the determination of executive compensation in the US lobbying companies, where lobbying expenses is more significant than executive networks in determining executive compensation. Our study also helps the company policy makers to understand the importance of corporate lobbying in determining the executive compensation.

Keywords: Corporate Lobbying; Executive Compensation; Executive Network; Company Performance

# 1. Introduction

Companies usually invite top managers or bankers from other organizations to sit on the company boards as executives (Renneboog and Zhao, 2013). These board members build up useful connections at personal and professional level, and these connections help the executives to share critical and significant information for the benefit of companies (Fracassi and Tate, 2012). The importance of these networks, especially the influence of the discussion in the board room, are widely discussed in academic literature (Akbas, et al., 2016; Renneboog and Zhao, 2013; Fracassi and Tate, 2012). Moreover, through these networks, executives access information not only about corporate strategies, sector trends and economic evolutions, but also about the changes in executive remuneration and managerial vacancies in other firms (Renneboog and Zhao, 2013).

Because of this immense importance of executives’ networks in the business operation, it is always important to understand how executive networks would affect firm performance. Executives with quality network have better opportunities to access the non-public information, which may influence the corporate decision marking and monitoring in planning strategic alliances, mergers and acquisitions or entering a new market etc.(Renneboog and Zhao, 2011; Larcker et al; 2013). This valuable information affects the company performance at an early stage as this information is circulated among the networks. Thus, the company gets added advantage from executives’ networks. From the executives’ aspect, a strong network reflects their managerial power, past success, their reputation and experience, which guarantee the quality of this executive (Renneboog and Zhao, 2011). Thus, executives’ networks are valuable for the companies and better and timely performance of the companies, which allows the executives to progress in their compensation ladder.

In addition to executives’ network, corporate lobbying is another important element that affects the corporate performance. Corporate lobbying is a strategic process that a company try to influence government officials and politics in the policy-making decisions (Unsal et al., 2016). As the priority of increasing shareholders’ benefits, lobbying has potential effects on revenue growth, expenditure saving by persuading a tax policy benefit (Richter et al, 2009), favourable visa and trade policy (Kerr et al., 2011). Moreover, lobbying is positively linked to market and accounting measure of firm performance (Chen et al., 2015), and is related to better stock performance and return (Goldman et al., 2013). Such a broad spectrum of benefits makes corporate lobbying an important strategy for company, especially in the United States.

Prior studies show a positive effect of corporate lobbying on company performance (Chen et al., 2015). We also find evidence of better company performance leading to higher executive compensation (Crespi-Cladera and Pascual-Fuster, 2015). In addition, we find positive impact of executives’ network on company performance and executive compensation in non-lobbying companies (Renneboog and Zhao, 2011). Thus, it is important to investigate if it is executive network or corporate lobbying that determines the executive compensation in corporate lobbying companies.

In the existing literature, there is no comparison between executives’ networks and corporate lobbying as determinants of executive compensation. Academic literature is mainly focused on links between executives’ networks and executive compensation (Renneboog and Zhao, 2011, 2013; Akbas et al., 2016 ) as well as corporate lobbying and firm performance (Mathur et al., 2013; Unsal et al., 2016; Chen et al., 2015). In this study, we address the research gap by examining the executive compensation in corporate lobbying companies and by comparing the effects of corporate lobbying and executives’ networks on executive compensation. We investigate whether executives’ networks affect executive compensation more than corporate lobbying in the US lobbying companies.

Theoretically, we are complementing agency theory with stakeholder theory to define the theoretical model of our paper. With the help of Agency Theory we argue that more powerful and entrenched management teams pursing their personal interests may distort the positive link between corporate lobbying and value creation (Mathur et al., 2013). On the other hand, Stakeholder theory assists us to explain the executives’ reasonable amount of compensation. However, none of the theories alone can explain the impact of executive network and corporate lobbying strategies on executive compensation.

To empirically examine the research question we use a sample of 952 US companies for the periods of 2005-2015. We have 76,981 observations. We find that the executive network in this research is negatively related to executive compensation in the US lobbying companies. In corporate lobbying perspective, we find a positive relationship between corporate lobbying and executive compensation in the sample companies. The results are consistent with the existing research findings.

This paper has the following contributions. First, the comparative study on the effects of executives’ networks and corporate lobbying on executive compensation in lobbying companies in the United States will fill the literature gap in this area. It gives a new evidence of the relationship between corporate lobbying and executive compensation as well as updates the empirical evidence within the lobbying companies as we find that the executives’ networks have a negative effect on the executive compensation. In addition, we extend the study by considering professional and education network in this study. Secondly, theoretically we establish that the agency theory along with stakeholder theory can better explain the important determinant of executive compensation in lobbying companies. Thirdly, in the practical perspective, it provides a complete view about executive compensation, especially for lobbying companies. The decision makers will be able to understand why both executives’ networks and corporate lobbying are important in determining company performance and compensation, especially in corporate lobbying companies.

The rest of the paper is structured as follows. The next section provides a literature review related to the paper, highlighting executive compensation, corporate lobbying and executive networks. Followed by the theoretical framework, we will discuss the hypotheses development and methodology in the following sections. After the discussion and analyses of the results, a conclusion will be drawn at the end of this paper.

# 2. Literature review

In this section we discuss the relevant literature related to executive network and corporate lobbying as a determinant of executive compensation.

**2.1 Executive Networks**

In the existing literature, there are three main types of executive networks based on their activities. Professional networks are the connections build up through executive interlocks in different boards (Lu, Shailer and Wilson, 2016). Company executives network among them as they either sit on the same board as executives or they might have been in the same company in the past (Renneboog and Zhao, 2013). Social networks are established through similar sports interests, club membership or any other social activities between executives (Fracassi and Tate, 2012). Educational networks are developed among the executives graduated from the same universities or attend the same professional training program (Bulter and Gurun, 2012). In this study, we will focus on the professional and educational networks in corporate lobbying companies and we define these networks as the executives’ network.

Executives’ networks enhance company value (Renneboog and Zhao, 2011). Unpublicized information is exchanged among executives in their network, which is important to the company’s strategic decision making and also allow executives to reconsider and adjust own plan of actions to achieve better performance (Renneboog and Zhao, 2011). Extensive executive network brings high probability of successful takeover transactions with less negotiation duration (Renneboog and Zhao, 2013). The annualized return of informed trading is also higher in the companies with strong executive networks (Akbas, Meschke and Wintoki, 2016). However, strong director networks have negative effects on company performance as well. Board monitoring is poor when the executives have well-connected networks, which have negative effects leading to a decreasing corporate performance (Fracssi and Tate, 2012; Anders, Bongsrd and Lehmann, 2013). An extensive network reflects the executives’ quality, managerial power and previous achievements, as well as valuable information, higher reputation and better management experiences which contribute to company performance (Renneboog and Zhao, 2011). Better performance of company will have impact on executive compensation. Thus, executives with strong networks have positive impact on their compensation (Renneboog and Zhao, 2013; Larcker et al; 2013; Fracssi and Tate, 2012).

The existing literature mainly focused on the link between executive networks and executive compensation (Renneboog and Zhao, 2011,2013; Akbas et al., 2016), but there is no evidence about how important is the executive network in determining executive compensation in lobbying companies. As company lobbying influence company performance, the lobbying companies might focus more on the executives’ decision making related to lobbying activities instead of their networks, which would lead to a different relationship between executive networks and their compensation in lobbying companies.

**2.2 Corporate Lobbying**

In this paper along with executives’ network we are also examining if there is any influence of corporate lobbying on executive compensation in the corporate lobbying firm. Corporate lobbying is a political activity. Company executives engage in corporate lobbying to influence the government policy makers at different level of government structure to make favourable policies, which they can benefit from (Chen, Parsley and Yang, 2015). In the US, firms spent more than $3.3 billion on lobbying activities in 2012 (Kong, Radhakrishnan and Tsang, 2017), which is nine times greater than individual attempts to influence the policy maker (Kerr et al., 2011).

The lobbying expenditures doubled between 1999 and 2006 after the recognition of the advantages of lobbying by companies (Blanes I Vidal et al., 2012). Lobbying effects lower the effective tax rates in the following tax year (Richter et al., 2009), which will increase revenue and decrease the cost to the company which will have a positive effect on company performance. In addition, by influencing the policy maker, companies also get benefits from visa and trading policy, which help them to achieve greater access in the international market and their trading policy influence their performance in the global market ([Kerr et al., 2011](http://www.sciencedirect.com/science/article/pii/S0929119916300475#bb0205)). Moreover, lobbying is also found positively related to accounting and market measures of financial performance (Chen et al., 2015), preventing corporate fraud detection ([Yu and Yu, 2011](http://www.sciencedirect.com/science/article/pii/S0929119916300475#bb0295)).

Because of the above-mentioned benefits of corporate lobbying, in the existing literature we find evidence of positive relationship between corporate lobbying and company performance (Chen et al., 2015; Unsal et al., 2016). In addition, we also find that company performance influence executive compensation (Akbas et al., 2016). Thus, these existing literatures give us a hint that corporate lobbying can be a determining factor of executive compensation. But to the best of our knowledge there is no evidence in the existing literature about the impact of corporate lobbying on executive compensation especially in corporate lobbying firms, which we examine in this paper.

 To summarise the existing literature, we find evidence of positive and negative impact of executive network on company performance and in addition a contradictory impact on executive compensation mainly in non-lobbying company. We also identified evidence of influence of corporate lobbying on company performance leading to impact on executive compensation. But there is less research related to executive compensation in corporate lobbying firms. As corporate lobbying firms play an important role in the development of the economy and executives follow different decision-making strategies compared to non-lobbying firms, it is important to identify if the executive network or the lobbying activities influence the executive compensation most. In the existing literature corporate lobbying is separated from executive network so deliberately we selected the corporate lobbying firms as our sample which will assist us to identify among corporate lobbying and executive network which activity of executives affects their compensation most.

# 3. Theoretical framework

The theoretical framework proposed in this study is a combination of the agency theory and the stakeholder theory.

Agency theory deals with the relationship between principles and agents in business, concerning with separating ownership and control of a firm (Jensen and Meckling, 1976). Agency theory argues the managers with powerful and entrenched management style pursing their personal interests may change the positive relationship between corporate lobbying and value growth (Mathur et al., 2013). In other words, because of a potential agency problem, lobbying influence will exist only if lobbying offers benefits to shareholders (Unsal et al., 2016).

Stakeholder theory provides a basic structure of understanding, maintaining and enhancing the relationship between companies and their stakeholders (Hill 2010). The executives as an important stakeholder in the company, always are willing to help the company to get a better performance and maximize the shareholders’ value, another important stakeholder in companies. Better performance will allow the executives to be paid better.

 In our study, the corporate lobbying as a corporate strategy and also as agency problem will enhance the company performance and benefit shareholders value. At the same time, a better company performance will enhance the executive’s compensation. In other words, when company deal with the agency problem of corporate lobbying, they can maintain and increase the benefits of their stakeholders, such as shareholders and executives. Thus, the Agency and Stakeholder theory together allow us to discuss the theoretical framework of the paper in details.

# 4. Hypotheses Development

To address the research question we develop the following two hypotheses.

Executive networks positively impact company performance as executives collect unpublicized information through their network and apply these information in their strategic decision making (Renneboog and Zhao, 2011). Executive networks also play an important role in decreasing negotiation duration when executives process takeover transactions (Renneboog and Zhao, 2013) and extend annualized return when they run informed trade (Akbas, Meschke and Wintoki, 2016). Such activities of the executives usually influence company performance positively and executives’ involvement in increasing company profitability positively impact their compensation (Renneboog and Zhao, 2013; Larcker et al; 2013; Fracssi and Tate, 2012). But what is the role of executive network in determining their compensation in lobbying companies is yet to be examined. It is important to check the importance of executive network in lobbying companies compared to non-lobbying companies as lobbying activities also immensely influence the company performance (Chen et al., 2015; Unsal et al., 2016).

Company performance usually has significant impact on executive compensation (Renneboog and Zhao, 2011; Horton et al., 2012). However, executives’ networks can be negatively related to company performance (Fracssi and Tate, 2012). In other words, extensive executive networks lead to a poor company performance, and a poor company performance leads to decrease in executive compensation. As lobbying companies closely follow each other there is a high possibility that when executives of lobbying companies will do networking there performance will follow same trend (Chen et al., 2015). High reliance on lobbying peers will reduce the quality of information exchanged among the executives leading to a poor performance which will in turn negatively affect the executive compensation (Lockhart and Unlu, 2018). So, to fill the gap in the academic literature related to executive compensation in corporate lobbying companies we propose the following hypothesis

***Hypothesis 1****: executive networks in the US lobbying companies have negative impact on executive’s compensation.*

More specifically, educational network and professional networks will be investigated in this study. Professional networks are the connection that executives gained in their employment, which brings valuable information to the company (Akbas et al., 2016). However, if the company as a whole can get the information from any professional source, they rely more on that one particular source of information without evaluating other sources. Thus, we find evidence of negative relationship between executives’ professional networks and their compensation as executives network rely on negative information circulated among the netwrok (Renneboog and Zhao, 2011). Thus, we examine hypothesis 1a as follows:

***Hypothesis 1a****: Executives’ professional networks in the US lobbying companies have negative impact on executives’ compensation.*

Educational networks are the connection that executives gained from their education, which links the executives in the same university or in the same professional training course in the same period (Butler and Gurun). In majority of literature based on non-lobbying companies either educational networks is positively related to the executives compensation (Butler and Gurun, 2012; Akbas et al., 2016) or executives’ educational networks have no significant effect on executive compensation (Kim et al., 2015). In these inconclusive research, executive educational network have negative effect on company performance (Fracassi and Tate, 2012), which indicate a higher probability of negative executive compensation. Thus, this discussion forms the basis of the hypothesis 1b:

***Hypothesis 1b****: Executive educational network in the US lobbying companies have negative impact on executives compensation.*

Corporate lobbying activities increase the revenue and decrease the cost of the company which have positive relation to company performance (Richter et al., 2009). Better company performance is significantly related to executive compensation (Horton et al., 2012). Hence, to address the research question we examine the following hypothesis:

***Hypothesis 2****: Corporate lobbying in the US lobbying companies has positive impact on executives’ compensation.*

# 5. Methodology

**5.1 Sample Selection**

The United States is the largest lobbying country in the world (Borisov et al., 2016). Thus, we considered all US listed lobbying companies as our sample to examine the proposed research question. Following the literature we use the lobbying expenditures to proxy for corporate lobbying for all available companies (Hadani, 2012; Hadani et al., 2015) and we collected these information from the Center for Responsive Politics (CRP) from 2005 to 2015. The executive network information (professional and educational) is collected from BoardEx for the same period. We collect the financials, executive compensation and board characteristics information from Compustat, Execucomp and Bloomberg. Missing data exists after merging different datasets. The final sample size includes 952 lobbying companies, with 76,981 executive-year observations in the United States.

**5.2 Variable Description**

5.2.1 Dependent variables: executive compensation

We use five proxies to measure executive compensation. These variables are salary, bonus, equity, other and total compensation (Renneboog and Zhao, 2011). Salary is the fixed annual payment and usually it is cash based payment. Bonus is the additional amount of annual payment, and it is normally paid in cash or shares when specific targets or benchmarks are achieved. Equity Linked Compensationare the shares awarded to the directors, estimating by the value of options awarded yearly. Other means any other compensation paid to executives. Total compensation is the sum of all compensation items listed above. The above definitions are taken from both BoardEx and ExecuComp. The natural log of executive compensation term is used in our research, as the pay gap between different executives in different companies is significant large (Bulter and Gurun, 2012).

5.2.2 Independent variables

5.2.2.1 Executive networks

Following Fracassi and Tate (2012), we focus on two types of executive networks, professional and educational networks. We calculate the both network size. Professional network is the sum of the network size of an individual director siting in the different board in the same fiscal year (Renneboog and Zhao, 2011). Educational network is the sum of the network size of an individual director attends the same university or program in the same year (Butler and Gurun, 2012). You need to mention how you dealt with missing observation

5.2.2.2 Corporate lobbying

We aggregated one of the widely used and studied forms of corporate lobbying, company’s lobbying expenditures (Hadani et al., 2015; Unsal et al., 2016). We use natural log of the lobbying expenditure in the US dollars spend by company.

5.2.3 Control Variables

5.2.3.1 Company size

Company size is an important determinant of lobbying (Mathur et al., 2013) activities as well as executive compensation (Renneboog and Zhao, 2011). To control the influence of company size, we use the natural log of the total assets as a proxy of company size.

5.2.3.2 Company performance

Corporate lobbying and executive networks have influence on company performance (Unsal et al., 2016; Chen et al., 2015; Crespi-Cladera and Pascual-Fuster, 2015). In addition, company performance links to executive compensation. To control company performance, we aggregated two main forms of company performance, namely return on assets (ROA) and Tobin’s Q. Explain how you measure both.

5.2.3.3 Board characteristics

Board characteristics is an important control variable for the executive related research (Focke et al., 2017; Hadami et al., 2015; Fracassi and Tate, 2012). We aggregated two main forms of board characteristics in our study. They are board size and board independence.

More detailed description of the variables used in the research is explained in Table 1.

[Insert Table 1 about here]

**5.3 Methodology**

5.3.1. Econometric Approach

The distribution of our dependent variable, executive compensation term, and independent variables, corporate lobbying and executive networks are not normal distributed. Meanwhile, some missing value also exists. The unbalanced distribution can cause estimation problems for ordinary least squares regression (Hadani, 2012). Therefore, we use two stages least squares regression in our study.

5.3.2. Model Description

In order to make a comparison between the effects of directors’ networks and corporate lobbying in determining executive compensation, we use the following empirical model in this paper:

y = *α+β1* X*1 + β2 Control + ε*

where the *y* is the dependent variables, which refers to the executive compensation terms, including salary, bonus, equity related compensation, other and total compensation. The X*1* is the independent variables in this study, namely director network terms and corporate lobbying expenditures. The major control variable terms are financial performance, including firm size, ROA and Tobin’s Q, and board characteristics, including total director and numbers of standard director on board. More detailed variable description is given in Table 1.

5.3.3. Descriptive Statistics

Table 2 reports the summary statistics for all variables in our sample. The average nature log of total compensation is 5.755, where the total compensation includes all the other compensation terms. The average log of lobbying expenses in our sample is 6.137, with a standard deviation of 1.607. The mean of professional networks is 14 connections and the mean of educational networks is 36 connections.

[Insert Table 2 about here]

5.3.4. Correlation Matrix

Correlations among all variables are reported in Table 3. The correlations between total compensation and professional networks are negative and significant (-0.07), while a positive significant correlation (0.04) is found between educational networks and total compensation. This suggests that professional network and educational networks might have opposite effects on executive compensation. in addition, the correlation between total executive compensation is positive and significant (0.32) at 5% significance level. This suggests that more expenditure on lobbying would bring more benefit to executive’s compensation in the US lobbying companies.

[Insert Table 3 about here]

# 6. Results

In this section, we report the empirical results on the relationship between executive compensation terms and executive networks as well as corporate lobbying in the US companies. we start with a basic ordinary least squares (OLS) analysis in Table 4 of how the executive network terms (professional and educational networks) and corporate lobbying (lobbying expenses) affect the executive compensation terms (salary, bonus, equity, other and total). In general, we find a negative and significant relationship between professional networks and salary (-0.0030), equity (-0.0085) and total compensation (0.0064), but a positive and significant (0.0227) relationship between professional networks and a negative relationship between professional network and other compensation. In the

educational networks aspect, we find a positive and significant relationship between educational network and equity (0.0007) as well as total compensation (0.0004). For salary and other compensation, we find a positive link with educational network but not significant. In addition, by using the OLS regression, we find a positive and significant relationship between lobbying expenses and salary (0.0177) and total compensation (0.0210), positive relationship between lobbying expenses and equity. However, a negative and significant relationship exists between other compensation and lobbying expenses. Comparing the results of total compensation by using OLS regression, the coefficient of networks terms are -0.0064 for professional networks and 0.0004 for educational networks, and the coefficient of lobbying expenses is 0.0210. This suggests that the company has higher lobbying expenses tent to give more compensation to the executives instead of paying more on their extensive networks.

However, the results of OLS regression might be influenced by the randomly contributed missing data. In addition, the firm level unobserved heterogeneity would be influenced the results as well. We used two stage least squares estimation (instrumental variables). In the two stage least square model we follow Fracassi and Tate (2012) using retirement variables as instruments to make the connection with endogenous variables. More specifically, we use “time to retire” of executives as exogenous variables in the first stage. In other words, we regress “time to retire” on executives qualification and average year on boards (endogenous variables) along with all other control variables. We also examine the validity of all instruments and find that we cannot reject the overidentifying restrictions of the model (p-value is 0.0755).

We report the two stage least square results in Table 4 as well. The executive compensation terms are used one at a time to investigate the effects of executive networks and corporate lobbying on executive compensation.

In Hypothesis 1a we proposed a negative relationship between professional network and executive compensation. In the empirical test, we find that the professional networks are negative and significant related to majority of executive compensation terms in the US lobbying companies, namely salary (-0.0022), equity (-0.0061) and total compensation (-0.0044). But we find bonus is significantly positively (0.0212) related to executive compensation. Majority of our empirical results give an evidence of our hypothesis 1a. This suggests that extensive professional networks would not benefit the executive compensation in salary, equity and total compensation in the US lobbying companies. However, as bonus would link to some specific goals for the company, the executive networks would help the company to meet the specific goals. Thus, executive networks would benefit the bonus in the executive compensation in the lobbying companies.

Hypothesis 1b expected a negative relationship between educational network and executive compensation. Similar to the professional network, we find educational networks are significantly negatively related to salary (-0.0012), bonus (-0.0051), equity (-0.0023), other (-0.0020) and total compensation (-0.0020) in the US lobbying companies. Our results suggest that in the US lobbying companies executives would not benefit from their extensive educational network in their compensation portfolio.

In general, summarize the executive networks term variables, professional and educational networks, we find that executive networks have a negative effect on executives’ compensation, which is match our hypothesis 1. In the US lobbying companies, extensive executive networks would not that valuable to the companies, so it has negative effects on executive compensation.

In Hypothesis 2, we proposed a positive relationship between lobbying expenses and executive compensation. We find positive and significant relationship between lobbying expenses and salary (0.0287), equity (0.0309) and total compensation (0.0373). However, a negative relationship and significant relationship is found between lobbying expenses and bonus (-0.0551). Our empirical results show that in this US lobbying companies lobbying expenses would have more positive effects on executive compensation.

Compared with the effects of professional networks, educational networks and lobbying expenses on total compensation, we find a positive coefficient of 0.0373 for lobbying expenses, while -0.0044 for professional network and -0.0020 for educational networks. In other words, lobbying expenses have more positive effects on executive compensation than professional and educational networks.

[Insert Table 4 about here]

Because of the unobserved data and the data restricted to find appropriate instrument variable, as well as the causality within the data set, we also use the GMM as an alternative estimation method to analysis our sample. Table 5 reports the results of GMM regression. In the GMM regression, we find the same sign and significance for our dependent and independent variables but with a better coefficient number for all the variables. In addition, AR(1) Test, AR(2) Test and Hansen Test results are also reported in Table 5.

[Insert Table 5 about here]

We preform several robustness tests for our analysis. In table 6, we split our sample into two groups based on the financial crisis. We create a dummy variable here: 1) within the financial crisis (marked as “FinCris” for year 2007 to 2009), the dummy variable is “1”; 2) for other sample period (marked as “non FinCris” for year before 2007 and after 2009), the dummy variable is “0”. The results from considering the effects of financial crisis are consistent with results reported in Table 4 and Table 5. However, as the some policy changes after the financial crisis we still can distinguish the difference before and after the financial crisis period.

[Insert Table 6 about here]

Another robustness test, we split our sample into two groups based on the amount of lobbying expenses. We use the mean of the lobbying expenses as the boundary. The lobbying expense higher than the mean defines as “high lobbying company” and the lobbying expenses lower than average defines as “low lobbying company”. We use both 2SLS and GMM estimation methods in this analysis. The results are shown in Table 7 (2SLS) and Table 8 (GMM). The results of these two methods are consistent and with better significant level and coefficient figure. In Table 7 we find a negative relationship between total compensation and professional networks at 10% significant level (-0.0031) and in the GMM analysis, we have the same sign and coefficient but in 5% significant level.

[Insert Table 7 and Table 8 about here]

# 7. Conclusion

We investigate the relationship between executive networks and executive compensation as well as corporate lobbying and executive compensation in the US lobbying companies. Because of rapidly growing importance of corporate lobbying, it is worth to investigate if the corporate lobbying would affect executive compensation or it will be executive network that will determine the executive compensation in the e lobbying companies. Our results show that large professional and educational network among executives have negative effects on their compensation portfolio in the US lobbying companies. In addition, our results show that more money the company spend on lobbying, the more will be executive compensation.

The empirical findings of this paper contribute to the academic literature related to executive compensation, executive network and corporate lobbying. Our research is carried out in the lobbying companies, which expend the determination of executives’ compensation in the specific US lobbying companies. In addition, by considering professional network and educational network and different types of executive compensation assisted us to provide a detail picture about executive compensation in the US lobbying firms. In the theoretical perspective, we link the agency theory and stakeholder theory to investigate the effects of executives’ networks and corporate lobbying on executive compensation. We use company performance as a bridge to link with the executive networks and corporate lobbying. Our findings have important implication for policy makers and decision makers. Lobbying activities bring benefits to company performance as well as increase executive compensation. So executives might be interested to spend more money in lobbying activities to get benefited by increased compensation. Thus, our findings will assist the stakeholders to understand the importance of executives network and also the expenses made by executive for corporate lobbying. This paper will give a better understanding about the determinants of executive compensation in corporate lobbying companies.

In this study we focus on the US lobbying companies based on the availability of data. We realized that there are lots of other companies around the world doing lobbying in domestic or international market. We only use the lobbying expense as the lobbying proxy. Future research could use other lobbying proxies, such as lobbying bills etc. and expend this research into other country.

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Table 1: Variable Description

|  |  |  |
| --- | --- | --- |
| Variables | Description  | Source |
|  |  |  |
| Executive Compensation |  |  |
|  |  |  |
| Salary  | Fixed annual payment; usually cash based payment | BoardEx, Execucomp  |
| Bonus | Additional amount of annual payment; normally paid in cash or shares when a specific target or benchmarks were achieved | BoardEx, Execucomp  |
| Equity Linked Compensation | Shares awarded to the directors; the estimated value of options awarded yearly | BoardEx, Execucomp  |
| Other | Other compensation paid to executive directors | BoardEx, Execucomp  |
| Total Compensation | Sum of all compensation items listed above | BoardEx, Execucomp  |
|  |  |  |
| Director Networks |  |  |
|  |  |  |
| Professional Network | Network size when the directors sit in the same board; total networks size calculated yearly | BoardEx |
| Educational Network | Network size when the directors graduated from the university or attend the same professional program | BoardEx |
|  |  |  |
| Corporate Lobbying |  |  |
|  |  |  |
| Lobbying Expenditure | The expense that firms spend for lobbying activities; collected yearly | the Centre for Responsive Politics (CRP) |
|  |  |  |
| Financial Performance |  |  |
|  |  |  |
| Firm Size | Natural log of the total assets | Bloomberg, Compustat |
| ROA | The ratio of net income to total assets | Bloomberg, Compustat |
| Tobin's Q | Natural log of the ratio of the market value of assets to book value of assets | Bloomberg, Compustat |
|  |  |  |
| Board Characteristics |  |  |
|  |  |  |
| board size  | The total number of directors siting in the board | BoardEx |
| board independence  | The number of outside or independent directors | BoardEx |

Table 2: Sample descriptive statistics

|  |  |  |  |
| --- | --- | --- | --- |
| Variables | Obs | Mean | Std. Dev. |
| Salary (log) | 26,240 | 4.638524 | 1.04382 |
| Bonus (log) | 1,076 | 7.030327 | 1.388908 |
| Total Equity Linked Compensation (log) | 26,133 | 5.390132 | 1.615833 |
| Other (log) | 14,620 | 2.904127 | 1.57066 |
| Total Compensation (log) | 28,355 | 5.755146 | 1.459509 |
| Professional Networks | 57,581 | 14.29107 | 8.032091 |
| Educational Networks | 57,581 | 36.80664 | 45.25207 |
| Lobbying Expenses (log) | 53,231 | 6.137352 | 1.607201 |
| Firm Size | 57,481 | 9.077311 | 1.800935 |
| ROA | 57,481 | 0.044456 | 0.096847 |
| Tobin's Q | 49,037 | 6.155878 | 1.691036 |
| Board Size | 57,581 | 10.84389 | 2.652156 |
| Board independence | 57,581 | 8.915892 | 2.575851 |

Table 3: Correlation Matrix (2005-2015)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| Salary (log) | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| Bonus (log) | 0.33 | 1 |  |  |  |  |  |  |  |  |  |  |  |
| Total Equity Linked Compensation (log) | 0.34 | 0.19 | 1 |  |  |  |  |  |  |  |  |  |  |
| Other (log) | 0.36 | 0.24 | 0.23 | 1 |  |  |  |  |  |  |  |  |  |
| Total Compensation (log) | 0.48 | 0.41 | 0.88 | 0.34 | 1 |  |  |  |  |  |  |  |  |
| Professional Networks | 0.25 | 0.20 | 0.14 | 0.18 | 0.17 | 1 |  |  |  |  |  |  |  |
| Educational Networks | 0.02 | -0.09 | 0.02 | 0.05 | 0.04 | 0.11 | 1 |  |  |  |  |  |  |
| Lobbying Expenses (log) | 0.19 | 0.14 | 0.31 | 0.20 | 0.32 | 0.17 | 0.08 | 1 |  |  |  |  |  |
| Firm Size | 0.41 | 0.37 | 0.30 | 0.33 | 0.45 | 0.26 | 0.06 | 0.47 | 1 |  |  |  |  |
| ROA | 0.11 | 0.09 | 0.14 | 0.03 | 0.14 | 0.01 | 0.01 | 0.12 | -0.11 | 1 |  |  |  |
| Tobin's Q | 0.34 | 0.22 | 0.27 | 0.24 | 0.34 | 0.28 | 0.08 | 0.35 | 0.53 | 0.27 | 1 |  |  |
| Board Size | 0.26 | 0.23 | 0.15 | 0.24 | 0.22 | 0.48 | 0.08 | 0.17 | 0.54 | 0.00 | 0.43 | 1 |  |
| Board independence | 0.26 | 0.18 | 0.28 | 0.22 | 0.31 | 0.39 | 0.08 | 0.30 | 0.50 | 0.04 | 0.36 | 0.83 | 1 |

*\*\* All results are significant at 5% level.*

Table 4: Effect of executive networks and corporate lobbying on executive compensation (OLS and 2SLS regression results)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|   |   | Salary | Bonus | Equity | Other | Total Compensation |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | OLS | 2SLS | OLS | 2SLS | OLS | 2SLS | OLS | 2SLS | OLS | 2SLS |
| Professional Networks | -0.0030\*\*\* | -0.0022\*\* | 0.0227\*\*\* | 0.0212\*\*\* | -0.0085\*\*\* | -0.0061\*\*\* | -0.001 | 0.0007 | -0.0064\*\*\* | -0.0044\*\*\* |
|  |  | (-3.41) | (-2.33) | (3.40) | (3.13) | (-6.23) | (-4.26) | (-0.05) | (0.37) | (-5.4) | (-3.52) |
| Educational Networks | 0.0000 | -0.0012\*\*\* | -0.0041\*\*\* | -0.0051\*\*\* | 0.0007\*\*\* | -0.0023\*\*\* | 0.0004 | -0.0020\*\*\* | 0.0004\*\* | -0.0020\*\*\* |
|  |  | (0.17) | (-6.54) | (-4.18) | (-3.94) | (2.94) | (-7.86) | (1.17) | (-5.03) | (1.98) | (-8.04) |
| Lobbying Expenses | 0.0177\*\*\* | 0.0287\*\*\* | -0.0468 | -0.0551\*\*\* | 0.0114 | 0.0309\*\*\* | -0.0182\* | -0.0119 | 0.0210\*\*\* | 0.0373\*\*\* |
|  |  | (3.32) | (5.17) | (-1.39) | (-1.64) | (1.38) | (3.62) | (-1.73) | (-1.10) | (2.94) | (5.03) |
| Firm Size |  | 0.1144\*\*\* | 0.1286\*\*\* | 0.3411\*\*\* | 0.3481\*\*\* | 0.0372\*\*\* | 0.0749\*\*\* | 0.0397\*\* | 0.0734\*\*\* | 0.0531\*\*\* | 0.0804\*\*\* |
|  |  | (14.61) | (15.77) | (7.63) | (7.17) | (3.13) | (6.04) | (2.43) | (4.28) | (5.12) | (7.41) |
| ROA |  | 0.3754\*\*\* | 0.4210\*\*\* | 1.3008\*\* | 1.1022 | 1.1063\*\*\* | 1.2479\*\*\* | -0.3340 | -0.2997 | 0.9818\*\*\* | 1.0553\*\*\* |
|  |  | (3.30) | (3.56) | (1.88) | (1.42) | (6.32) | (6.87) | (-1.37) | (-1.18) | (6.44) | (6.66) |
| Tobin’s Q |  | -0.0024 | -0.105 | 0.0305 | 0.0247 | 0.1077\*\*\* | 0.0839\*\*\* | 0.0938\*\*\* | 0.0807\*\*\* | 0.0614\*\*\* | 0.0456\*\*\* |
|  |  | (-0.37) | (-1.54) | (0.77) | (0.58) | (10.59) | (7.94) | (6.74) | (5.57) | (6.97) | (4.97) |
| Board Size |  | 0.0364\*\*\* | 0.1182\*\*\* | 0.0359 | 0.0074 | 0.0375\*\*\* | 0.1876\*\*\* | 0.1302\*\*\* | 0.1899\*\*\* | 0.0353\*\*\* | 0.1577\*\*\* |
|  |  | (5.29) | (10.59) | (0.98) | (0.15) | (3.51) | (10.74) | (9.47) | (8.44) | (3.85) | (10.45) |
| Board Independence | -0.0518\*\*\* | -0.1376\*\*\* | -0.0398 | 0.0007 | -0.0940\*\*\* | -0.2526\*\*\* | -0.1402\*\*\* | -0.1870\*\*\* | -0.0782\*\*\* | -0.2058\*\*\* |
|  |  | (-7.19) | (-11.87) | (-1.04) | (0.01) | (-8.44) | (-14.04) | (-10.05) | (-8.05) | (-8.16) | (-13.27) |
| Observations |  | 20,634 | 20,634 | 813 | 813 | 20,570 | 20,570 | 11,366 | 11,366 | 22,326 | 22,326 |
| Adj R2 |  | 0.0201 | 0.2186a | 0.1636 | 0.2048a | 0.0209 | 0.2189a | 0.018 | 0.2285a | 0.015 | 0.2239a |

*Notes: The dependent variable is the term of compensations package: salary, bonus, equity, other and total compensation. z-statistics are in parentheses. \* indicates significance at the 10% level; \*\* significance at 5%; \*\*\* significance at 1%. For the 2SLS model the reported adjusted R2 (..a) are from the first stage.*

Table 5: Effect of executive networks and corporate lobbying on executive compensation (Dynamic GMM regression results)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|   |   | Salary | Bonus | Equity | Other | Total Compensation |
| Professional Networks | -0.0021\*\* | 0.0204\*\*\* | -0.0060\*\*\* | 0.0008 | -0.0043\*\*\* |
|  |  | (-2.46) | (3.73) | (-4.59) | (0.48) | (-3.85) |
| Educational Networks | -0.0013\*\*\* | -0.0048\*\*\* | -0.0023\*\*\* | -0.0021\*\*\* | -0.0021\*\*\* |
|  |  | (-6.45) | (-3.04) | (-8.11) | (-5.18) | (-8.29) |
| Lobbying Expenses | 0.0283\*\*\* | -0.0585 | 0.0306\*\*\* | -0.0133 | 0.0371\*\*\* |
|  |  | (4.97) | (-1.61) | (3.55) | (-1.20) | (4.96) |
| Firm Size |  | 0.1293\*\*\* | 0.3428\*\*\* | 0.0753\*\*\* | 0.0747\*\*\* | 0.0808\*\*\* |
|  |  | (15.41) | (6.76) | (6.09) | (4.23) | (7.30) |
| ROA |  | 0.4253\*\*\* | 0.8080 | 1.2496\*\*\* | -0.2461 | 1.0602\*\*\* |
|  |  | (3.40) | (0.96) | (6.54) | (-0.83) | (6.50) |
| Tobin’s Q |  | -0.0114\* | 0.0336 | 0.0838\*\*\* | 0.0793\*\*\* | 0.0452\*\*\* |
|  |  | (-1.65) | (0.76) | (7.66) | (5.27) | (4.78) |
| Board Size | 0.1178\*\*\* | 0.0112 | 0.1870\*\*\* | 0.1894\*\*\* | 0.1570\*\*\* |
|  |  | (9.44) | (0.27) | (9.46) | (7.92) | (9.07) |
| Board Independence | -0.1372\*\*\* | -0.0030 | -0.2519\*\*\* | -0.1847\*\*\* | -0.2051\*\*\* |
|  |  | (-10.80) | (-0.06) | (-12.42) | (-7.51) | (-11.52) |
| Observations |  | 20634 | 813 | 20570 | 11366 | 22326 |
| AR (1): p-value |  | 0.000 | 0.005 | 0.000 | 0.000 | 0.000 |
| AR (2): p-value |  | 0.658 | 0.903 | 0.464 | 0.520 | 0.479 |
| Hansen over-id Test (p-value) |  | 0.003 | 0.228 | 0.010 | 0.464 | 0.085 |

*Notes: The dependent variable is the term of compensations package: salary, bonus, equity,other and total compensation. z-statistics are in parentheses.*

*\* indicates significance at the 10% level; \*\* significance at 5%; \*\*\* significance at 1%.*

Table 6: Effect of executive networks and corporate lobbying on executive compensation (Comparison between Financial Crisis – Non Financial Crisis Period)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|   |   | Salary | Bonus | Equity | Other | Total Compensation |
|  |  | FinCris | Non FinCris | FinCris | Non FinCris | FinCris | Non FinCris | FinCris | Non FinCris | FinCris | Non FinCris |
| Professional Networks | -0.0030\*\* | 0.0002 | 0.0126\* | 0.0185 | -0.0075 | -0.0046\*\*\* | -0.0023 | 0.0039\* | -0.0051\*\*\* | -0.0030\*\* |
|  |  | -2.29 | 0.14 | 1.94 | 1.36 | -3.63 | -2.8 | -0.96 | 1.78 | -2.87 | -2.14 |
| Educational Networks | -0.0018\*\*\* | -0.0012\*\*\* | -0.0027\*\* | -0.0054\*\* | -0.0031 | -0.0023\*\*\* | -0.0021\*\*\* | -0.0021\*\*\* | -0.0027\*\*\* | -0.0022\*\*\* |
|  |  | -6.03 | -6.41 | -2.28 | -2.19 | -6.91 | -7.76 | -3.69 | -4.87 | -6.75 | -8.45 |
| Lobbying Expenses | 0.0289\*\*\* | 0.0096 | 0.0159 | -0.0916 | 0.0149 | 0.0176\*\* | 0.0053 | -0.0185 | 0.0428 | 0.0106\*\*\* |
|  |  | 3.78 | 1.57 | 0.53 | -1.38 | 1.25 | 1.85 | 0.39 | -1.38 | 4.20 | 1.28 |
| Firm Size |  | 0.1528\*\*\* | 0.0796\*\*\* | 0.3207\*\*\* | 0.3801\*\*\* | 0.0874 | 0.0364\*\*\* | 0.0919\*\*\* | 0.0814\*\*\* | 0.0910\*\*\* | 0.0315\*\* |
|  |  | 13.31 | 8.80 | 7.09 | 3.87 | 5.07 | 2.63 | 4.17 | 3.90 | 6.12 | 2.57 |
| ROA |  | 0.6901\*\*\* | 0.0001 | 0.6453 | 1.1292 | 0.9640 | 1.2820\*\*\* | 0.4061 | -1.3988\*\*\* | 0.9397\*\*\* | 0.9127\*\*\* |
|  |  | 4.81 | 0.00 | 0.93 | 0.70 | 4.38 | 5.72 | 1.44 | -4.07 | 4.96 | 4.61 |
| Tobin’s Q |  | -0.0154 | -0.0117 | 0.0579\*\* | 0.0526 | 0.0838 | 0.0771\*\*\* | 0.0740\*\*\* | 0.0853\*\*\* | 0.0374\*\*\* | 0.0489\*\*\* |
|  |  | -1.59 | -1.58 | 1.47 | 0.66 | 5.64 | 6.7 | 3.92 | 4.94 | 2.93 | 4.86 |
| Board Size |  | 0.1267\*\*\* | 0.1589\*\*\* | -0.1015\*\* | 0.2247\*\* | 0.2210 | 0.2138\*\*\* | 0.0966\*\*\* | 0.2579\*\*\* | 0.1820\*\*\* | 0.1994\*\*\* |
|  |  | 8.75 | 12.19 | -2.28 | 1.98 | 9.64 | 10.48 | 3.58 | 8.75 | 9.32 | 11.19 |
| Board Independence | -0.1589\*\*\* | -0.1757\*\*\* | 0.1172 | -0.2368\* | -0.2926 | -0.2778\*\*\* | -0.1311\*\* | -0.2450\*\*\* | -0.2279\*\*\* | -0.2492\*\*\* |
|  |  | -10.76 | -13.09 | 2.48 | -1.95 | -12.55 | -13.23 | -4.80 | -8.02 | -11.51 | -13.6 |
| Obs |  | 11,962 | 15,787 | 784 | 341 | 11,628 | 16,072 | 6,785 | 8,390 | 12,984 | 17,069 |

*Notes: The dependent variable is the term of compensations package: salary, bonus, equity,other and total compensation. z-statistics are in parentheses. “FinCris” refers to financial crisis period, 2007 to 2009; “Non FinCris” refers to non financial crisis period, before 2007 and after 2009; \* indicates significance at the 10% level; \*\* significance at 5%; \*\*\* significance at 1%.*

Table 7: Effect of executive networks and corporate lobbying on executive compensation (Comparison between High-low lobbying companies)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|   |   | Salary | Bonus | Equity | Other | Total Compensation |
|  |  | High LobCom. | Low LobCom. | High LobCom. | Low LobCom. | High LobCom. | Low LobCom. | High LobCom. | Low LobCom. | High LobCom. | Low LobCom. |
|  |  | 2SLS | 2SLS | 2SLS | 2SLS | 2SLS | 2SLS | 2SLS | 2SLS | 2SLS | 2SLS |
| Professional Networks | -0.0016 | -0.0028\*\* | 0.0178 | 0.0184\*\* | -0.0102\*\*\* | -0.0021 | -0.0013 | 0.0028 | -0.0058\*\*\* | -0.0031\* |
|  |  | (-1.23) | (-2.18) | (1.41) | (2.38) | (-4.81) | (-1.12) | (-0.51) | (1.16) | (-3.13) | (-1.84) |
| Educational Networks | -0.0008\*\*\* | -0.0015\*\*\* | -0.0087\*\*\* | -0.0014 | -0.0012\*\* | -0.0029\*\*\* | -0.0026\*\*\* | -0.0015\*\*\* | -0.0015\*\*\* | -0.0034\*\*\* |
|  |  | (-2.94) | (-5.97) | (-3.99) | (-0.85) | (-2.55) | (-7.99) | (-4.26) | (-2.88) | (-3.76) | (-7.29) |
| Lobbying Expenses | 0.0880\*\*\* | 0.0116 | -0.0900 | -0.0225 | -0.0478 | 0.0486\*\*\* | -0.0538 | -0.0413\*\* | 0.0143 | 0.0407\*\*\* |
|  |  | (4.80) | (1.35) | (-0.56) | (-0.52) | (-1.56) | (3.85) | (-1.37) | (-2.46) | (0.54) | (3.69) |
| Firm Size |  | 0.0695\*\*\* | 0.1503\*\*\* | 0.4406\*\*\* | 0.2717\*\*\* | 0.1092\*\*\* | 0.0684\*\*\* | 0.0503\* | 0.1027\*\*\* | 0.0796\*\*\* | 0.0829\*\*\* |
|  |  | (5.27) | (13.89) | (4.94) | (4.59) | (5.17) | (4.33) | (1.73) | (4.58) | (4.30) | (5.97) |
| ROA |  | 0.2108 | 0.4800\*\*\* | -2.0507 | 2.7091\*\*\* | 1.2791\*\*\* | 1.2173\*\*\* | -1.4508\*\*\* | 0.6921\*\* | 1.1729\*\*\* | 0.9802\*\*\* |
|  |  | (1.04) | (3.27) | (-1.38) | (3.07) | (3.99) | (5.51) | (-3.58) | (2.12) | (4.19) | (5.08) |
| Tobin’s Q |  | -0.0163 | -0.0113 | -0.0042 | 0.1135\*\* | 0.0663\*\*\* | 0.0983\*\*\* | 0.1042\*\*\* | 0.0571\*\*\* | 0.0169\*\*\* | 0.0641\*\*\* |
|  |  | (-1.54) | (-1.23) | (-0.05) | (2.25) | (3.78) | (7.25) | (4.68) | (2.92) | (1.12) | (5.40) |
| Board Size | 0.1254\*\*\* | 0.1157\*\*\* | 0.0755 | -0.0143 | 0.3524\*\*\* | 0.1166\*\*\* | 0.2150\*\*\* | 0.1861\*\*\* | 0.2574\*\*\* | 0.1145\*\*\* |
|  |  | (6.59) | (8.35) | (0.68) | (-0.26) | (10.85) | (5.63) | (5.29) | (6.95) | (9.38) | (6.32) |
| Board Independence | -0.1520\*\*\* | -0.1322\*\*\* | -0.0989 | 0.0398 | -0.4068\*\*\* | -0.1918\*\*\* | -0.1877\*\*\* | -0.2118\*\*\* | -0.3064\*\*\* | -0.1656\*\*\* |
|  |  | (-7.82) | (-9.15) | (-0.86) | (0.62) | (-12.25) | (-8.89) | (-4.53) | (-7.47) | (-10.93) | (-8.80) |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Obs |  | 7,602 | 13,032 | 253 | 560 | 7,423 | 13,147 | 4,819 | 6,547 | 8,111 | 14,215 |

*Notes: The dependent variable is the term of compensations package: salary, bonus, equity,other and total compensation. z-statistics are in parentheses. “High LobCom.” refers to the companies that lobbying expenses is more than average; “Low LobCom.” refers to the companies that lobbying expenses is less than average; \* indicates significance at the 10% level; \*\* significance at 5%; \*\*\* significance at 1%.*

Table 8: Effect of executive networks and corporate lobbying on executive compensation (Comparison between High-low lobbying companies)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|   |   | Salary | Bonus | Equity | Other | Total Compensation |
|  |  | High LobCom. | Low LobCom. | High LobCom. | Low LobCom. | High LobCom. | Low LobCom. | High LobCom. | Low LobCom. | High LobCom. | Low LobCom. |
|  |  | GMM | GMM | GMM | GMM | GMM | GMM | GMM | GMM | GMM | GMM |
| Professional Networks | -0.0016 | -0.0029\*\* | 0.0179\* | 0.0180\*\*\* | -0.0101\*\*\* | -0.0022 | -0.0010 | 0.0028 | -0.0056\*\*\* | -0.0031\*\* |
|  |  | (-1.33) | (-2.31) | (1.76) | (2.95) | (-5.20) | (-1.23) | (-0.37) | (1.25) | (-3.41) | (-2.05) |
| Educational Networks | -0.0008\*\*\* | -0.0015\*\*\* | -0.0088\*\*\* | -0.0012 | -0.0013\*\*\* | -0.0029\*\*\* | -0.0028\*\*\* | -0.0014\*\*\* | -0.0016\*\*\* | -0.0024\*\*\* |
|  |  | (-2.84) | (-5.97) | (-3.70) | (-0.79) | (-2.67) | (-8.21) | (-4.59) | (-2.76) | (-3.81) | (-7.58) |
| Lobbying Expenses | 0.0877\*\*\* | -.0110 | -0.0905 | -0.0370 | -0.0497\* | 0.0485\*\*\* | -0.0574 | -0.0410\*\* | 0.0129 | 0.0407\*\*\* |
|  |  | (4.88) | (1.26) | (-0.69) | (-0.72) | (-1.67) | (3.76) | (-1.38) | (-2.42) | (0.50) | (3.65) |
| Firm Size |  | 0.0698\*\*\* | 0.1510\*\*\* | 0.4409\*\*\* | 0.2580\*\*\* | 0.1103\*\*\* | 0.0686\*\*\* | 0.0541\* | 0.1037\*\*\* | 0.0801\*\*\* | 0.0833\*\*\* |
|  |  | (5.21) | (13.80) | (5.75) | (4.18) | (5.43) | (4.29) | (1.81) | (4.47) | (4.34) | (5.83) |
| ROA |  | 0.2091 | 0.4943\*\*\* | -2.0571\*\* | 1.9952\* | 1.2667\*\*\* | 1.2255\*\*\* | -1.4115\*\*\* | 0.7654\*\* | 1.1654\*\*\* | 0.9941\*\*\* |
|  |  | (0.93) | (3.29) | (-2.22) | (1.86) | (3.66) | (5.40) | (-2.97) | (2.03) | (3.78) | (5.20) |
| Tobin’s Q |  | -0.0165 | -0.0126 | -0.0038 | 0.1299\*\* | 0.0670\*\*\* | 0.0980\*\*\* | 0.1039\*\*\* | 0.0553\*\*\* | 0.0172 | 0.0633\*\*\* |
|  |  | (-1.50) | (-1.36) | (-0.05) | (2.39) | (3.81) | (6.80) | (4.55) | (2.68) | (1.11) | (5.16) |
| Board Size | 0.1253\*\*\* | 0.1150\*\*\* | 0.0752 | -0.0065 | 0.3525\*\*\* | 0.1155\*\*\* | 0.2098\*\*\* | 0.1867\*\*\* | 0.2577\*\*\* | 0.1130\*\*\* |
|  |  | (6.33) | (7.27) | (0.73) | (-0.15) | (9.08) | (5.04) | (4.92) | (6.42) | (7.79) | (5.56) |
| Board Independence | -0.1520\*\*\* | -0.1314\*\*\* | -0.0986 | 0.0303 | -0.4067\*\*\* | -0.1906\*\*\* | -0.1797\*\*\* | -0.2106\*\*\* | -0.3067\*\*\* | -0.1640\*\*\* |
|  |  | (-7.53) | (-8.09) | (-0.95) | (0.58) | (-10.29) | (-8.04) | (-4.12) | (-6.94) | (-9.02) | (-7.80) |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Obs |  | 7,602 | 13,032 | 253 | 560 | 7,423 | 13,147 | 4,819 | 6,547 | 8,111 | 14,215 |

*Notes: The dependent variable is the term of compensations package: salary, bonus, equity,other and total compensation. z-statistics are in parentheses. “High LobCom.” refers to the companies that lobbying expenses is more than average; “Low LobCom.” refers to the companies that lobbying expenses is less than average; \* indicates significance at the 10% level; \*\* significance at 5%; \*\*\* significance at 1%.*

1. Corresponding author [↑](#footnote-ref-1)