DETERMINANTS OF

CEO COMPENSATION IN PAKISTAN

FROM 2007 TO 2009

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Abstract

Most studies of the determinants of executive compensation are based on the experience of developed countries. This paper examines the relationship between firm size, firm performance and board composition on CEO compensation, in the context of an emerging and developing economy of Pakistan. Data for 83 listed firms from Lahore stock exchange, Pakistan has been used for 2007 to 2009. The findings show that firm size is one of the major determining factors of CEO compensation rather than performance. A family recruited CEO has a negative and significant effect upon the CEO compensation. In this study we also look at a number of other variables like board size, percentage of independent director, CEO duality and firm performance; but these variables do not significantly affect CEO compensation in companies in Pakistan.

Key words: CEO Compensation, Board size, Duality, Ownership, Independent directors, Firm performance, Pakistan.

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CEO   **Chief Executive Officer**

SECP   **Security And Exchange Commission Of Pakistan**

KSE   **Karachi Stock Exchange**

LSE   **Lahore Stock Exchange**

ISE   **Islamabad Stock Exchange**

SBP   **State Bank of Pakistan**

ROE   **Return On Equity**

LOG   **Logarithm**

LN   **Natural Logarithm**

Executive Summary

The objective of present study is to increase our knowledge of executive compensation practices through an analysis of specific determinants of executive compensation in Pakistan. The main purpose of this exercise is to see how firm size, performance and board composition are affecting the CEO compensation in Pakistani listed firms (Lahore stock exchange) from 2007 to 2009. On the basis of this problem, this paper explained the relevant theories to CEO compensation and how these theories can contribute to construct the hypotheses. The theories those are included in this thesis are; Agency theory, Managerial power theory, Human capital theory and Board theory. These theories help us to understand the interrelated concepts, definitions, and propositions that present a systematic view of CEO compensation by specifying relations among concepts.

This paper is based upon quantitative research approach and secondly, annual reports of 83 listed firms in Lahore stock exchange, Pakistan from year 2007 to 2009 are used for the analysis. Statistical tools like correlation and multiple regression are used to determine the relation between dependent and independent variables.

After analysis, the results demonstrated that the firm size and family CEO have significant relation with CEO compensation in Pakistan. Firm size exhibited positive significant relation but family CEO proved negative significant effect upon CEO compensation, other variables that were used in this paper, did not present any significant relation with CEO compensation i.e. board size, CEO duality, percentage of independent directors and firm performance.

These results are not different from the previous studies because some authors concluded the same results for developing countries as well as for developed countries. In Pakistan, as discussed in this report that most of the firms are family controlled so we concluded that if CEO is from the controlling family, he will obviously struggle for the firm profitability instead of his own compensation. CEO will stay at low compensation in contrast to non family firms. Firm size has positive relation, it is also concluded that large firms can hire the best CEOs because they can bear not only the cost but also can avail more benefits from their human capital.

Chapter 1

1. Introduction

Executive compensation is considered highly valuable in the news virtually every day and at the center of an ongoing public policy debate as well as in the academic and business communities (Economist, 2007). As Most of the empirical studies on CEO compensation and corporate governance conducted in developed countries, such as the United States, United Kingdom, Canada, Japan, and Italy etc. but implementation of these studies in developing countries is not possible because several economists have forcefully argued that there are basic institutional and structural differences between developed and developing countries like firm structure, markets, and organization in developing countries are quite different from developed countries and also in developing countries there is no clear distinction between ownership and control.

As elaborated by (Gosh, 2006) developing economies as managerial markets are not well developed, founder families have greater influence inside the firms and founders often intervene in firms matters. Corporate laws, corporate governance codes, listing agreements, and bankruptcy laws, are also very weak. Accounting practices are not up to international standards, and there is no uniformity in accounting across firms (Ghosh, 2006). CEOs are often selected from the relatives of the founder, and there is a common fear that they build up their wealth at the cost of shareholder. In case of Pakistan mostly firms are family owned and have their family in boards as well as serving as CEOs. Corporate governance code 2002 is implemented in Pakistan for listed firms but due to lack of implementation still most of the firms have no separate ownership and control system (Nishat 2004).

On the other side in developed countries due to well developed managerial markets, strong corporate governance laws, listing agreements, bankruptcy laws and international standard accounting systems are quite different from developing countries.

Executive compensation is a topic that has also produced a proliferation of academic literature in past decades. The importance of the topic is difficult to overstate, especially the wide

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spread public perception of executive compensation as excessive unfair and difficult to explain (Gray & Benson, 2003). Research on executive compensation is of growing interest to both academics and practitioners and a significant stream of research has focused on the antecedents and consequences of executive compensation spanning diverse disciplines such as economics e.g. (Ciscel, 1980), (Conyon, Gregg, & Machin, 1995), For Finance and accounting there are e.g. (Agrawal, Makhija, & Gershon, 1991), (Coughlan, 1985), (Jensen, 1990), (Randøy & Nielsen, 2002). This stream of research provided valuable insight into CEO compensation. In the developed markets, the CEO compensation is well explored as a significant focus of economics and finance research but there is also a growing interest across emerging markets in this area (Kannan Ramaswamy, 2000) . In Pakistan, after the publication of the SECP Corporate Governance Code 2002 for publicly listed companies has made the CEO compensation and corporate governance an important area of research for corporate sector.

1.1 Executive Compensation

When hiring a top class executive, the executive compensation is considered to be of much importance, both to the executive as well as the company. The task of finding and hiring an executive who would prove to be an asset to the company is a challenging one. The executive compensation offered by the company helps to attract the best candidate at all top executive levels and also to retain them further. In a modern US corporation, the CEO and other top executives are paid salary plus short-term incentives or bonuses.

1.1.1 What is Executive Compensation?

According to Murphy (1999) CEO pay packages can be divided into four basic parts; a base salary, an annual bonus plan which is tied to some accounting measure of the company performance, stock options and long term incentive plans, such as restricted stock plans and multiyear accounting based performance. Furthermore, CEOs are also the participants in employee benefits plan and also receive the special benefits plan like retirement plans (Murphy, 1998).

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In short, we can say that executive compensation is a collective term for all the components that make up the remuneration package of chief executive officers and top level managers of a business corporation. The components of executive compensation are a base salary, long-term and short-term incentives/bonuses, shares and options, employee benefits and perquisites. The basic salary is a definite component and the other components may vary depending upon the company policies.

It is very useful to have some knowledge about these components of CEO compensation to proceed further. So these components are briefly explained as under:

1.1.1.1 Base Salary

Salary is termed as the 'single largest component' of executive compensation. The salary offered to an executive is decided on the basis of his/her educational qualifications, experience and other skills. Salary increments, also known as performance appraisals, depend upon the executive's performance and contribution towards the growth of the company.

Another way to set the CEO pay described by Murphy 1999, he said that base salaries for CEOs are generally set through competitive benchmarking , based on general industry salary surveys, supplemented by detailed analysis of specific industries or market peers (Murphy, 1998).

Base salary is the key and fixed component of the executive pay and this causes the risk averse executives to prefer an increase in base salary. Base salary also acts as dependent for the annual bonuses because mostly bonuses are announced as the percentage of base salary (Oreland, 2008).

1.1.1.2 Annual Bonus

Most of the companies offer annual bonuses to their top executives at the end of the year based on the performance of the specific year. Main purpose behind the annual bonus is to align the CEOs and share holders' interests in other words, to reduce the agency problem.

Annual bonus can also be act as a motivation factor for CEOs and then they act in best favor of the share holders.

The annual bonus plan can be categorized in three basic components; performance measures, performance standards and structure of pay performance relation. Mostly companies use the financial and non financial performance measures. Mostly financial measures are based upon accounting measures and non financial measures are based upon the pre established company objective and also based upon subjective assessment on individual performance. Secondly, performance standards describe what the performance target is, e.g. budget standard, prior year standard etc. The pay performance structures are based upon the relation between pay and performance; mostly it varies from firm to firm (Murphy, 1998). But in case of Pakistan mostly companies announce the bonuses that are based upon company objective and also based upon subjective assessment on individual performance.

1.1.1.3 Stock Option

Stock options are contracts which give the owner the right to buy shares at a pre-specified exercise price (Oreland, 2008).

Stock options have two types; call options and put options. Mostly firms issue the call options for CEO instead of put option. Because call option is a financial security that gives the right to its owner to purchase one share of a company's stock, at a fixed strike price or exercise price so for this reason if stock price is above the exercise price, the option holder can make a profit by exercising the option, selling the stock and pocketing the difference between the two prices. On the other hand, put option gives the right to its owner to sell one share of a company's stock at a fixed exercise price, exercising a put would make senders if stock price fell, just opposite to call option. For this reason, CEOs stock options are always called. CEO stock options differ from those that are traded on exchange. Because when it is granted to CEOs they are usually not vested immediately. Typically CEOs options expire in 10 years and are granted with exercise prices equal to the fair market values on the grant date. Secondly, even CEOs cannot trade an option to other investor. In short, CEOs either can hold the option or exercise (Zajac, 1992).

There are two types of options; qualified and non-qualified. Qualified options give the stock in return but non-qualified give the cash equivalent of the difference between the market price and exercise price. Mostly companies offer the non-qualified options to CEOs (Murphy,

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1998). On the basis of information that is available in annual reports of the firms about CEO compensation, firms are not offering the stock options to CEOs.

1.1.1.4 Restricted Stock

Executives are also compensated with restricted stock, which stock is given to an executive that cannot be sold until certain conditions are met and has the same value as the market price of the stock at the time of grant. These grants, which could be called performance shares, do not vest or are not granted until these conditions are met. These performance conditions could be earnings per share or internal financial targets (WIKIPEDIA, 2010).

1.1.1.5 Other Types of Long Term Benefits

Many companies also offer the long term benefits along with the annual bonus plan. Difference between long term and annual bonus plan is only the time frame. Long term bonuses are offered mostly after 3 to 5 years (Murphy, 1998). Top executives also have supplementary executive retirement plans in addition with the company retirement plans. Some executives also have severance arrangements.

In case of Pakistan, some companies offer the annual bonus with base salary with some other benefits like company car, house, free medical etc. But in case of offering stock options to CEOs, presently there is no strong evidence.

1.2 Corporate Governance in Pakistan

Corporate governance is phenomenon that has received increased attention worldwide. It has received wide attention of policy makers in the developed and developing countries in recent years. According to Nishat (2004) a more significant dimension in a developing country like Pakistan, given the underdeveloped nature of corporate culture and the fact that vast numbers of companies are held and controlled by family networks. The actual conduct of corporations in terms of performance, efficiency, growth, financial structure and treatment of shareholders etc. are not yet well established. The laws and regulations under which firms are operating, the functioning of the board of directors in relation to ownership structures, the responsibility of executive dispensation in determining and deciding firm performance, the relationships between labor policies and firm productivity, the role of multiple shareholders and lack of transparent and accountable corporate and financial reporting frameworks, are some of the issues confronting the corporate sector in Pakistan (Nishat, 2004).

Even though the presence of all above deficiencies, the Securities and Exchange Commission of Pakistan (SECP) was set up in pursuance of the Securities and Exchange Commission of Pakistan Act, 1997 and the SECP became operational in January 1999 and has come a long way since then. It was initially concerned with the regulation of corporate sector and capital market. Over time, its mandate has expanded to include supervision and regulation of insurance companies, non-banking finance companies and private pensions. The SECP in pursuance of its policy of regulation has enacted and enforced various laws and regulations in order to create and enabling the business environment to overcome the constraints confronted by the corporate companies for smooth and sustained economic development (SECP, 2010).

In March 2002, the Securities and Exchange Commission of Pakistan issued the Code of Corporate Governance to establish a framework for good governance of companies listed on Pakistan's stock exchanges. In exercise of its powers under Section 34(4) of the Securities and Exchange Ordinance, 1969, the SEC issued directions to the Karachi, Lahore and Islamabad stock exchanges to incorporate the provisions of the Code in their respective listing

regulations. As a result, the listing regulations were suitably modified by the stock exchanges. Corporate governance has recently taken center stage in Pakistan's business community.

The principal source of corporate governance law is the Code of Corporate Governance which was first drafted by the Institute of Chartered Accountants of Pakistan in 1998. The Securities and Exchange Commission of Pakistan promulgated the Code in 2002. Corporate governance is also covered in the Companies Ordinance of 1984 and the Banking Companies Ordinance of 1962 (SECP, 2010).

Presently, corporate governance in Pakistan primarily falls within the ambit of two entities: the SECP and the State Bank of Pakistan. The SECP, which was formed in 1997 by legislative action, is the chief enforcer of the Code. While the SECP is working under the Corporate Law Authority, was a division of the Ministry of Finance and under the Ministry's control, the SECP is largely an independent body that regulates the corporate sector and capital markets. The Ministry of Finance has only the authority to appoint the SECP's commissioners. The commissioners are typically top professionals involved in capital markets and many of them come from the private sector (Garrie, 2006).

Figure 1: Regulatory Authorities of Corporate Sector in Pakistan
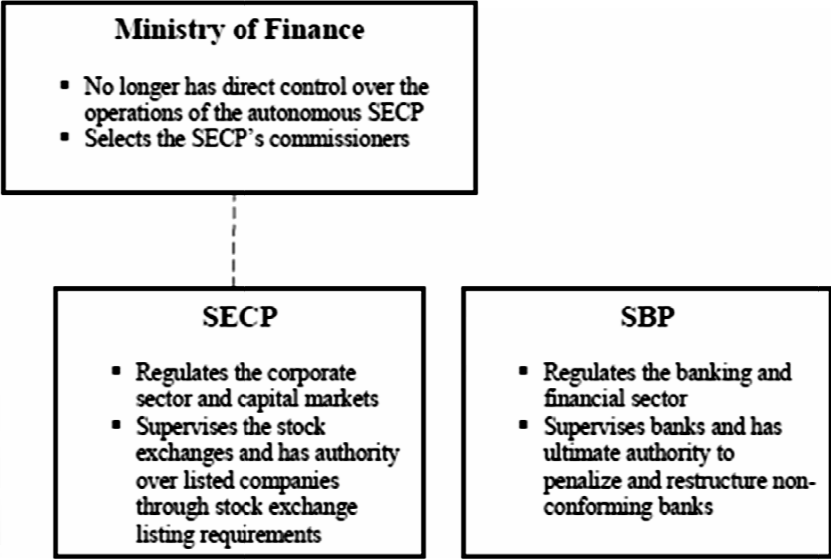
Source: (Garrie, 2006)

The SECP's autonomy is encouraging as the independence of a regulator is increasingly important for good corporate governance. Most importantly for corporate governance, the SECP enforces the listing requirements for the three stock exchanges of Pakistan: the Karachi

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Stock Exchange, the Lahore Stock Exchange and the Islamabad Stock Exchange. Pakistan stock market is one of the leading emerging markets in the world. It has gone through series of reforms and structural changes since 1991. Financial reforms during 1990s have influenced the pattern of capital structure, dividend policy, risk premier, and compliances to corporate governance (SECP, 2010) .

Another authority the SBP is Pakistan's central bank and is responsible for regulating the country's banking and finance sector. The SBP has the authority to enforce corporate governance guidelines for banks. In addition to complying with the Code, banks must comply with the Prudential Regulations of the SBP and the Banking Ordinance of 1962. However, regulations for banks are more stringent and detailed than those for other listed companies (Nishat, 2004).

1.3 Problem Definition

The objective of present study is to increase our knowledge of executive compensation practices through an analysis of specific determinants of executive compensation in Pakistan like firm size, firm performance and corporate governance arrangements. These determinants already researched and identified significant influences on executive compensation practices in prior empirical research but most of the studies have conducted in developed countries. So there is still need of research on this topic for developing and emerging countries like Pakistan.

In Pakistan corporations are historically family-controlled, especially those in the textile, automotive, tobacco, and agricultural sectors. There are three main types of listed corporations in Pakistan, multinational, family-controlled and state-owned enterprises. A majority of listed corporations are family-controlled via pyramid structures and cross-shareholdings (Garrie, 2006).

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Equity culture of Pakistan is still developing. Due to lack of focus on an equity culture in the 1980s and high returns on government bonds and easy access to bank loans in 1990s, all discouraged an equity culture in Pakistan. In Pakistan, at present there are three equity markets; Karachi stock exchange (KSE), Lahore stock exchange (LSE) and Islamabad stock exchange (ISE). KSE is a premier stock exchange of Pakistan with 651 listed companies, market capitalization of $26.48 billion and listed capital of $9.65 billion(KSE, 2010) . Second one is Lahore stock exchange, LSE has 519 companies, spanning 37 sectors of the economy, that are listed on the Exchange with total listed capital of Rs. 555.67 billion having market capitalization of around Rs. 3.64 trillion (LSE, 2010) . Third stock exchange is Islamabad stock exchange; there are 262 listed companies on the Exchange with an aggregate capital of Rs. 389.512 billion. The market capitalization stood at Rs. 2,275.00 billion as on 04-04-2007 (Garrie, 2006).

Even though in the presence of three stock exchange equity financing is still not a priority because of a lack of competition in various industries. Family-controlled companies are often satisfied with their position in the market and do not prefer to take risk to weak family control by selling shares to minority investors.

Due to insufficient data it is not possible for me to produce the highly generalize results but I can try to explore the relation and effects of different variables with CEO compensation in perspective of Pakistan. We want to focus on the top manager's salary in scope and form. Salary is a payment that a senior manager earned for work performed. Composition and size of executive pay varies from country to country, in Pakistan mostly firms offer the salary plus bonus with some medical, accommodation etc. benefits.

Determinants of CEO compensations are well discussed in developed countries but in Pakistan I did not find out any evidence of prior published study. Before proceeding further first I have to clear the definitions: CEO is the person in a company that is set to the total charge of the daily operations of the company. In short, we can say CEO is the most influential person in any firm. Secondly, board of the company is responsible to decide about the CEO pay, hiring and firing. In some companies if board is not performing this responsibility then remuneration committees are responsible. In case of Pakistan, mostly

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boards of the companies are responsible so board composition and size can also affect the CEO pay. In this exercise, we are assuming for simplicity's sake that the Board determines the size and shape of executive pay. This will make it easier to see connections and analyze our data set. We, therefore, wish to look at board composition and how this affects managerial salaries. At the same time, I want to check the other firms' specific variables like firm size and financial performance, how they affect the CEO compensation.

CEO duality can also affect the CEO compensation. If any CEO is the member of board then CEO has strong influence on board members as well as on the owner. So, that is another factor which I want to check that how it will affect the CEO compensation. Even in Pakistan, most firms are family owned and CEOs of these firms also belong to family so being a family member CEO has power to influence on the decisions. Here I can also check how family CEO can be affected by the board decision.

This research paper is limited to companies listed on the Lahore Stock Exchange in the period 2007 to 2009. Definition of listed companies is as an enterprise in which none of the participants have personal liability for company debts. Based on this discussion I construct the following research question. How firm size, performance and board composition are affecting the CEO compensation in Pakistani listed firms (Lahore stock exchange) from 2007 to 2009.

1.4 Structure of the Report

This paper consists of 5 chapters.

Chapter 1 – Introduction

This chapter includes the brief introduction about the CEO pay as a whole and also with respect to Pakistan. Chapter also presents the problem definition. This chapter gives the brief introduction about the components of CEO pay and also some explanation about the corporate governance in Pakistan. In short, this chapter consists of introduction, back ground and problem definition.

Chapter 2 -Theory

Chapter 2, which is the theory part of the task, defining theory we want to look at, in order to encumber our problem. Theory chapter will help us and read to understand the mechanisms that help to shape the CEO compensation. This chapter consists of pure theory in the form of principles and theorems, and previous studies that have been implemented that may be relevant with respect to our problem. In order to provide an answer to the problem of this paper, a theoretical foundation is needed.

Chapter 3 - Methodology

This chapter describes the method we have assumed for the study and why we have made some choices with respect to the appraisal and data analysis. So, first part of this chapter is about data collection methods and second part explains the methods that I have chosen for further statistical analysis i.e. multiple regressions.

Chapter 4 - Data and Analysis

This chapter covers the empirical part of the paper. This chapter consists of some descriptive analysis of data as well as regression tables.

Chapter 5 – Discussion and conclusions

This chapter will explain the findings of analysis and trying to find reasons and explanations for the results that analysis have given to us. I will also try to link the findings to the theory which I used in Chapter 2.

Chapter 2

2. Theory

A theory is a set of interrelated concepts, definitions, and propositions that presents a systematic view of a phenomenon by specifying relations among concepts, with the purpose of explaining and predicting the phenomenon (Kerlinger, 1973).

This chapter presents the theories that are most relevant to my research. As my research is about how different determinant like firm specification, board arrangement and corporate governance arrangement affect the chief executive compensation. Executive compensation is a pay for the top leader of the company as we know chief executive is a top leader of the company. So, the pay that is offered to CEO is known as CEO compensation.

As CEO compensation is decided by board of directors and board of directors always work on the behalf of the share holders. Agency problem may exist between board, share holder and CEO so to explain this relation; we have to go through the agency theory. On the other hand, CEO is top leader and he is the most influential personality in the firm so he can exert influence on the board for more liable salary package, to explain this relation we should have the knowledge of managerial power theory and human capital theory.

Board composition can also affect the CEO compensation because inside and outside directors have different effects on the CEO compensation and to explain this relation we have to flow the board theory. According to defined problem and to support my research topic, I have to explain these four theories; agency theory, managerial power theory, human capital theory and board theory. With the help of strong theoretical background, it will be easy for me to find out the exact and reliable results.

2.1 Agency Theory

When we view human interaction as an economist, it is presupposed that all individuals prefer their self-interest. Moreover, individuals are assumed to be cognizant of the self-interest motivations of others and can form unbiased expectations about how these motivations will guide their behavior. Conflicts of interest naturally arise. These conflicts are apparent when two individuals form an agency relationship, i.e. one individual (principal) engages another individual (agent) to perform some service on his/her behalf (E. F. Fama, 1980). A fundamental feature of this contract is the delegation of some decision-making authority to the agent. Agency theory is an economic framework employed to analyze these contracting relationships. Jensen and Meckling (1976) present the first unified treatment of agency theory.

Agency theory is concerned with resolving two problems that can occur in agency relationships. The first is the agency problem that arises when both principal and agent have different goals, secondly, it is difficult and expensive for the principal to look what the agent is actually doing and the agent is performing according to the contract or not. The problem here is that the principal cannot verify that the agent has behaved appropriately. On the other hand, problem of risk sharing arises when the principal and agent have different attitudes toward risk. The problem here is that the principal and the agent may prefer different actions because of the different risk preferences (K. M. Eisenhardt, 1989). As explained by Jensen (1983) agency theory has developed along two lines; positivist and principal-agent (Jensen, 1983).

According to Jensen, Positivist researchers have focused on the situations in which agent and principal have the conflicts with each in term of setting the goals and then describing the governance mechanisms that make limited the agent's self-serving behavior. Positivist research is less mathematical than principal-agent research. Other side is principal-agent paradigm that involves careful explanation of assumptions, which are followed by logical deduction and mathematical proof and when they make the comparison between the positivist stream and principal-agent theory then they find out that principal agent theory is abstract and mathematical and, therefore, less accessible to organizational scholars .

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The focus of the principal-agent literature is on determining the optimal contract, behavior versus outcome, between the principal and the agent. The first case, a simple case of complete information, is when the principal knows what the agent has done. The second case is when the principal does not know exactly what the agent has done. Given the self-interest of the agent, the agent may or may not have behaved as agreed.

At the core of this agency theory is the potential conflict between the principal and the agent due to divergent interest under the condition of asymmetric information and in the absence of complete contract (M. C. Jensen & Meckling, 1976).

Figure 2: Agency Theory Overview

Agency Theory Overview

Key idea	Principal-agent relationships should reflect efficient organization of information and risk-bearing costs
Unit of analysis	Contract between principal and agent
Human assumptions	Self-interest Bounded rationality Risk aversion
Organizational assumptions	Partial goal conflict among participants Efficiency as the effectiveness criterion Information asymmetry between principal and agent
Information assumption	Information as a purchasable commodity
Contracting problems	Agency (moral hazard and adverse selection) Risk sharing
Problem domain	Relationships in which the principal and agent have partly differing goals and risk preferences (e.g., compensation, regulation, leadership, impression management, whistle-blowing, vertical integration, transfer pricing)

Source: (Eisenhardt, 1989)

In agency theory, principal and agent have two main problems; principal and the agent have different goals and the principal cannot determine if the agent has behaved appropriately. Moral hazard refers to lack of effort on the part of the agent. The argument here is that the agent may simply not put forth the agreed-upon effort. That is, the agent is shirking (Carrasco-Hernandez & Sanchez-Marin, 2007). Adverse selection refers to the misrepresentation of ability by the agent. The argument here is that the agent may claim to have certain skills or abilities when he or she is hired. Adverse selection arises because the principal cannot completely verify these skills or abilities either at the time of hiring or while the agent is working more over. Schulze, Lubatkin, Dino and Buchholtz (2001) affirm that a third agency problem may exist in family controlled firms that is asymmetric altruism "which can manifest itself as a problem of self control due to free riding, biased parental perception of child's performance, difficulty in enforcing contract, and generosity in terms perquisite consumption"(Carrasco-Hernandez & Sanchez-Marin, 2007).

Bounded rationality ensures that complete contracts are impossible to negotiate or write. This leaves room for opportunistic self interested behavior unconstrained by morality- but this is what the contract tried to solve. A problem of commitment arises and a possible complete contract may not develop because of private information that prevents the parties from reaching value maximization or required outcome. According to agency theory, self promoting actions appear when principal and agent goals differ, in this situation outcome based contracts would provide the desired motivation by minimizing the conflict (Milgrom, 1992).

Agency problems that can occur in corporations are owner-manager problems, arise between the shareholders and manager i.e. CEOs share holders act as a principal and CEO acts as an agent because CEO is appointed by board of directors on the behalf of shareholders. Second agency problem can occur between majority and minority investors if there are conflicts between the two groups. A founding family may have different goals or views than minority investors. Third agency problem can occur between share holders and stake holders when shareholders make self interested decisions which influence the welfare of the stake holders (Thomsen, 2008).

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Berle and Means (1932) the owner and CEO agency problem begins with separation of ownership and management, in other words, separation of ownership and control. A greater depression of ownership leads to greater costs to owners of collecting and disseminating information regarding the efficiency of managerial decisions and also to smaller returns to each stock holders for policing managerial inefficiencies (Berle, 1932).

Evaluation of agency problem and CEO pay is complicated process because in practical same person holds the different posts e.g. in Pakistan most of the CEOs are also the members of the board. It is possible in some extreme conditions when a powerful CEO may be directly responsible for membership on the board and may be affect to control the board and it could be possible for him to set his pay by himself. This would be expected to be more prevalent in companies where ownership was more dispersed and agency problem was more important (Goldberg & Idson, 1995).

In case of Pakistan as described by (Rida Zaidi, 2006) family firms are a fundamental and intrinsic feature of the Pakistani economy. Approximately 80% of all listed companies have family involvement or are indirectly affiliated to a large business families (Rida Zaidi, 2006). In family owned firms, mostly CEOs and board of directors are from the family. Family owned firms have different agency problems because CEO belongs to the same family then there will be no agent and principal relation will exist between both parties.

Several opinions are proofs at present to consolidate that CEO compensation is influenced by the agency theory because CEO holds the place of agent in corporation and share holders are principals and their relationship is always critical in respect of agency theory. To mitigate the agency problems, principals have to incur an agency cost, and compensation design can help them to control and reduce agency problems and co-align the preferences between the parties.

2.2 Human Capital Theory

Workers' productivity is not only the function of their strength, dexterity intelligence and amount and quality of the physical capital that they have to use but also their human capital. Human capital refers to the knowledge and acquired skills a person has that increases his or her ability to conduct the activities with economic value (Milgrom, 1992). In other words in

human capital theory, compensation is related to the skills and experiences that incumbents bring to their work (Agarwal, 1981). Specifically, they are human capital under limited organizational control that has the potential to generate economic rent. This definition is similar to the economic concept of human capital (Coff, 1997).

Human capital theory indicates two types of human capital for firms so it is also useful to distinguish between firm specific and general purpose or non firm specific human capital. Firm specific capital includes skills and knowledge that are valuable only in the context of a particular firm and on the other hand, general purpose human capital involves the skills and knowledge that increases the persons productivity when working (Milgrom, 1992). Human capital is often measured in terms of education. Simplifications in the human capital model makes you to assume that highly educated people are more productive than those who do not have high education, thus the theory argues that a population with high education is a population that is more productive. Theory also explains that an employer wants the workers to maximize their efforts in relation to its working capacity, while a worker wants to minimize the performance while maximizing income. Human capital is seen as a form of prosperity for the people because it involves current and future income (Bai, 2010).

Human capital theory is the idea that humans are a factor of production in a typical business. It's a factor of production along with certain other factors, like land, labor and capital goods. Human capital theory suggests that pay premiums reflect executives' superior managerial skills. Shareholders should anticipate gains from those executives' efforts (Murphy, 2002).

Human capital poses an interesting issue in terms of pay. If a person is more competent at his/her job than someone else, then technically speaking, his human capital should be more valuable to the company, thus meriting more pay. This is a notoriously difficult thing to weigh, however, and it can cause a number of problems within a business. Another issue raises when human capital isn't so much inherent as it is learned, meaning that the people with the access to this type of education are going to have a better chance of gaining human capital than someone who can't afford that education (Garibaldi, 2006).

According to Murphy, the level of CEO pay is determined by competition among firms for executives and depends upon the portion of the CEOs' skills that is transferable across firms and industries. They also indicate that the increase in executive compensation can be explained by an increase in the importance of general skills, as opposed to firm-specific knowledge (Murphy & Zábojník, 2004).

They suggest that market forces and the composition of managerial skills are of first-order importance in determining the trends in CEO pay and turnover (Murphy & Zábojník, 2004). So we can say that human capital theory plays a major role in wage setting. There are several aspects of leadership that can help to determine the size of the salary, especially a manager's knowledge and expertise. Large companies are more complex to manage and require greater management skills.

2.3 Managerial Power Theory

Research on executive compensation began in Earnest after Berle and Means (1932) presented managerialism. They argued that as shared ownership became increasingly dispersed, a separation of ownership and control emerged that increased the capacity for hired managers to become entrenched (Berle, 1932).

Managerial power theory resembles with the optimal contract approach rather closely. Except, managerial power theory considers the discretion pay setters and pay receivers have not merely as a cost but as real possible behavior. Managerial power substantially affects the design of executive compensation in companies with a separation of ownership and control (L. A. Bebchuk & Fried, 2003).

At the other end, executive compensation is not generally the product at arm's length bargaining, but is the result of a process that executives can substantially influence. Executive compensation is set against a background of market forces; these forces are hardly strong

enough to compel optimal contracting outcomes. As a result, executives can use their power to influence compensation arrangements and to extract rent (Bebchuk, 2002).

In light of managerial theory CEOs prefer more rather than less compensation, and CEOs and other top managers are able to influence both the level and structure of their pay. CEO's influence over pay is typically indirect, and reflects that judgment calls by well-intentioned boards tend systematically to favor the CEO (Murphy, 2002). Even nominally independent boards are not truly independent because the CEO controls the nomination process, maintains social relations with board members, and expects board support (Murphy, 2002).

As we discussed, executives have substantial influence over their own pay. In addition, the greater is managers' power, the greater is their ability to extract rents. There are limits to what directors will accept and what markets will permit, but these constraints do not prevent managers from obtaining arrangements that are substantially more favorable than those they could obtain by bargaining at arm's length. So the present analysis proceeds from the assumption that the chief executive officer is normally the most powerful individual within any corporation (Gordon). However, some chief executive officers are more so than others. To be exact, it is the relative distribution of stock ownership between the chief executive officer and the other members of the board of directors which determines, in large part, his power within the corporation and, consequently, his length of managerial tenure. In the absence of any principal stockholders among the directors, as in the case of the typical management controlled firm, the chief executive officer is usually the dominant member of the board of directors. Furthermore, the inherent power of the chief executive officer is reinforced whenever he is the only principal stockholder among the directors. Conversely, the power of the chief executive officer is somewhat curtailed whenever there are other principal stock-holders among the other directors. The chief executive officer is perhaps the least powerful whenever he is not a principal stockholder but one or more of the other directors are principal stockholders (Allen, 1981).

The managerial power approach predicts that pay will be higher and/or less sensitive to performance in firms in which managers have relatively more power. Other things being equal, managers would tend to have more power when: 1) the board is relatively weak or

ineffectual; 2) there is no large outside shareholder; 3) there are fewer institutional shareholders; or 4) managers are protected by anti-takeover arrangements. There is evidence indicating that each of these factors affects pay arrangements in the way predicted by the managerial power approach (L. A. Bebchuk & Fried, 2003).

This theory also sheds new light on the effect of managerial power on tenure in the large corporation. It is evident that significant stock ownership by a chief executive officer increases the length of his managerial tenure. The chief executive officer of a large corporation is often the dominant member of the board of directors by virtue of his position of authority within the corporation. It is often difficult for other directors, even those who are principal stockholders, to limit the managerial tenure of the chief executive officer (Allen, 1981).

CEOs vary in the degree to which they can influence their external and internal environments. Although the security of CEO positions may be in danger in their early years, once CEOs establish a performance record and build relationships with key stakeholders, they may be difficult to remove. Over time, CEO can gain additional power by controlling the information revealed to stakeholders. These sources of power may be particularly strong if any CEO was also the company founder. When governance structures are strong, it is difficult for executives to extract compensation beyond what might be expected on the basis of objective predictors of pay (Combs & Skill, 2003).

However, in small firms, situation is quite different because we can find out the effects of managerial power theory. In small firm CEO's influence is not one of the determinants of CEO compensation. It is possible that CEOs of small firms may be the owners of the firm or part of a family operation where co-owners or family members dilute CEO's influence. In this situation, CEO's influence might be unimportant in determining compensation. So according to Ueng effect on compensation for CEO's influence for large companies not for small firms, consistent with prior research (Ueng, 2000).

2.4 Theory of Board

There is no doubt the boards are the central to the corporate governance. Boards are just one of many corporate governance mechanisms that can play a valuable but limited role in certain key decisions according to Thomsen boards are partially internalized, non hierarchical corporate institution based on collective decision making (Thomsen, 2008). Studies consider the two main functions of the board, advising and monitoring. The board's advisory role is to provide the CEO with advice and access to information and resources, and is more efficiently carried out by outside directors who can provide important connections and expertise (Fama, 1983).

The monitoring role involves ensuring that senior management pursues shareholder interests. Outside directors are more likely to be independent and objective in this task than insider directors, since they wish to signal their competence to other potential employers and frequently already have monitoring experience (Fama, 1983).

A larger board and proportion of outsiders can provide greater information and hence both should increase as the requirement for advice increases. This should occur as firm scale and complexity increases (Lehn, Patro, & Zhao, 2003). In contrast, insiders are less independent because their careers within the firm are dependent on the CEO (Zajac & Westphal, 1994). Most empirical studies finds out that board size and outsider proportion are positively related to firm size and complexity, the latter measured by age, leverage, or industrial diversification. Monitoring is more efficient with a larger board and proportion of outsiders because of greater shared information (Lehn, et al., 2003).

Raheja (2005) also argues firms structure their boards in ways consistent with the costs and benefits of monitoring and advising by the board, insiders are an important source of firm-specific information for the board, but that they can have distorted objectives due to private benefits and lack of independence from the CEO (Raheja, 2005). Compared to insiders,

outsiders provide more independent monitoring, but are less informed about the firm's constraints and opportunities. Thus, as the benefits (costs) of monitoring increase, boards will do more (less) monitoring leading to more (fewer) outsiders (Linck, Netter, & Yang, 2008).

An alternative theory of board structure is that it is determined by CEO power, whereby more powerful CEOs bargain with outside directors for a smaller board with fewer outsiders (Hermalin, 1998).

The board of directors also has a broad range of responsibilities. According to business Roundtable suggests that the board of directors has five primary functions: (1) select, regularly evaluate, and, if necessary, replace the chief executive officers, and determine management compensation and review succession planning; (2) review and, where appropriate, approve the financial objectives, major strategies, and plans of the corporation; (3) provide; We classify the board's activities into two major functions: monitoring and advising. Broadly speaking, the monitoring function requires directors to scrutinize management to guard against harmful behavior, ranging from shirking to fraud. The board's advising function involves helping management make good decisions about firm strategy and actions. A firm's optimal board structure is a function of the costs and benefits of monitoring and advising given the firm's characteristics, including its other governance mechanisms (Linck, et al., 2008).

Thomsen explained that according to proposed theory of board, boards have a comparative advantage in a few classic tasks- evaluating company performance, hiring and firing the executives, fixing the executive pay, and ratification of major decisions- which managers themselves cannot handle because of conflicts of interest. The expertise which boards accumulate in undertaking these tasks is also useful for business strategy, risk management, social responsibility and share holder relations. But given time and information constraints, the marginal value of additional board work decline steeply and becomes negative if boards begin to seriously interfere with management of the company (Thomsen, 2008).

Denis and Sarin (1999) suggested that board size and composition vary across firms and change over time to accommodate the specific growth, monitoring, and managerial characteristics of the firm. Boards of larger or more diverse firms also can increase their demands for new board members as such tasks as succession planning, compensation, and auditing are assigned to committees rather than handled by the board as a whole. The scope of operations hypothesis is also consistent with results reported by that suggest that board size is positively related to firm size (Denis, Denis, & Sarin, 1999).

In short, on the bases of previous discussion we can say that firms choose board structures based on the costs and benefits of monitoring and advising. Broadly speaking, monitoring guards against harmful behavior, and advising provides input on strategy. Firms with high growth opportunities, high R&D expenditures, and high stock return volatility are associated with smaller and less independent boards, while large firms tend to have larger and more independent boards. High managerial ownership is associated with smaller and less independent boards, consistent with the hypothesis that managerial ownership and board monitoring are substitute governing mechanisms. However, if a managerial ownership proxy for managerial power, then this result is also consistent with the alternative view that powerful managers structure their boards in ways that are more advantageous to themselves. We also find that firms have more independent boards when insiders have more opportunity to extract private benefits and when the CEO has greater influence over the board (Linck, et al., 2008).

2.5 Previous Empirical Literature on CEO Compensation

Previous empirical literature on CEO pay is highly multidisciplinary. Various academics have their participation e.g. economics, finance, accounting and management fields have contributed to the current state of the literature. We find that in some research works the researchers have contradictory views about the same point although most of them have same point of view. So to further understand the depth of this topic first we have to look upon the previous literature on CEO compensation. For this purpose, we have some previous studied determinants of CEO by different researchers and also their findings.

Tosi, Werner et al. (2000) examined through a meta-analytic review of the empirical literature on the determinants of CEO pay and they tested the hypothesized relationships between firm size, performance, and CEO pay. The results they showed that firm size accounts for more than 40% of the variance in total CEO pay, while firm performance accounts for less than 5% of the variance. They also concluded that pay sensitivities are relatively similar for both changes in size (5% of the explained variance in pay) and changes in financial performance (4% of the explained variance in pay). The meta-analysis also suggests that moderator variables may play an important role (Tosi, Werner, Katz, & Gomez-Mejia, 2000).

In another study conducted by Ballout in (1992) he used the data for the period 1987-1990. He used the managerialist and social comparison theories and revealed that there is a simultaneous and positive relationship between CEO compensation and firm performance, but not between CEO compensation and board size. While larger boards are not associated with higher executive compensation, an inverse and simultaneous relationship exists between board size and firm performance. He also found that Strategic considerations such as R&D intensity have direct positive influences on CEO compensation. Since strong link exists between CEO compensation and firm size and social influence and less between CEO rewards and firm-performance, policy makers are invited to review the process of CEO rewards determination by focusing more on the role of the boards of directors as well as the role of the compensation committee that enacts and approves executive compensation policies (Ballout, 1992).

Hill and Phan (1991) used the data on the total cash compensation paid from 1977 through 1988 to the CEOs of firms, they tested the hypotheses were that; the influence of chief executive officers (CEOs) over boards of directors and the likelihood that the CEOs' compensation packages will reflect their preferences increase with CEO company tenure. They found the relationship between CEO pay and stock returns weakens with tenure. The results suggested that tenure influences the strength of the relationship between absolute pay and firm size, absolute pay and firm risk, and changes in pay and stock returns (Hill & Phan, 1991).

Kostiuk (1990) used data set consisting of the salary plus bonus for the chief executive. This historical data covered 135 firms during the years 1934-1939, both of which containing compensation and firm financial data. Kostiuk found that elasticity of executive earnings to firm size is about the same today as it was in the 1930s, with evidence of a decline in the earnings of top executives, controlling for firm size. In addition to the effects of size and other firm and industry characteristics, there are returns to age and experience. There is also substantial variability in the level of compensation among firms of comparable size, indicating that there may be impediments to mobility (Kostiuk, 1990).

In the same way Zhou (2000) examined the Executive compensation of 755 Canadian firms over the period 1991- 95 and evidence is obtained consistent with previous studies: CEO pay rises with firm size and compensation is tied to company performance. Furthermore executives in utilities earn lower pay, and their compensation is less responsive to performance, that is true for their counterparts in other industries. Some novel findings are also documented. First, the sales elasticity of CEO compensation is greater in larger firms. Second, while CEO turnover probability is generally negatively related to the firm's stock performance (Zhou, 2000).

In 2006 Brick, Palmon et al. used the data of 1441 firms as sample. They used the CEO and director compensation using firm characteristics, CEO characteristics, and governance variables. After controlling for monitoring proxies, they found that a significant positive relationship between CEO and director compensation. They also found the evidence that excess compensation (both director and CEO) is associated with firm underperformance. They concluded that the evidence is consistent with excessive compensation due to mutual back scratching. They found that director compensation is closely related to the monitoring and effort required of directors to ensure value maximization, Nevertheless, after controlling for monitoring proxies (Brick, Palmon, & Wald, 2006).

Kato and Kubo (2006) from Japan conducted the research upon a panel of 10 years on salary and bonuses of the CEOs of 51 Japanese firms (18 listed and 33 unlisted firms) from 1986–1995. Using unique 10-year panel data on individual CEO's salary and bonus of Japanese

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firms from 1986 to 1995, they presented the first estimate on pay-performance relations for Japanese CEO Compensation. Specifically they concluded consistently that Japanese CEO's cash compensation is sensitive to firm performance (especially accounting measures). On the other hand, to be consistent they found that stock market performance tends to play a less important role in the determination of Japanese CEO Compensation. Finally the bonus system makes CEO compensation more responsive to firm performance in Japan. The finding is in contrast to the literature on compensation for regular employees in Japan (Kato & Kubo, 2006).

Mehran (1995) examined the relation among executive compensation, ownership structure and firm performance. For this purpose he used the data on 153 randomly selected U.S. firms from 1979-80. He found that firms with more outside directors have positive relation with CEO compensation in equity based form (Mehran, 1995).

Lewellen and Huntsman (1970) examined the data set of 50 U.S. firms at the year interval from 1942 to 1963. They found the strong evidence the top executive compensation is strongly related with or dependent upon the firm profit. Furthermore they indicated the accounting based profit and stock market values are important determinants of CEO compensation (Lewellen, 1970).

Randøy and Nilsen (2002) used the data of 224 traded companies from Norway 120, Sweden 104 and examined the relationship among company performance, corporate governance arrangements, and CEO compensation within the Scandinavian countries of Norway and Sweden. They found that both Norway and Sweden have significant positive relationships among board size and CEO compensation, foreign board membership and CEO compensation, and market capitalization and CEO compensation. Secondly they found significant negative relationship is between CEO ownership and CEO compensation. Furthermore according to their analysis there was no significant relationship in between company performance and CEO compensation or CEO tenure and CEO compensation, except in the case of Norwegian firms when a change in market-to-book performance measure is used (Randøy & Nielsen, 2002).

Ramaswamy (2000) conducted a study of the determinants of CEO pay in India. He tried to find that is the same relation exits in developing and developed countries between the CEO

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pay and the determinants of CEO pay. He found almost the same results like developed countries in India. He concluded that CEO compensation is positively related to age and organizational performance. However, unlike prior research, this study found that family ownership was negatively related to CEO pay. Further, it was found that CEO duality and proportion of insider directors had no significant bearing on CEO compensation in family-owned firms but did play a key role in non-family organizations (Kannan Ramaswamy, 2000).

In another study conducted by Ramaswamy and Veliyath (2000) in India this study investigated the CEO's social embeddedness and overt and covert power as determinants of CEO pay in a sample of Indian family-controlled firms. They used the time-series, cross sectional regression analysis and found family shareholding and the percentage of inside directors on the board (identified as bases of overt power for the CEO have predominant influences on CEO pay. on the other side some of the identified bases of covert power, such as the CEO's tenure, age, education, and firm diversification, are not significant. Surprisingly other variables like firm size and performance also exhibit no influence on CEO pay. These findings shows the opposite results from western studies (Veliyath, 2000).

From previous studies we can observe the conflicts and relevance both. Even we can find different results in western countries but we can also find the opposite and same results between developed and developing countries. So there is still need to study the relationship of CEO pay and its determinants more deeply to find out the suitable and generalized results.

Chapter 3

3. Data and Methodology

This chapter will explain the methods and data collection process. In research, it is important to have valid and reliable data to proceed further for the analysis. Chapter, first of all, will explain the research design because research design provides the basic directions for carrying out the project and it depends upon the researcher to choose a design that provides relevant information on the research for hypothesis and to complete the job most efficiently. After research design, this chapter will explain the sampling approach which I will use for sample selection. Then elaboration of data collection method, which I will use for analysis and finally this chapter will throw light on the methods that are suitable to analyze the data. As this research is about what the conditions actually are in reality so this is an empirical approach. Through empirical approaches and theories about the executive pay, I will try to confirm or disprove the assumptions in this area.

Table 1: Overview of Chapter (Data and Methodology)

Events	Description
Research type	Quantitative research
Research design	Descriptive
Data type	Secondary data from Annual reports of listed firms
Population	Listed firms from Pakistan
Sampling frame	Listed firms from Lahore stock exchange, Pakistan
Sampling method	Non probability (Convenience sampling)
Dependent variable	CEO compensation
Independent variables	Firm size, ROE, board size, CEO duality, % of independent directors and family CEO.
Control variable	Industry and Year
Statistical method	Multiple regression
SPSS method	Hierarchical regression method

3.1 Research Design

A research design represents the master plan or framework for the study as a guide in collecting and analyzing data. There is no single, standard, correct research design. Research design can, however, be classified into some basic types as well. One useful classification is in terms of the fundamental objective of the research: Exploratory, descriptive, or casual (Hair, 2007).

In quantitative research, aim is to determine the relationship between one construct (an independent variable) and another construct (a dependent or outcome variable) in population. Quantitative research designs are either descriptive (subjects usually measured once) or experimental (subjects measured before and after a treatment). A descriptive study establishes only associations between variables. An experiment establishes casualty. Exploratory research is about to discover new relationship among the variables, this design can be used by the researchers when researcher knows little about the problem. On the other hand, the descriptive must start with prior knowledge about the phenomenon studied, and should rest on one or more specified hypotheses. Descriptive research requires a clear specification of who, what, when, where, and how of the research. In casual research tests whether or not one event causes another (Sekaran, 1992).

In this research work emphasis is upon descriptive and casual research design. Theory about executive pay is already well discussed and information about the variables that are included, have well discussed in previous researches. So due to previous knowledge about topic, the best research design is descriptive and I have also to check the cause and effect of different variables so that's why research paper is also based upon the casual research design.

3.2 Hypothesis and Testing

3.2.1 Hypothesis

Hypotheses are developed prior to data collection and generally emerge from the literature reviews, research questions and theory. In statistic, a hypothesis is an unproven supposition or

proposition that tentatively explains certain facts or phenomenon. In business research, hypothesis is used to verify that any relationships thought to exist among variables being studied are due to true relationships and not chance (B. G. Tabachnick & Fidell, 2007). Hypotheses are developed before data collection as part of the research plan. They will assist in explaining and testing the facts. Hypotheses are divided into null hypothesis and alternative hypothesis. The null hypothesis means the statement you want to test. It is based on changes of the past which is given by the random error. The alternative hypothesis says the exact opposite of a null hypothesis. If one rejects the null hypothesis you will accept the alternative hypothesis, and thus there is the alternative hypothesis that represents what you believe is correct. There is always the alternative hypothesis we want to prove. When we reject a null hypothesis is that on a statistical basis (Hair, 2007).

A hypothesis is formulated based on direction. Direction means the positive or negative value that we want to acquire variables. When we use a direction-oriented hypothesis, it is desirable to map the direction of the different values. In hypothesis testing, we find out which direction the variable have, such as less than or greater than a given value. When we have a direction-oriented hypothesis, where one indicates the direction in which you want to test the hypothesis for, the one-sided t-test instead of a two-sided t-test (Hair, 2007).

I want to analyze whether there is a negative or positive relationship between the dependent and the independent variable. The most important thing for us is still to have a hypothesis that first and foremost, mapping the relationship between variables. We can then use the coefficient table to see if there is a positive or negative direction of the independent variables affect the dependent variable. Direction variables have to be a part of our discussion section. On theoretical grounds, we have a statement indicating its direction variables, and we can then see if our analysis is consistent with the theory or not.

Hypotheses will be rejected if there is no existence of directional relationship between variables that we learned from the theory. We test this on a 5 percent significance level, and are thus a critical t-value of 1.6644. In SPSS we can get the p-value for a two-sided t-test. That means we must divide p-value by two to get the correct p-value of the one-sided t-test. If we get a one-sided p-value low, i.e. below 0.05, it will explain that the null hypothesis is most likely not true. In other words, the p-value that explains about the alternative hypothesis is within 95 percent confidence interval (Kerr, Hall, & Kozub, 2002).

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3.2.2 Research Hypothesis

Hypotheses are used to explain and test the proposed facts or phenomena. In this paper, problem is already defined in chapter one and also relevant theory about this problem have discussed in chapter 2. At present with help of this theory and problem definition it is possible to develop the hypothesis about the determinants of executive compensation.

So according to the previous research, there is a positive relation between firm size and CEO compensation as documented by Mikko Mäkinen (2008) CEO compensation and firm size have positive relation and elasticity parameter estimates for firm size are considerably larger. According to the allocation theory of control in a market equilibrium talented CEOs were always rewarded more pay in large firms as compared to the people below to them to whom they are linked with some other researchers have same findings like Robert (1956), Cosh (1975), Murphy(1985), Kostiuk (1989) and Lau and Vos (2004). With respect to this work our hypothesis is to test whether this relation exists for Pakistan as developing country because most of the above research is done for developed countries.

H1: There is a positive relation between CEO compensation and firm size

As suggested by previous studies, relation between financial performance and CEO compensation is not quite consistent. Agency theory predicts that CEO compensation is positively correlated with the firms' financial performance (Vos, 2004). But some studies showed the non existing accounting based link between financial performance and CEO pay like Gomez-Meija and Wiseman (1997), Randøy and Nielssen (2004), on the other hand we can find the significant positive relation between CEO pay and financial performance as mentioned by Conyon (2007). In order to test whether this relation exists in Pakistan the hypothesis is as.

H2: There is a positive relationship between CEO compensation and firm financial performance.

This is also suggested by the previous research that board size and CEO compensation have positive relations. It is expected that limiting board size is to improve firm performance but it

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is also documented that limiting the board size is call of improvement of corporate governance (Steven & Nina, 2008) because by larger boards increased monitoring are over weighted by the poorer communication and decision-making. It is also verified by J.E.Core et al. (1999) the CEO compensation is an increasing function of board size (Core, Holthausen, & Larcker, 1999).

H3: There is a positive relation between CEO pay and board size.

McConaughy (2000) checked the effect of family ties on CEO pay and he found that founding family CEOs are paid less and receive fewer compensation based incentives than outside CEOs (McConaughy, 2000). Gomez Mejia et al. (2003) observed the same relationship between family ties and CEO compensation they found that CEOs which are related to the controlling family receive lower total compensation as compared to outside CEOs (Gomez-Mejia, Larraza-Kintana, & Makri, 2003). Gomez- Mejia et al. concluded that families' purpose is not to provide high pay to family CEOs but rather to get risk protection against risk. On the basis of previous research that if CEO belongs to family who is controlling the firm then CEO will surely get the less compensation because mostly family firms want to secure the long term benefits.

H4: There is a negative relation between CEO compensation and Family CEO.

CEO compensation depends upon the board of directors because mostly boards of directors are involved in decisions regarding the CEO pay. If CEO is a board chair then absolutely CEO will put his influence on the board decision. Evidence indicates that CEO's pay increases as their influence over the board increases. Many firms have the role of chairperson of the board filled by their CEO. This duality of positions (i.e. the CEOs also serving as chairperson of the board) places the CEO in a powerful position of managing the operations of the firm and also overseeing the direction which the firm will take into the future (Steven & Nina, 2008). With respect to previous work here we want to test the hypothesis in Pakistan whether it gives the same result or it differs from the previous research took place in developed countries.

H5: There is a positive relation between CEO compensation and CEO board chair.

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As indicated by previous research work on inside and outside directors by (Linck, et al., 2008) firms have more independent boards when insiders have more opportunity to extract private benefits and when the CEO has greater influence over the board. It means the independent boards are positively related to CEO pay because if CEO has greater influence then CEO can influence for high compensation. On the basis to this proof I can construct the hypothesis:

H6: There is a positive relationship between proportion of independent directors and CEO compensation.

3.2.3 Errors in Hypothesis Testing

There are two types of possible errors that can occur when it comes to hypothesis testing. These are called type I error and type II errors. Both errors are based on range of research. Type I error refers to the alpha (α). This occurs when the result leads to rejection of the null hypothesis when the null hypothesis is actually true. It refers also to the significance level, which refers to the risk level of accuracy that the researcher is willing to accept. In other words, the type I error, error based on the level of significance, which indicates the probability of rejecting incorrect. We must therefore look at the significance level, <0.05 or <0.01, which we wish to accept in advance (Sekaran, 1992).

Type II error refers to the beta (β). This is based on errors that occur when one does not reject the null hypothesis when it is false and should be rejected. Unlike the alpha error, this error occurs when based on the committee's parameters and size. This ensures that there is a type of error that is difficult to explain in advance. In addition, there may be a third type of error is the statistical probability of rejecting the null hypothesis ($1-\beta$). Extreme low value of alpha will result in a high beta value, making it necessary and achieve a certain balance between the two values. The controlling of these errors is the size of the sample (Kerr, et al., 2002).

3.3 Data Collection

Data is essential for business research irrespective of whether an investigation is quantitative or qualitative in nature. Quantitative data can be obtained in number of ways ideally researcher wants to collect data from all members of a population under investigation. But in reality it's very difficult to get data from whole population therefore a sample of population is drawn. A sample is relatively small subset of the population. It is drawn using either probability or non probability procedures (Hair, 2007).

In this thesis, sample is based upon non probability procedure. In non probability sampling the selection of sample elements is not necessarily made with the aim of being statistically representative of the population. Non probability also has some other disadvantages, there are no statistical methods for measuring the sampling error for a non probability thus researchers cannot generalize the findings to the target population with any measured degree of confidence. The most frequently used non probability methods are convenience sampling, judgment sampling, quota sampling and snowball sampling (Sekaran, 1992). In this paper I used convenience sampling method. A convenience sample involves selecting sample elements that are most readily available to participate in the study. With convenience sampling researcher can collect the data quickly and cost effectively. For this research due to less time and non availability of funds and no physical access to the population, I used the convenience sampling although it limits my ability to make generalizations in relation to the population.

There are two ways to collect the data; primary and secondary, the data used for this research is secondary data because CEO compensation data are collected from the annual reports listed firms of Lahore stock exchange. According to corporate governance act Pakistani listed companies require to disclose the total compensation paid to chief executive officer and board of directors and this disclosure is made in the annual reports. Other means to collect data about CEO compensation was unavailable. It was very difficult process to collect data because data was scattered, some firms published their annual reports on their websites, and on the other hand, some firms don't have annual reports published on web sites. Due to these difficulties it was impossible to collect data of all the listed companies so I decided to take

convenience sample from the web sites of listed firms in Lahore stock exchange. I visited all the websites of the listed firms and I found only 83 firms have published annual reports on their respective websites So this sample consists of 83 listed firms out of population 519 companies from Lahore stock exchange for the period of three years 2007, 2008, June 2009.

The financial variables were collected from 2007, 2008, and 2009 annual reports of listed companies from all industries are included, except banking, Islamic banking insurance and other financial institutions like Modarabah etc. The initial sample of 95 listed firms was reduced after finding that 12 companies had unusual reporting period.

3.4 Explanation of Variables

3.4.1 Dependent Variables

In many of the annual reports, companies only reported total CEO compensation and facilities like medical facility, accommodation facility etc. The dependent variable is CEO pay since 2002 listed firms have been required to disclose the compensation of the chief executive in the company's annual reports. The CEO's total cash compensation includes base salary, bonuses, and commissions but unfortunately the pay is not broken down into these components in Pakistan. So I used the total CEO compensation as dependent variable that is given in all annual reports. Dependent variable is a variable that is to be predicted or explained. The dependent variable will represent the phenomenon that is to be studied. I collected the information about CEO pay from notes attached with the financial statements in annual reports. CEO pay is reported as dependent variable, to reduce the heteroscedasticity the natural log of CEO compensation is used as the dependent variable. The regression models use the natural log of CEO pay. This approach was previously used by (Randøy & Nielsen, 2002) and (Vos, 2004).

Table 2: Definitions of the Variables

Variables	Definition
Executive compensation	Natural log of the total compensation of CEO
Return on equity	Natural log of the return on equity (PBT/share holder equity)
CEO family	Equal to 1 if CEO is the member of controlled family
CEO duality	Equal to one if CEO is member of board
Board size	Natural log of the number of directors on the board
Firm size	Natural log of net sales
Independent director % of board size	Percentage of independent directors on board
YEAR09	Equal 1 for year 2009
YEAR08	Equal 1 for year 2008
Chemical	Equal 1 for chemical industry
Textile	Equal 1 for textile industry
Fertilizer	Equal 1 for fertilizer industry
Sugar	Equal 1 for sugar industry
Cement	Equal 1 for cement industry
Glass	Equal 1 for glass industry
Telecommunication	Equal 1 for telecommunication industry
Technology	Equal 1 for technology industry
Energy	Equal 1 for energy industry
Engineering	Equal 1 for engineering industry
Food products	Equal 1 for food industry
Paper	Equal 1 for paper industry

3.4.2 Independent Variables

Independent variable is also called predictor variable or explanatory, a variable that is assumed to explain or predict the dependent variable. Firm performance was measured as return on equity by using the data of three years; we will calculate the return on equity for each year by dividing the annual profit before tax by year's end share holder's equity. The one year lag was introduced to maintain consistency with previous studies as used by (Randøy & Nielsen, 2002). It has been argued that board of directors typically make pay decisions based on previous year company performance. Hence, the one year lag was considered appropriate.

CEO characteristics, included family CEO, CEO is board chair both are measured as 0 and 1 variable. In case CEO family status variable, this variable will take a value of 1 when CEO

belongs to the family otherwise 0. CEO duality CEODUALTY was defined as a 0 and 1 variable assuming a value of '1' if the CEO also served as the member of Board otherwise '0'.

Board characteristics included variables; board size, percentage of independent directors, independent directors are the proportion of the independent directors on the board. It is from 2002 after the implementation of corporate governance code firms are required to have independent directors in board. Definition of independent director according to code is as under:

"Independent director means a director who is not connected with the listed company, or its promoters, or directors, on the basis of family relationship and who does not have any other relationship, whether pecuniary or otherwise, with the listed company, its associated companies, directors, executives or related parties. The test of independence principally emanates from the fact whether such person can be reasonably perceived as being able to exercise independent business judgment without being subservient to any apparent form of interference" (SECP, 2010).

Last independent variable is firm size as firm size is proxy of net sales, was measured as the natural lag net sales to control for the inherent skewness.

3.4.3 Control Variables

Variable held constant in order to assess or clarify the relationship between two other variables, not to be confused with controlled variable, which is an alternative term for independent variable. A control variable is used in empirical research to reduce the risk of attributing explanatory power to independent variables that in fact are not responsible for the occurrence of variation in the dependent variable. That is, to test the possibility that an empirical observed relation between an independent variable and a dependent variable is spurious. A spurious relation is a relation that can be explained by other variables. The model is using two control variables. YEAR is added to control for time because it is reported in

some previous works that CEO compensation is vary across the year due to economic changes or other factors etc. So it is reliable to control this variable e.g. in 2009 CEOs may be paid less by the companies due to the recession.

Some prior studies have reported significant differences in compensation practices across industries. Therefore, in examining the determinants of CEO compensation in a multi-industry sample, it was considered prudent to explicitly control for such inter-industry variations. Since the sample comprised thirteen industries, textile, chemical, energy, engineering, glass, paper, sugar, cement, technology, food, telecommunication, fertilizer and transport was designated as the residual industry in the analysis.

3.5 Methods

3.5.1 Multiple Regression Analysis

Regression analysis is set of statistical techniques that allow one to assess the relationship between dependent variables and several independent variables. Regression technique can be applied to a data set in which the independent variables are correlated with one another and with dependent variable. Multiple regression is not just one technique but a family of techniques that can be used to explore the relationship between the one continuous dependent variable and number of independent variables usually continuous but categorical variables also (Stevens 1996). Multiple regression is based upon the correlation but allows more sophisticated exploration of the interrelationship among a set of variables.

Multiple regression is an extension of bivariate regression in which several independent variables instead of one are combined to predict a value on a dependent variable for each subject. The goal of regression is to arrive at the depth of β value, called regression coefficients for the independent variables that bring the predicted value as close to the obtained values. The beta value is a measure of how strongly each predictor variable influences the criterion variable. The beta is measured in units of standard deviation (B. G. Tabachnick & Fidell, 2007).

There are different ways that the relative contribution of each predictor variable can be assessed. In the simultaneous method which SPSS calls the Enter method, the researcher specifies the set of predictor variables that make up the model. The success of this model in predicting the criterion variable is then assessed. In contrast, "hierarchical" methods enter the variables into the model in a specified order. The order specified should reflect some theoretical consideration or previous findings. If you have no reason to believe that one variable is likely to be more important than another you should not use this method. As each variable is entered into the model, its contribution is assessed. If adding the variable does not significantly increase the predictive power of the model then the variable is dropped. In statistical methods, the order in which the predictor variables are entered into or taken out of the model is determined according to the strength of their correlation with the criterion variable (Pallant, 2005).

This research paper is based upon hierarchical method of regression that means we will enter our variables in steps or blocks in a predetermined order in first block we will force all independent variables responding into the analysis . In other block we will enter the control variables because we can then see whether our block on independent variables is still able to explain the variance in our dependent variable.

Initial steps are in regression analysis to set the statistical significance level. This is done by using an F statistical model. For that to be statistically significant, it is a rule of thumb that says it should be <0.05 probability that the results are random. In other words, there is a 5 percent significance level we want to use. Absolute value of F must be greater than the critical F-value. If this is not the case, the model is rejected. This means that the model is not significant enough to be included in further analysis (Kerr, et al., 2002). If the model is statistically significant, it will evaluate whether there is substance in the linear association between the dependent variable and the independent variables. A high multiple R^2 indicates that the estimated regression is well adapted and also the relationship between the dependent variable and independent variables. We use the adjusted R^2 to get a more accurate explanation power. The adjusted R^2 is adjusted for degrees of freedom, and is better suited when one wants to look at the variables and its explanatory power unless it is abnormally high (Studenmund, 2001).

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Before proceeding with the regression analysis we also have to consider some assumptions of multiple regression are as:

3.5.1.1 Sample Size

First and main issue is about the sample size i.e. with small sample we may obtain a result that does not generalize with other samples. To tackle this problem I used the recommended method introduced by Tabchnick and Fidell (2001 , p117) they give the formula for calculating the sample size i.e. N=50+8m here m= number of independent variables (B. G. Tabachnick, & Fidell,L.S, 2001). In this research five independent variables were present so I chose the sample of N= 50 + 40 = 90 firms that is well prescribed by this formula (B. G. Tabachnick & Fidell, 2007).

3.5.1.2 Multicollinearity

Next assumption is about multicollinearity. When choosing a predictor variable, you should select one that might be correlated with the criterion variable, but that is not strongly correlated with the other predictor variables. However, correlations amongst the predictor variables are not unusual. The term multicollinearity (or collinearity) is used to describe the situation when a high correlation is detected between two or more predictor variables (Pallant, 2005). Such high correlations cause problems when trying to draw inferences about the relative contribution of each predictor variable to the success of the model. SPSS provides you with a means of checking for this multicollinearity whether it exists or not when the independent variables are highly correlated r=0, 9 and above so. For this problem, I used the correlation analysis to check the correlation between the variable but I did not find the higher value of r=0.9, all the values were not more than .4 or .45 (B. G. Tabachnick, & Fidell,L.S, 2001). On the basis of this analysis I can say that these independent variables certainly contribute to a good regression model. SPSS also performs the collinearity diagnostics on the variable that are the part of multiple regression. I performed the same diagnostic with SPSS on the variables see Appendix 2, 3, and 4. I got two values for each variable, tolerance and VIF. Tolerance is an indicator of how much of the variability of the specified independent is not explained by the other independent variables in the model. Variance Inflation Factor (VIF) which is just the inverse of the tolerance value (B. G. Tabachnick, & Fidell,L.S, 2001).

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It is quoted by several researchers and Tabachnick and Fiedell (2001, p.84) that tolerance value less than .10 and VIF value above 10 are the warning sign. In this report, VIF for all the variables are less than 10, see Appendix 2, 3, 4.

3.5.1.3 Outliers

Multiple regression is also very sensitive to outliers at very high or very low scores. The presence of outliers can be detected from the scatter plot (Fox, 1991), according to Tabachnick and Fiedell (2001) variables that have a standardized residual as displayed in scatter plot of more than 3.3 or less than -3.3 are defined as outliers. If we find these outliers, the only action we have to take, to remove these cases (B. G. Tabachnick, & Fidell,L.S, 2001; B. G. Tabachnick & Fidell, 2007). In this research, I found outliers or extreme values in dependent variable i.e. CEO pay that was 0 pay and one more value that was very high as compared to all other values. Other variables were visually checked but did not find any outliers.

3.5.1.4 Normality

Normality is another assumption for multiple regression. To verify the variables against normality we used the normal probability plot of the regression standardized residuals (Stevens 1996). In the normal probability plot I did not find the points of most variables lied in a reasonably straight diagonal line from bottom left to top right. To remove this non normality and heterodicity I used the natural lag of CEO pay, firm size, and return on equity and board size. After that points were lying reasonably in a straight line from bottom to top right.

3.5.1.5 Regression Model

When data approved by these assumptions then the relation, present between dependent and independent variable was analyzed by multiple regression method. I used model that was given below to analyze the CEO compensation and other corporate governance variables. This model was also used by (Randøy & Nielsen, 2002), (Mikko Mäkinen, 2008) and (Core et al., 1999).

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$$\ln(\text{ceo compensation})_t = \alpha + \beta_1 \ln(\text{ROE})_{t-1} + \beta_2 \ln(\text{firmsize})_{t-1} + \beta_3 \ln(\text{boardsize})_{t-1} + \beta_4(\text{ceo duality})_{t-1} + \beta_5 (\text{family ceo})_{t-1} + \beta_6 (\% \text{ of independent directors})_{t-1}$$

CEO compensation variable is log transformed of the CEO compensation because CEO compensation was non - normal. Other variables like ROE, board size, firm size are also log transferred I used the log transferred to reduce the heteroscedasticity. I used the log of net sales as proxy to measure the firm size. As we can note one year lag between the independent and dependent variable because in most companies board of directors decide the compensation of CEOs on the bases of previous year's performance. So I used the independent variables like ROE, net sales etc. of year 2007 for dependent variable CEO compensation variable year 2008 and year 2008 values of these variables used for CEO compensation of year 2009.

Other variables belong to CEO ownership measured with 0 or 1 method (e.g. if CEO is a board chair then 1 and if no then 0). In visual inspections of the remaining independent variables, the distribution appeared to be normal with the exception on occasional outliers.

I checked the problem of heteroscedasticity or non normal distribution with the analysis of regression residual but I did not find any problem. Also I took a separate test of multicollinearity diagnostic but the variance inflation factor (VIF) statistics (<10) does not indicate multicollinearity even though the correlation coefficient also does not indicate that we have multicollinearity problem, see Appendix 2,3,4.

3.6 Validity and Reliability

Validity is accuracy or correctness. The validity of a measuring instrument is defined as the extent to which differences in scores on it reflect true differences among individuals on the characteristic we seek to measure, rather than constant or random errors. An ideal in measurement is to generate items that reflect the true score or value of the characteristic, or to measure what it is supposed to measure. Researchers always wish to get the results that are precise and accurate as possible (Hair, 2007). In case of validity, we can never know if a measure is valid or not, simply because we do not know the true value, what we do, therefore,

is to infer the validity of the measure by looking for evidence of its predictive, content, and construct validity.

Validity measures the accuracy and truth, both internally, in terms of the appropriate variable is measured, and externally in terms of degree of generalization .Predictive validity is ascertained by how well the measure predicts the criterion This is sometimes called criterion-related validity(Hair, 2007). This research study is about CEO pay and in previous studied many researcher have used the same measures to predict about this dependent variable i.e. CEO compensation. Another type of predictive validity is the concurrent validity. This is concerned with the relationship between the predictor variable and the criterion variable when both are assessed at the same point in time. In this case we are assessing the independent variables and dependent variables at the same time as data collected for this research paper is for three years and each year data about same variables are collected. Another thing also variables have good correlation with dependent variable so we can say that measures have the predictive validity.

Another type of validity that is required face validity of the measures, how accurately some measures (operationalizations) actually can represent the concept (Studenmund, 2001). This is based upon pervious literature. As we have discussed in theory portion that this concept have studied by many researchers and measures used in this paper are used by many previous researchers so without any doubt these variables can prove the face validity.

 On the other, hand convergent validity that is about to what degree similar measurement instruments measure the same concept. If they are measuring the same concept, the measures should be highly correlated. From the correlation table in appendix 1 we can see that independent variables have good correlation with the dependent variable. But we also have to consider the discriminant validity that is discriminant validity requires that a measure does not correlate too highly with measures from which it is supposed to differ. In this research paper some variable are highly correlated with dependent variables but some other variables have low correlation with dependent variable. In case of internal validity, internal validity is very important in this exercise since we want to look at a few of the variables to try to identify the cause - effect relationship. We will then assign an effect to the reason we focus on, although there are many external factors that can affect the CEO compensation. The external validity concerns to what extent we can generalize the results to apply to all companies in this paper it is not possible to generalize the results for all the firms listed in Lahore stock exchange as

data sample is based upon the convenience sample method we did not use the random sampling due to limitation of time so it is difficult to generalize the results for all the companies.

Reliability is concerned about the similarity of results provided by independent but comparable measures of the same object or concept By reliability we mean how our research findings match the real situation (Sekaran, 1992). Our data are based on concrete numbers that listed companies have presented in their annual reports. Thus it will be difficult to arrive at different results if any other researchers conduct the same research. The reliability of research can be affected if listed firms are not care full about the accounting controls and reporting. On the other hand in this report I used the net sale as a proxy for firm size but many other researcher have used different measures for firm size if they will use the different measure then they can reach at the different results. But if research will conduct by the same measure and same time frame then results will be the same as in this paper.

Chapter 4

4. Analysis

4.1 Descriptive Statistics

In this section, we use descriptive statistics to view the developments in executive pay. With this, we hope to find relationships and what has affected executive pay. We will also try to break down all the descriptive statistics throughout in the CEO compensation. This chapter will also describe with the help of descriptive statistics how board size, firm size and other independent variables are changing with time and will also explain the trend and strength of their change not only with time but also with respect to CEO compensation. So with this detailed descriptive explanation, we can understand the data deeply and thoroughly which will help us to simplify our data set and make it more understandable and transparent to the reader. In this chapter, we want to look at how executive pay has evolved in the period 2007 to 2009 for listed companies in Lahore Stock Exchange in Pakistan.

4.1.1 Yearly development in CEO pay

There has been much discussion about the evolution of executive pay. We wish the following to see how the various forms of compensation to executive pay have evolved in the period from 2007 to 2009 in Pakistan.

Table 3: Overview of Yearly Change in Total CEO Pay in Rupees

YEAR		Mean	Std. Deviation
2007	TOTAL CEO PAY	5553992.81	9095580.832
2008	TOTAL CEO PAY	6262234.22	9797533.212
2009	TOTAL CEO PAY	7240844.41	1.068E7

1 Rupee = 0.0779 NOK (May 31, 2010)

This table 3 shows the mean value of CEO pay across the three years from 2007 to 2009 and also mean value and standard deviation that are used to measure the central tendency of data. Measures of central tendency locate the center of distribution as well as other useful information and secondly, table also shows the standard deviation for each year. Standard deviation describes the spread or variability of the sample distribution values from the mean and is perhaps the most valuable index of dispersion. From this table, we can analyze the CEO pay has increase trend from 2007 to 2009. This finding is related with U.S. CEO Compensation because there is also increase in CEO salaries across the time. But table shows the less increase in 2009 as compared to increase in 2008. Maybe it is due to the recession period. In 2009, in most of the companies' annual reports I found the decline in their sales and they argued in annual reports that this decline is due to the recession period in whole economy. On the basis of this information, we can say that decline in CEO pay in 2009 as compared to 2008 is due to the last year's recession.

4.1.2 CEO Pay in family and non family firms

In Pakistan, mostly firms are family based. In this collected data from Lahore Stock Exchange I found almost 60% of the firms are family oriented. According to our definition; family oriented firm is a firm if 2 or more directors in board of directors are from the family. So according to this definition 40 % are non family firms. The Table 4 below shows the yearly CEO compensation in family and non family firms

Here we can observe from table 4 that there is a yearly development in CEO compensation in both; family and non family firms. But another point is to be noted that CEO compensation in family firms is less than the CEO compensation in non family firms.

Table 4: Yearly Comparison between CEO Pay in Rupees in Family and Non Family firms

YEAR	Family or Non Family		Mean	Std. Deviation
2007	Non Family	TOTAL CEO PAY	9594305.91	1.627E7
	Famliy	TOTAL CEO PAY	4096830.70	3506569.536
2008	Non family	TOTAL CEO PAY	12307879.05	1.743E7
	Famliy	TOTAL CEO PAY	4342981.89	4284214.311
2009	Non Family	TOTAL CEO PAY	14082113.55	1.707E7
	Famliy	TOTAL CEO PAY	5069012.94	6452603.801

1 Rupee = 0.0779 NOK (May 31, 2010)

Table 5 shows the Mean CEO pay in family and non family firms. According to table 5, CEO mean compensation is more in non family firms and less in family firms. In table 4 as we discussed that there is increase in CEO compensation both in family and non family firms by time.

Table 5: CEO Pay in Family and Non Family Firms in Rupees

Family OR Non Family		Mean	Std. Deviation
Non family	TOTAL CEO PAY	11917331.97	1.673E7
Famliy	TOTAL CEO PAY	4507285.28	4912697.352

1 Rupee = 0.0779 NOK (May 31, 2010)

4.1.3 Independent Directors

In Pakistan, after the introduction of corporate governance code of 2002, it is compulsory to have independent directors in the board because of their independent views about the performance of company and monitoring. This Table 6 shows frequency of independent directors in the companies from year 2007 to 2009. From table 6, we can see that most of the companies do not have independent directors in boards and 15 % companies have only one independent director in companies. Even though it is compulsory to have independent

directors according to corporate code but still companies are not used to include independent directors in board, reason can may be such as, most of the companies are family controlled so they may not like to disclose their inside information to outside directors that's why still most of the companies are discouraging this compulsion.

Table 6: Frequency of Independent Directors

No. of independent directors	Frequency	Valid Percent
0	126	50.6
1	39	15.7
2	21	8.4
3	23	9.2
4	15	6.0
5	7	2.8
6	8	3.2
7	4	1.6
12	4	1.6
13	2	.8

4.1.4 CEO Duality and CEO Pay

CEO duality is explained as if CEO is also the member of the board. In Pakistan, from data we can see that most of the CEOs are board members. According to managerial power theory CEO can influence the board decisions if he is a member of the board committee and in case of his own pay CEO can put the pressure on board. Even though CEOs have optimal contract with board committee but rather than these contracts CEOs have several ways to influence the board. In Table 7 there is no change in CEO duality by time. CEO duality has constant mean value for whole three years but CEO pay have incline trend. From table 8 we can see that CEOs are earning more compensation in firms where CEOs have duality means CEOs are also the members of the board and where CEOs do not have the dual role, they have less earrings.

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Table 7: Yearly Comparison of CEO Pay in Rupees and CEO Duality

YEAR		Mean	Std. Deviation
2007	CEO DUALITY	.98	.154
	TOTAL CEO PAY	5553992.81	9095580.832
2008	CEO DUALITY	.98	.154
	TOTAL CEO PAY	6262234.22	9797533.212
2009	CEO DUALITY	.98	.154
	TOTAL CEO PAY	7240844.41	1.068E7

1 Rupee = 0.0779 NOK (May 31, 2010)

Table 8 shows that CEO compensation is high in firms with CEO duality and low compensation in firms that are without CEO duality. But from table 9, we can make comparison between CEO duality and family and non family firms. Table 9 shows that CEO duality in family firms can not influence but in non family firms CEO can influence because in non family firms CEOs mean compensation is more than the family firms.

Table 8: CEO Pay in Firms With and Without CEO Duality

CEO DUALITY		Mean	Std. Deviation
Non Dual	TOTAL CEO PAY	2689833.33	3010726.850
Dual	TOTAL CEO PAY	6442789.83	9958470.760

1 Rupee = 0.0779 NOK (May 31, 2010)

Table 9: CEO Duality and CEO pay in family and non family firms

CEO DUALITY	fmailyornon		Mean	Std. Deviation
1	Non family	TOTAL CEO PAY	12905992.54	1.731E7
	famliy	TOTAL CEO PAY	4507285.28	4912697.352

1 Rupee = 0.0779 NOK (May 31, 2010)

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4.1.5 Board Size and CEO Pay

Board size and CEO pay is well discussed topic in all over the world and they have almost same research results. Most of the studies recommended that board size have negative relation with CEO pay. This table shows the mean board size and mean pay of CEO from year 2008 to 2009. In 2008, mean value shows the decline in board size but increase in CEO pay and in opposite to 2008, in 2009, board size shows the increase and also CEOs have the same trend on increase. To understand this relation another table 10 shows the relation between number of board members and CEO pay.

Table 10: Yearly Comparison of Board Size and CEO Pay Trend in Rupees

YEAR		Mean	Std. Deviation
2007	BOARD SIZE	8.07	1.772
	TOTAL CEO PAY	5553992.81	9095580.832
2008	BOARD SIZE	8.04	1.721
	TOTAL CEO PAY	6262234.22	9797533.212
2009	BOARD SIZE	8.13	1.758
	TOTAL CEO PAY	7240844.41	1.068E7

1 Rupee = 0.0779 NOK (May 31, 2010)

This table 10 shows that as board size is increasing, CEO pay is also increasing. This trend of increase is opposite to the previous research but argument is that in Pakistan most of the big firms have large board size and big firms also have talented CEOs and they are paying their talented CEOs more as compared to other small firms. From previous studies it is clear that big firms can have talented CEOs and can pay more as compared to small fellows. In case of Pakistan same relation exists between board size and CEO pay. Because here in Pakistan board size depends upon firm size and also CEO pay depends upon firm size. As board size increases, CEO pay increases as well. Table 11 also shows the frequency of board size. Board size with 7 members has high frequency and board with 16 members has very low frequency. Frequency of board size can also affect the mean results.

Table 11: Overview of Board Size and CEO Pay Trend in Rupees

BOARD SIZE	Frequency		Mean	Std. Deviation
7	134	TOTAL CEO PAY	4008701.93	3711925.018
8	51	TOTAL CEO PAY	9530033.51	1.834E7
9	30	TOTAL CEO PAY	5080003.27	3740683.828
10	19	TOTAL CEO PAY	13687477.05	1.120E7
12	2	TOTAL CEO PAY	6490500.00	1079752.055
13	7	TOTAL CEO PAY	8611142.86	3321925.317
15	5	TOTAL CEO PAY	11641400.00	6654093.875
16	1	TOTAL CEO PAY	14611000.00	.

1 Rupee = 0.0779 NOK (May 31, 2010)

4.1.6 Firm Size and CEO Pay

In case of firm size, descriptive statistics show the positive trend between CEO pay and firm size. This table shows the trend of increase or decrease between the firm size and CEO pay from the year 2007 to 2009. This table 12 shows that both CEO pay and firm size have increase trend but on the other hand, percentage on this increase is not same. Proportion of increase in firm size is more as compared to CEO pay. It means that CEOs are not getting the pay with respect to the percentage increase in the firm size.

Table 12: Yearly Comparison of Firm Size and CEO Pay Trend in Rupees

YEAR		Mean	Std. Deviation
2007	TOTAL CEO PAY	5553992.81	9095580.832
	FIRM SIZE	8.15E9	1.654E10
2008	TOTAL CEO PAY	6262234.22	9797533.212
	FIRM SIZE	9.97E9	1.986E10
2009	TOTAL CEO PAY	7240844.41	1.068E7
	FIRM SIZE	1.18E10	2.382E10

1 Rupee = 0.0779 NOK (May 31, 2010)

4.2 Correlation

This part is about the correlation between the variables that are used in this analysis as we discussed that correlation is the first step of regression. Because before performing the regression analysis, we have to get some information about the relations among all the variables. This information will help us to find the multicollinearity problem and also this part will give us the information about the direction of the relation among the different variables. In this section, we will find the relationship among the variables across two years 2008 and 2009 separately and also we compute the correlation for both years together. In this way, we can make comparison among the results and we can also analyze the differences between year wise correlation and together correlation. We have to also remind this correlation of 0 indicates no relationship at all, a correlation of 1.0 indicates a perfect positive correlation and values of -1.0 indicate perfect negative relationship. Here I will divide the discussion in two parts; in first part, paper will explain the direction of the relation among the variables and in second part, it will explain the strength of the relation among the variables.

In correlation table 13 for year 2008, the correlation is between seven variables. Here we can note that correlation between CEO pay and CEO from family is negative and CEO pay has positive relation with all other variables as we can see from the table. As CEO pay and CEO from family have negative relation it means that CEO belongs to the family. Family who is controlling the firm, the CEO pay will get the negative effect. CEO pay will be less if CEO is a family CEO and if CEO is from outside the family then CEO can get more pay. But other variables have positive relation; it means as the values of positive variables increase, CEO pay will also increase. According to correlation table four variables among six variables have significant relationship with CEO pay that are ROE, Board Size, Firm Size and Family CEO.

In year 2008, CEO pay is highly correlated with firm size as we can note from the table r = .577, this strong relation shows that firm size have very strong relation with CEO pay. Here we also have to consider that if firm size also doesn't have strong relation with other variables and we can see that firm size also have strong relation with board size but not as strong as with CEO pay. CEO duality and percentage of independent directors in board have small

relation with CEO pay. Other variables like family CEO, ROE, Board Size have medium relationship with CEO pay.

In summary, CEO pay has negative and medium relation with family CEO which is also significant at 0.5 levels. Firm size has positive and strong relation with CEO pay. In year 2008, CEO is mostly affected by firm size according to correlation analysis. If we calculate the coefficient of determination, we can find that how much variance is being shared by two variables. Firm size helps to explain the variance in respond to CEO pay is 33.29 % and other variables ROE 11% , Board Size 12 %, Family CEO 9 %, CEO duality 4 % and independent director 3%. From table below, it indicates that four variables have significant relationship with CEO pay; those variables are return on equity, board size, firm size and family CEO.

Table 13: Correlation of CEO Compensation of t=2008 with Variables of t-1=2007

	CEO PAY$_{t-1}$	RETURN ON EQUITY $_{t-1}$	BOARD SIZE$_{t-1}$	FIRM SIZE$_{t-1}$	FAMILY CEO$_{t-1}$	CEO DUALITY $_{t-1}$
Ln CEO PAY$_{t-1}$	1					
Ln RETURN ON EQUITY$_{t-1}$	.332*	1				
Ln BOARD SIZE$_{t-1}$	.354**	.283*	1			
Ln FIRM SIZE$_{t-1}$	.577**	.180	.445**	1		
FAMILY CEO$_{t-1}$	-.305**	-.226	-.286**	-.267*	1	
CEO DUALITY$_{t-1}$	.209	.004	-.001	.105	.193	1
% OF INDEPENDENT DIRECTORS$_{t-1}$	.179	.186	.295**	.042	-.149	.037

***Significant at 1% level (two-tailed).
**Significant at 5% level (two-tailed).
*Significant at 10% level (two-tailed).

CEO Compensation is measured as the logarithm of the total value of 2008 salary. ROE (Return on Equity) is annual earnings before tax divided by year-end equity. Board Size is the logarithm of total number of directors on the board. Percentage of independent directors is the proportion in independent directors in board. CEO duality is 1 if CEO is board member otherwise 0. Firm size is measured as natural log of net sales. Family CEO is measured by 0 and 1 variable if CEO is from the controlled family then 1 otherwise 0. Industry and year are dummy variables. For more details about variables, we have to look at definition table.

In year 2009 table 14, CEOs have positive relation with board size, firm size, CEO duality and percentage of independent directors in board. It means as these variables gain the more values, CEO will get the more pay. On the other hand, negative relation between CEO pay and ROE and family CEO. In 2008, we have experienced the same negative relation between CEO pay and family CEO but ROE was positive in 2008 but in 2009 ROE is showing negative relation but if we consider the strength of the relation, ROE have less strength in 2009 as compared to 2008. Strength of the relationship among other variables like ROE, CEO

duality, board size and percentage of independent directors is weak. In year 2008, board size and ROE have the medium level strength. Coefficient of determination for all the variables are as: ROE is sharing 0.3 %, board size 8%, firm size 30%, family CEO 13 %, CEO duality 0.7 % and percentage of independent directors 3 %. In year 2008, four variables have the significant relationship with the CEO pay but in 2009, only three variables; firm size, ROE and family CEO are showing the significant relationship with CEO pay. Three variables have significant relation with CEO pay i.e. firm size, board size and family CEO in year 2009. In year 2008, ROE was also significant but in 2009, ROE in no more significant.

Table 14: Correlation of CEO Compensation of t=2009 with Variables of t-1=2008

	CEO PAY$_{t-1}$	RETURN ON EQUITY$_{t-1}$	BOARD SIZE$_{t-1}$	FIRM SIZE $_{t-1}$	FAMILY CEO$_{t-1}$	CEO DUALITY$_{t-1}$
Ln CEO PAY$_{t-1}$	1					
Ln RETURN ON EQUITY$_{t-1}$	-.057	1				
Ln BOARD SIZE$_{t-1}$	.291[*]	-.049	1			
Ln FIRM SIZE $_{t-1}$	.544[**]	-.381[**]	.457[**]	1		
FAMILY CEO$_{t-1}$	-.364[**]	-.097	-.300[**]	-.252[*]	1	
CEO DUALITY $_{t-1}$	.087	-.117	-.005	.101	.193	1
% OF INDEPENDENT DIRECTORS$_{t-1}$	.177	-.015	.315[**]	.098	-.178	.034

***Significant at 1% level (two-tailed).
**Significant at 5% level (two-tailed).
*Significant at 10% level (two-tailed).

CEO Compensation is measured as the logarithm of the total value of 2009 salary. ROE (Return on Equity) is annual earnings before tax divided by year-end equity. Board Size is the logarithm total number of directors on the board. Percentage of independent directors is the proportion in independent directors in board. CEO duality is 1 if CEO is board member and otherwise 0. Firm size is measured as natural log of net sales. Family CEOs are measured by 0 and 1 variable if CEO is from the controlled family then 1 otherwise 0. Industry and year both are dummy variables. For more details about variables, we can see definition table.

This table 15 shows the correlation for both years 2008 and 2009 as a whole. Purpose to compute this correlation is to find out that is there any difference between year wise correlation and as a whole, because in any economy, as time passes, economic changes occur and these changes also affect the industries and firms and the chief players of the economy as well. So CEO pay may be having some influence of these changes. So to conclude paper already has explained year wise correlation. In this table, first I will explain the relation among different independent variables and dependent variable CEO pay. From table, we can see that board size, firm size, CEO duality and percentage of independent directors have positive relation with CEO pay. It means as these variables increase their values, CEO pay will also increase with these variables. Only one variable i.e. family CEO has negative relation with the CEO pay that is also clear from previous studies that mostly family CEOs have less pay as compared to professional CEOs because family CEOs have interest in their long term benefits, not in short, they have to increase the profitability of the firm, not their compensations. But four variables board size, firm size, family CEO and percentage of independent directors have significant relationship. Secondly, strength of relation among these variables is different as compared to year wise correlation. Here in this table, only firm size have strong relationship with CEO pay and other variables like CEO duality and percentage of independent directors show poor relation with CEO pay. But two other variables; board size and family CEO show the average relationship with CEO pay. For coefficient of determination, we can see that board size shows the contribution of 10%, firm size shares 31 %, and CEO duality 2 %, family CEO 11%, percentage of independent director 3% and ROE shows 0.3%. But percentage increased in 2008 and 2009. In previous studies findings are different, some studies explain the positive relation between the CEO pay and outside directors, and some argue the negative relation between the CEO pay and percentage of outside directors in the board. According to the definition of independent directors, independent directors must not be relative and any other person which have any kind of relation with the firm. In Pakistan, as we discussed that most of the firms are family firms and even most of the CEOs are family CEOs. Effect of CEO duality is not prominent because a family member cannot use his influence on his own family firm because most of family CEOs plans are about the long term profitability of the firm and not about their pays. They get the benefits in terms of increase in firm profitability, not to increase in pay.

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Table 15: Correlation for Year 2008 AND 2009 As A Whole

	CEO PAY$_{t-1}$	RETURN ON EQUITY$_{t-1}$	BOARD SIZE$_{t-1}$	FIRM SIZE$_{t-1}$	FAMILY CEO$_{t-1}$	CEO DUALITY$_{t-1}$
Ln CEO PAY$_{t-1}$	1					
Ln RETURN ON EQUITY$_{t-1}$	.088	1				
Ln BOARD SIZE$_{t-1}$	.319**	.103	1			
Ln FIRM SIZE$_{t-1}$	.559**	-.123	.450**	1		
FAMIlY CEO$_{t-1}$	-.336**	-.155	-.293**	-.259**	1	
CEO DUAlITY$_{t-1}$	.143	-.062	-.003	.103	.193*	1
% INDEPENDENT IN BOARD$_{t-1}$	.177*	.079	.305**	.069	-.164*	.036

***Significant at 1% level (two-tailed).
**Significant at 5% level (two-tailed).
*Significant at 10% level (two-tailed).

CEO Compensation is measured as the natural logarithm of the total value of 2008 and 2009 salary. ROE (Return on Equity) is annual earnings before tax divided by year-end equity measured as natural logarithm of ROE. Board Size is the natural logarithm of total number of directors on the board. Percentage of independent directors is the proportion in independent directors in board. CEO duality is 1 if CEO is board member otherwise 0. Firm size is measured as natural log of net sales. Family CEO is measured by 0 and 1 variable if CEO is from the controlled family then 1 otherwise 0. Industry and year are dummy variables. For more details about variables we have to see definition table.

4.3 Regression Analysis

This section will explain the regression analysis that will elaborate the relationship among the independent and dependent variables and also regression analysis will help to accept or reject the hypothesis that were constructed in previous chapter. Regression analysis will also conclude the best model for this paper. Means which model will explain the dependent variable more accurately as compared to the other ones and will also give a detail about all the independent variables' relationship with dependent variable and explain their significance.

For regression analysis I used SPSS and implemented the sequential methods of regression for this analysis because of control variable. In sequential method, control variables are entered before the independent variables and it is noted that there is no effect if enter these variables first or after the independent variables. As it is described that dependent variable is CEO pay and independent variables are firm size, board size, CEO duality, family CEO and percentage of independent directors in board. Control variables are industry and year.

Table 16 will explain the regression analysis for both years 2008 and 2009 separately and second, Table 17 will elaborate both years as a whole.

In first table 16, model 1 is without firm size. The reason to exclude the firm size is high correlation of firm size with CEO pay as well as with board size. To reduce this effect, it was decided to construct two models; model 1 is with firm size and model 2 is without firm size.

Model 1:

ln(ceo compensation)$_t$ = α+ β$_1$ln(ROE)$_{t-1}$+ β$_2$ln(boardsize)$_{t-1}$+ β$_3$(ceo duality)$_{t-1}$+ β$_4$ (family ceo)$_{t-1}$ + β$_5$ (% of independent directors)$_{t-1}$

Model 2:

ln(ceo compensation)$_t$ = α+ β$_1$ln(ROE)$_{t-1}$+ β$_2$ln(firmsize)$_{t-1}$+ β$_3$ln(boardsize)$_{t-1}$+ β$_4$(ceo duality)$_{t-1}$+ β$_5$ (family ceo)$_{t-1}$ + β$_6$ (% of independent directors)$_{t-1}$

In year 2008 table 15, we used two models; in model 1 only one independent variable CEO duality shows the significant effect on CEO pay and adjusted r2 for this model is.345 means 34.5%. This model has the explanatory power of 34.5% and this model is significant model with f value 2.815. When a small sample is involved, the r square value in the sample trends to be a rather optimistic overestimation of the true value in the population. In model 2 for the same year, we can see that when firm size was added in model the adjusted r2 value increases, it means now model has more explanatory power as before without firm size. Now in model 2, two independent variables are significant; firm size and CEO duality. This means that if we control the industry variable then firm size and CEO duality have significant effects on the dependent variable CEO pay. This model's explanatory power is .489 or 48.9 %. This is a quite respectable result as compared to the model 1 result.

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Table 16: Regression Analysis for Year 2008 and 2009

	t=2008		t=2009	
	Model 1	Model 2	Model 1	Model 2
INDEPENDENT VARIABLES				
ROE_{t-1}	.135 (.895)	.058 (.428)	-.019 (-.125)	.902 (.374)
$BOARD\ SIZE_{t-1}$	.108 (.759)	.027 (.214)	.069 (.457)	-.667 (.510)
$FIRMSIZE_{t-1}$		.432 (3.283)***		3.465 (.002)**
$FAMILY\ CEO_{t-1}$	-.170 (-.1328)	-.125 (-1.094)	-.227 (-1.537)	-1.249 (.221)
$CEO\ DUALITY_{t-1}$	.318 (2.657)*	.228 (2.071)**	.206 (1.480)	.962 (.344)
% INDEPENDENT DIRECTORS $_{t-1}$	-.053 (-.413)	-.021 (-.181)	-.018 (-.123)	.194 (.847)
CONTROL VARIABLES				
CHEMICAL	.216 (1.034)	.139 (.745)	.098 (.464)	.047 (.800)
FOOD	-.152 (-.826)	-.143 (-.873)	-.357 (-1.861)	-.359 (.038)*
SUGAR	-.066 (-.347)	-.078 (-.465)	-.062 (-.311)	-.030 (.861)
TEXTILE	-.046 (-.158)	-.217 (-.826)	-.234 (-.796)	-.271 (.295)
TECHNOLOGY	.409 (2.462)*	.317 (2.108)**	.308 (1.747)	.251 (.111)
CEMENT	.170 (.741)	.080 (.390)	-.057 (-.241)	-.079 (.701)
GLASS	-.040 (-.258)	-.049 (-.354)	-.101 (-.596)	-.084 (.569)
$ENERGY_{t-1}$	.250 (1.147)	.006 (.027)	.102 (.475)	-.048 (.804)
ENGINEERING	.167 (.735)	.057 (.279)	.008 (.037)	-.033 (.870)
PAPER	.174 (1.105)	.130 (.926)	.094 (.568)	.084 (.563)
FERTILIZER	.014 (.107)	-.052 (-.440)	-.030 (-.212)	-.081 (.517)
Number of firms	83	83	83	83
Adjusted R2	.354	.489	.235	.431
F	2.815**	3.983***	1.923	3.139**

∗∗∗Significant at 1% level (two-tailed).
 ∗∗Significant at 5% level (two-tailed).
∗Significant at 10% level (two-tailed).
Standardized beta values reported with t-statistics in parentheses

In year 2009 table 15, in model 1, no variable has the significant effect and model explanatory power is also quite low that is 23.5 % with non significant f value 1.932. But model 2 for year 2009 has one significant independent variable; firm size. This model explains the 43.8 % of the variance in CEO pay in year 2009 with a significant f value 3.139.

T- Test was also used. Above table shows the given t values for all independent variables. Given t values will be tested against the critical t value to see whether if there is a statistically significant ability to reject or accept the null hypothesis. One sided t test is used and it has the critical value at 95% significance level is 1.664. If observed, t value is greater than the critical value, we reject the null hypothesis.

Table 17: Regression Analysis for Both Year 2008 And 2009

	2008 and 2009	
	Model 1	Model 2
INDEPENDENT VARIABLES		
ROE $_{t-1}$	.023 .255	.057 (.721)
BOARD SIZE $_{t-1}$	.099 1.050	-.028 (-.323)
FIRMSIZE $_{t-1}$		.457 (5.207)**
CEO DUALITY $_{t-1}$	-.199 (-2.222)*	-.148 (-1.878)
FAMILY CEO $_{t-1}$	.263 (3.144)**	.167 (2.212)*
% INDEPENDENT DIRECTORS $_{t-1}$	-.037 -.413	.000 (-.003)
CONTROL VARIABLES		
CHEMICAL	.147 1.086	.088 (.738)
FOOD	-.265 (-2.197)*	-.261 (-2.472)*
SUGAR	-.072 -.580	-.056 (-.516)
TEXTILE	-.180 -.944	-.261 (-1.560)
TECHNOLOGY	.349 (3.146)**	.277 (2.834)**
CEMENT	.036 .239	-.012 (-.94)
GLASS	-.074 -.704	-.072 (-.776)
ENERGY	.168 1.210	-.036 (-.283)
ENGINEERING	.083 .564	-.003 (-.023)
PAPER	.130 1.248	.099 (1.078)
FERTILIZER	-.011 -.119	-.067 (-.862)
YEAR	.034 .442	.006 (.090)
NUMBER OF FIRMS	**83**	**83**
ADJUSTED R2	**.393**	**.535**
F	**4.879***	**7.530***

***Significant at 1% level (two-tailed).
**Significant at 5% level (two-tailed).
*Significant at 10% level (two-tailed).
Standardized beta values reported with t-statistics in parentheses

H1: There is a positive relation between firm size and CEO compensation.

According to correlation analysis the independent variables firm size has strong positive and significant relation with CEO pay (.577) at 0.01 significance level in 2008. It is also confirmed from the multivariate analysis, the firm size also have significant and strong relation with CEO pay. Standardized beta value is .432 and t-value is 3.283 which is significant value. These results show that CEO compensation has positive relation with firm size. It means, in a big firm, CEO has more pay as compared to small ones. In 2009, firm size also have strong and positive correlation with CEO pay (.544) at 0.01 significance level and even in multivariate analysis we can find the significant relation between CEO pay and firm size i.e.β= 3.464 at t value 0.002 which is strongly significant. Hence in 2009 and 2008 there is a positive relation between CEO compensation and firm size. Even for the data as a whole for year 2008 and 2009 we find strong positive (.554) and significant relationship between CEO pay and firm size, it is significant at 0.01 significance level. Multivariate test for both years as a whole for firm size and CEO pay confirms the strong and significant relation among these variables which show the β= .457 at t value (5.207). With the help of these results we conclude that firm size and CEO compensation have positive and significant relation.

H2: There is a positive relationship between CEO compensation and firm financial performance.

Correlation analysis between CEO compensation and financial performance that is measured only by accounting measures is showing average relation (.332) with each other and has significant relation in year 2008. But firm performance variables have no significant relation with CEO pay in 2009. If we will check the multivariate analysis of these variables then same condition is like correlation. No significant relation exists between these variables. Hence hypothesis two has positive relation with CEO pay but this relation is not significant in both years. On the basis of this analysis there in no relation between firm financial performance and CEO pay. For two years as a whole, correlation among the variables is very weak and positive but it is not significant even in multivariate analysis, no significance occurs between

firm performance and CEO pay. It shows no relation exists between CEO pay and firm performance.

H3: There is a positive relation between CEO pay and board size.

Correlation for hypothesis 3 for year 2008 board size and CEO pay is positively correlated (.354) with each other and have significant relation at 0.01 level and for year 2009 board size has weak positive and significant correlation (.291) with CEO pay. When we will check the multivariate tests, board size shows the positive relation with CEO pay but this relation is not significant with CEO pay for both years 2008 and 2009 hence it s proved from this analysis that there is no existed relation between CEO pay and board size. Correlation, for both years as a whole is positive and has significant relation (.319) among these variables at 0.01 significance level. Multivariate test shows no significance relation between board size and CEO compensation.

H4: There is a negative relation between CEO compensation and family CEO.

In line with hypothesis 4, correlation between family CEO and CEO compensation is negative (-.305) at it has significant relation at 0.05 significance level in year 2008 and also shows negative correlation (-.364) and significant at 0.01 significance level in year 2009. However multivariate tests show that there is no significant relation between CEO compensation and family CEO for both years. Multivariate also shows the direction of relation which is also negative like correlation. In short, hypothesis four is not true for both years. In case of both years as a whole, family CEO and CEO pay shows the negative and significant correlation among the variables even in multivariate tests. Both variables indicate the negative but significant relation with each other β= .167 at t value (2.212). Hypothesis is true for both years because there is a negative relation between CEO compensation and family CEO.

H5: There is a positive relation between CEO compensation and CEO board chair.

CEO compensation and CEO duality have positive correlation (.209) but relation between these variables is not significant for year 2008. In 2009, both variables are again not significant but variables have weak positive correlation (.087). In 2009, relation among these variables is much weaker than 2008. Multivariate test also shows that there is no significant

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relationship among these variables in 2009 but in 2008 there is significant relationship among these variables with β= .228 and significant at t value (2.071) which concludes that CEO compensation and CEO board chair have positive and significant relation for year 2008. This hypothesis is true for year 2008 but false for year 2009. Correlation for both years as a whole shows the positive relation but not a significance relation. As a whole, for both years correlation between CEO pay and CEO duality not exists because both variables don't have significant relationship. Multivariate tests also confirm that there is no significance relationship.

H6: There is a negative relation between CEO Pay and Percentage of Independent Directors.

Correlation between percentages of independent directors in board and CEO compensation shows the positive but no significant relation for both years 2008 and 2009. Multivariate tests also find no significant relation between CEO compensation and percentage of independent directors in board. Hence hypothesis is rejected for both years. In case for both years as a whole, correlation among the variables is not significant. Even multivariate tests indicate no significance relation among the variables. As a whole, CEO compensation and percentage of independent directors have no relation hence hypothesis is rejected that there is a negative relation between CEO pay and % of independent directors.

Chapter 5

5. Discussion and Conclusions

This chapter will explain the result and will also state how these results are matched with previous studies. This chapter will also elaborate the relation between the theory and empirical part. Argument in favor of findings and against the results will also find in this chapter. How agency theory, managerial power theory and board theory are related with the result and what are their effects in a developing country Pakistan. In developed countries, these theories are implemented many times and researched plenty of times but in developing and emerging countries for implementation so these theories are still suspicious. The results from this research paper tell us how these theories are working in different contexts.

5.1 Discussion

Results from the analysis explain executive compensation in Pakistan from 2007 to 2009. We also observe an upward trend in CEO pay during this period. In Pakistan, Boards of directors are also responsible to take the decision about compensation, hiring and firing of the CEO. According to Nishat (2004) most of the firms in Pakistan are family based firms and even in this thesis 60% of the firms are family based firms and they have family CEOs. In this case, boards of directors and CEOs have mutual understanding with each other and in these conditions CEOs of these companies are working for the long term benefits of the company not for the compensation so this factor reduces the agency problem among directors and CEOs. But comparison between family firms and non family firms, we can find that in family firms CEOs are earning less as compared to non family firms. But both family firms and non family firms have upward in CEO pay during the study period 2007 to 2009. To find out causes of this increase, we have to discuss all about variables with their respective theories and practicalities. This thesis shows the positive relation between the firm size and CEO pay. This has been also confirmed by plenty of previous studies. Argument is here why big firms are paying more and small firms are paying less in Pakistan. As we can see that in big firms CEOs have more responsibilities as compared to small firms, they have to perform many more and complex duties; simply we can say that in big firms CEO's job is more complex,

hard and demanding in Pakistan and also in other countries. To perform these complex jobs, board of directors try to find the CEOs which have more abilities than others, to perform this job. They consider the human capital theory to find the exact CEO for the firm. On the other hand, if board of directors are thinking about the inside CEO, they are not going to hire outside CEO then in big firms CEOs have to pass more levels to reach the CEO level, in each level firms have to increase the pay and when a person becomes the CEO then gets the more pay in big firm due to more executive level and less in small firm due to few executive levels in Pakistan. Another argument in favor of this hypothesis is; as big firms have competition and big firms always try to hire the most talented persons from the market, if firm size is big they can pay the CEO more as compared to small sized firms. From this discussion, it's clear, as firm size increases, firm gains more resources and these firms pay more to their CEOs.

Board size has also contributory facts in CEO pay, many of the previous research have explained this relationship, and some found that as board size increases CEO pay also increases. The Board's negotiating ability and how they come to a consensus on various issues is thus dependent on board size. Board size has positive relation with CEO pay. Larger boards may have greater co-ordination problem that may affect wage determination by the Board is a weaker bargaining power. Board has a central role in the determination of wages. The size of the board is of great importance. Alternatively, a smaller governing the risk that an individual can have a too dominant position, which can turn bad in wage determination. This is just an example of the size of the board, can have both negative and positive effect on the determination of wages. In case of Pakistan, board size and CEO pay have no relation. In Pakistan, board consists of independent non executive directors, non executive directors and executive directors. It is written in corporate governance code 2002 that firm should have at least one independent non executive director for unfair monitoring of company affairs. Before corporate code, firms had non executive directors for unfair monitoring and controlling of the firms. But security and exchange commission found that mostly non executive directors have the relation with the company chairman and even with the board members. So due to this reason, most of the companies' boards are just boards in papers, they were not performing their duties (monitoring and controlling) and mostly the chairmen who own the firms; they apply their decisions on the firms. Board size can affect the CEO pay, if board will take the decision for CEO pay. Another problem is majority of family firms. In family firms, family decides about the CEO pay, not the board. These arguments clearly point out that the boards in Pakistani companies are not as powerful as in US or UK. This is consistent with the

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argument that in developing countries, a significant proportion of the firms is family controlled and operated, consequently offering little incentives for opportunism that is visible in developed economies where shareholding patterns differ with them. In this regard, they appear with differences between the governance mechanisms in western organizations and those in contexts such as Pakistan.

In previous studies, performance of the company is also among the determinants of the CEO pay. But in case of Pakistan, there is no relation between the company performance and CEO pay. In this paper, ROE is used as performance measure due to limitation of data collection and access it was not possible to get data about the market based performance measures. On the basis of available data, firm performance has no relation with CEO pay, may be this is also due to the majority of family firms in Pakistan. In family owned firms, CEOs prefer to reap the benefits of their labor through increases in the value of their firms while living off the generous expense accounts.

According to managerial power theory, CEOs have influence on the board if they are board chairperson. Previous studies also describe that even though CEOs have optimal contract with firms but in the presence of these contracts, they put their influence on board to increase their compensation with indirect ways. But it is contrast in case of Pakistan. Analysis shows that in Pakistan even CEO is a board chair but CEO doesn't have any influence upon his own pay. As mentioned above, family business is dominated in Pakistan. CEOs of most of the firms belong to the same families who owned the firms and they have family ties and these CEOs have interest in profitability of the firms, not in their own compensation. This finding is contrast to the western world because most of the countries show the positive relation between CEO pay and CEO duality and it follows the theory of managerial power.

After the implementation of corporate governance code 2002 of Pakistan, all the firms have to appoint one independent non executive director in firm. Family owned firms have dominant position in Pakistan and mostly family members are performing the duties of directors in board. In given data, some firms have more than 80% family members in board. In Pakistan, percentage of independent directors in board doesn't have any relation and association with CEO pay. We can argue on the basis of previous research that outside directors have positive relation with CEO pay because outside directors are dependent on the

CEO for information and for other related matters and outside directors don't have the exact knowledge about the firm. CEO is well informed person of any firm and has knowledge about all the matters so outside directors have to dependent upon CEO. But here we can note that CEO can use his influence upon independent directors and get the more compensation from the board. It means that there must be a positive relation between outside directors and CEO pay. But if we look deeply about Pakistani companies; they are mostly family owned and family CEOs are performing jobs as CEOs, it will be difficult for independent directors to influence the pay.

As mostly firms are family occupied in Pakistan and they have family CEOs. In analysis we find the negative relation between family CEO and CEO compensation. This relation has already discussed by several authors and they found same relation between family CEO and CEO compensation. Family CEOs are committed with the progress of the company, not with their own compensation. Family CEOs get the reward in shape of increased profitability and development of the firm.

Finally, most of these hypothesis are well discussed by previous researchers like (Randøy & Nielsen, 2002), (Zhou, 2000), (Gomez-Mejia, et al., 2003), (Kannan Ramaswamy, 2000), (Ghosh, 2006), (Kostiuk, 1990), (McConaughy, 2000) etc. they found the same results.

5.2 Limitations of Study

The limitations of study design must be acknowledged. First, this study used a two year time frame for most of the data. While it would have been valuable to examine a dynamic model with longitudinal data, we were constrained both by data access, time and finance availability constraints.

To achieve generalization of results, it is also difficult in this paper because data sample is not randomly collected, convenience sampling method that I used in this paper due to lack of time and resources. In Pakistan Lahore stock exchange does not have the data online. It was obvious to visit the Lahore stock exchange personally to collect the data because record room of Lahore stock exchange cannot issue more than 3 annual reports per day. So due to these difficulties, I used convenience sampling method because in this way I can collect the available data from the companies' web sites.

In this paper, performance of the firm is just based upon accounting measure but it would have been better to have both measures to perform the analysis; accounting and market measures, this limitation is also constrained due to access of data.

5.3 Conclusions

This paper examines the effects of possible factors that determine CEO compensation in Pakistan. This paper reported results, which is perhaps the first study of executive compensation determinants in the developing country Pakistan.

The findings show that firm size is one of the major determining factors of CEO compensation rather than company performance. As discussed in theory part, Pakistani companies are mostly family owned and controlled. This paper also describes that if CEO is also from the controlling family, then CEO compensation is low, and if CEO is outside from the family, then CEO pay is higher. So CEOs from family are earning less pay as compared to non family CEOs. This paper also explains the board size effect on CEO compensation. Findings show that board size has a negative but insignificant effect on CEO pay. But if CEO is also the member of the board means that CEOs have two roles; CEO is also monitoring authority as well as a decision maker, CEO duality have positive but no significant effect. It means according to management power theory if CEO is a member of board, CEO can influence and mould the decision in his favor that is taken by the board about his compensation but in case of Pakistan due to family firms CEO cannot influence the board as in most cases CEO from the same family. Independent directors, is another variable that has discussed in this paper but results show that independent directors cannot affect the CEO pay in Pakistan.

In short, firm size is major determining factor of the CEO compensation and secondly, family CEO has relation with the CEO compensation. Other variables like board size, independent directors, CEO duality and performance of the firm do not contribute to determine the CEO compensation.

But when we analyzed year by year then we found a bit different results. Firm size was again the major predictor of CEO compensation in both years 2008 and 2009 but CEO duality shows the significant effect in year 2008 but not in year 2009. Other predictors like board size, family CEOs, independent directors, and performance of the firm do not have significant effects on CEO compensation. On the basis of analysis and results, I can conclude that major predictor of CEO compensation is firm size in Pakistan. This result is same like the previous studies conducted in developing countries and also in developed countries. But in developed countries other determinants also contribute to explain the CEO compensation but in Pakistan, firm size is the most significant determinant.

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Appendices

Appendix 1

Year 2008 correlation with lag of one year

Correlations

		CEO PAY 2008	ROE 2007	BOARDSIZE 2007	FIRMSIZE 2007	CEOFMAILY 2007	CEODUALITY 2007	I
CEO PAY 2008	Pearson Correlation	1	.332**	.354**	.577**	-.305**	.209*	.179
	Sig. (1-tailed)		.007	.001	.000	.005	.039	.066
	N	72	54	72	71	72	72	72
ROE2007	Pearson Correlation	.332**	1	.283*	.180	-.226*	.004	.186
	Sig. (1-tailed)	.007		.012	.080	.038	.489	.073
	N	54	63	63	62	63	63	63
BOARDSIZE 2007	Pearson Correlation	.354**	.283*	1	.445**	-.286**	-.001	.295**
	Sig. (1-tailed)	.001	.012		.000	.004	.495	.003
	N	72	63	83	82	83	83	83
FIRMSIZE 2007	Pearson Correlation	.577**	.180	.445**	1	-.267**	.105	.042
	Sig. (1-tailed)	.000	.080	.000		.008	.173	.354
	N	71	62	82	82	82	82	82
CEOFAMILY 2007	Pearson Correlation	-.305**	-.226*	-.286**	-.267**	1	.193*	-.149
	Sig. (1-tailed)	.005	.038	.004	.008		.040	.089
	N	72	63	83	82	83	83	83
CEODUALITY 2007	Pearson Correlation	.209*	.004	-.001	.105	.193*	1	.037
	Sig. (1-tailed)	.039	.489	.495	.173	.040		.369
	N	72	63	83	82	83	83	83
INDEOPENDENTDIRECTORS2007	Pearson Correlation	.179	.186	.295**	.042	-.149	.037	1
	Sig. (1-tailed)	.066	.073	.003	.354	.089	.369	
	N	72	63	83	82	83	83	83

**. Correlation is significant at the 0.01 level (1-tailed).

*. Correlation is significant at the 0.05 level (1-tailed).

Year 2009 correlation with lag of one year

Correlations

	CEO PAY 2009	ROE 2008	BOARD SIZE 2008	FIRM SIZE 2008	CEO FAMILY 2008	CEO DULAITY 2008	INDEPENDENT DIR 2008
CEO PAY 2009	1	-.057	.291*	.544**	-.364**	.087	.177
ROE 2008	-.057	1	-.049	-.381**	-.097	-.117	-.015
BOARD SIZE 2008	.291*	-.049	1	.457**	-.300**	-.005	.315**
TRANS NET SALES 2008	.544**	-.381**	.457**	1	-.252*	.101	.098
CEO FAMILY 2008	-.364**	-.097	-.300**	-.252*	1	.193	-.178
CEO DUALITY 2008	.087	-.117	-.005	.101	.193	1	.034
INDEPENDENT DIR 2008	.177	-.015	.315**	.098	-.178	.034	1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Both year correlation with lag of one year

Correlations

		boardSIZE0708	FIRMSIZE0708	CEOpay0809	ceoduality0708	ceofamliy0708	INDEPENDENT DIR 0708
BOARDSIZE0708	Pearson Correlation	1	.450**	.319**	-.003	-.293**	.305**
	Sig. (2-tailed)		.000	.000	.968	.000	.000
	N	166	163	145	166	166	166
FIRMSIZE0708	Pearson Correlation	.450**	1	.559**	.103	-.259**	.069
	Sig. (2-tailed)	.000		.000	.190	.001	.381
	N	163	163	143	163	163	163
CEOPAY0809	Pearson Correlation	.319**	.559**	1	.143	-.336**	.177*
	Sig. (2-tailed)	.000	.000		.086	.000	.033
	N	145	143	145	145	145	145
CEODUALITY0708	Pearson Correlation	-.003	.103	.143	1	.193*	.036
	Sig. (2-tailed)	.968	.190	.086		.013	.649
	N	166	163	145	166	166	166
CEOFAMILY0708	Pearson Correlation	-.293**	-.259**	-.336**	.193*	1	-.164*
	Sig. (2-tailed)	.000	.001	.000	.013		.035
	N	166	163	145	166	166	166
INDEOENDENT DIR0708	Pearson Correlation	.305**	.069	.177*	.036	-.164*	1
	Sig. (2-tailed)	.000	.381	.033	.649	.035	
	N	166	163	145	166	166	166

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Appendix 2

For year 2008 lag of one year without firm size

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.638^a	.407	.252	.82340
2	.741^b	.549	.354	.76519

a. Predictors: (Constant), fertilizer07, paper07, glass07, technology07, food07, sugar07, energy07, chemical07, engineering07, cement07, textile07

b. Predictors: (Constant), fertilizer07, paper07, glass07, technology07, food07, sugar07, energy07, chemical07, engineering07, cement07, textile07, CEO DUALITY 2007, pinnonexe07, CEO FAMILY 2007, TRANS BOARD 2007, TRANS ROE 2007

c. Dependent Variable: TRANSFORMET CEO PAY 2008

ANOVA^c

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.559	11	1.778	2.623	.012^a
	Residual	28.475	42	.678		
	Total	48.034	53			
2	Regression	26.370	16	1.648	2.815	.005^b
	Residual	21.664	37	.586		
	Total	48.034	53			

a. Predictors: (Constant), fertilizer07, paper07, glass07, technology07, food07, sugar07, energy07, chemical07, engineering07, cement07, textile07

b. Predictors: (Constant), fertilizer07, paper07, glass07, technology07, food07, sugar07, energy07, chemical07, engineering07, cement07, textile07, CEO DUALITY 2007, pinnonexe07, CEO FAMILY 2007, TRANS BOARD 2007, TRANS ROE 2007

c. Dependent Variable: TRANSFORMET CEO PAY 2008

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95,0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(CONSTANT)	15.094	.594		25.413	.000	13.895	16.292		
	CHEMICAL07	.588	.696	.183	.844	.403	-.817	1.992	.300	3.336
	FOOD07	-.608	.750	-.153	-.810	.423	-2.122	.906	.397	2.521
	SUGAR07	-.259	.727	-.071	-.357	.723	-1.725	1.207	.357	2.801
	TEXTILE07	-.326	.634	-.150	-.514	.610	-1.605	.954	.166	6.014
	TECHNOLOGY07	1.838	.784	.416	2.343	.024	.255	3.421	.448	2.233
	CEMENT07	.371	.670	.133	.554	.582	-.980	1.723	.245	4.079
	GLASS07	-.280	.835	-.056	-.335	.739	-1.965	1.405	.514	1.944
	ENERGY07	.870	.696	.271	1.250	.218	-.534	2.274	.300	3.336
	ENGINEERING07	.603	.677	.207	.891	.378	-.763	1.969	.260	3.839
	PAPER07	.946	.838	.187	1.129	.265	-.745	2.638	.516	1.937
	FERTILIZER07	.559	1.184	.064	.472	.639	-1.830	2.949	.757	1.320
2	(CONSTANT)	12.404	1.709		7.259	.000	8.942	15.867		
	CHEMICAL07	.691	.669	.216	1.034	.308	-.664	2.046	.280	3.568
	FOOD07	-.603	.730	-.152	-.826	.414	-2.082	.876	.362	2.764
	SUGAR07	-.239	.690	-.066	-.347	.731	-1.637	1.158	.342	2.924
	TEXTILE07	-.099	.631	-.046	-.158	.876	-1.379	1.180	.145	6.903
	TECHNOLOGY07	1.807	.734	.409	2.462	.019	.320	3.295	.441	2.265
	CEMENT07	.475	.641	.170	.741	.463	-.823	1.773	.231	4.324
	GLASS07	-.203	.788	-.040	-.258	.798	-1.801	1.394	.498	2.007
	ENERGY07	.802	.700	.250	1.147	.259	-.615	2.220	.256	3.905
	ENGINEERING07	.484	.659	.167	.735	.467	-.851	1.819	.237	4.216
	PAPER07	.881	.797	.174	1.105	.276	-.734	2.496	.493	2.028
	FERTILIZER07	.123	1.141	.014	.107	.915	-2.188	2.434	.705	1.419
	ROE 2007	.244	.273	.135	.895	.377	-.308	.796	.537	1.861
	BOARDSIZE 2007	.560	.738	.108	.759	.453	-.935	2.055	.606	1.649
	CEO FAMILY 2007	-.328	.247	-.170	-1.328	.192	-.829	.173	.746	1.341
	CEO DUALITY 2007	1.964	.739	.318	2.657	.012	.466	3.461	.850	1.177
	INDEPENDENT DIR 2007	-.002	.005	-.053	-.413	.682	-.012	.008	.744	1.345

a. Dependent Variable: TRANSFORMET CEO PAY 2008

For year 2008 lag of one year with firm size

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.638[a]	.407	.252	.82340
2	.808[b]	.653	.489	.68055

a. Predictors: (Constant), fertilizer07, paper07, glass07, technology07, food07, sugar07, energy07, chemical07, engineering07, cement07, textile07

b. Predictors: (Constant), fertilizer07, paper07, glass07, technology07, food07, sugar07, energy07, chemical07, engineering07, cement07, textile07, CEO DUALITY 2007, pinnonexe07, CEO FAMILY 2007, TRANS BOARD 2007, TRANS NETSALES 2007, TRANS ROE 2007

c. Dependent Variable: TRANSFORMET CEO PAY 2008

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.559	11	1.778	2.623	.012[a]
	Residual	28.475	42	.678		
	Total	48.034	53			
2	Regression	31.361	17	1.845	3.983	.000[b]
	Residual	16.673	36	.463		
	Total	48.034	53			

a. Predictors: (Constant), fertilizer07, paper07, glass07, technology07, food07, sugar07, energy07, chemical07, engineering07, cement07, textile07

b. Predictors: (Constant), fertilizer07, paper07, glass07, technology07, food07, sugar07, energy07, chemical07, engineering07, cement07, textile07, CEO DUALITY 2007, pinnonexe07, CEO FAMILY 2007, TRANS BOARD 2007, TRANS NETSALES 2007, TRANS ROE 2007

c. Dependent Variable: TRANSFORMET CEO PAY 2008

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(CONSTANT)	15.094	.594		25.413	.000	13.895	16.292		
	CHEMICAL07	.588	.696	.183	.844	.403	-.817	1.992	.300	3.336
	FOOD07	-.608	.750	-.153	-.810	.423	-2.122	.906	.397	2.521
	SUGAR07	-.259	.727	-.071	-.357	.723	-1.725	1.207	.357	2.801
	TEXTILE07	-.326	.634	-.150	-.514	.610	-1.605	.954	.166	6.014
	TECHNOLOGY07	1.838	.784	.416	2.343	.024	.255	3.421	.448	2.233
	CEMENT07	.371	.670	.133	.554	.582	-.980	1.723	.245	4.079
	GLASS07	-.280	.835	-.056	-.335	.739	-1.965	1.405	.514	1.944
	ENERGY07	.870	.696	.271	1.250	.218	-.534	2.274	.300	3.336
	ENGINEERING07	.603	.677	.207	.891	.378	-.763	1.969	.260	3.839
	PAPER07	.946	.838	.187	1.129	.265	-.745	2.638	.516	1.937
	FERTILIZER07	.559	1.184	.064	.472	.639	-1.830	2.949	.757	1.320
2	(CONSTANT)	6.806	2.284		2.980	.005	2.174	11.439		
	CHEMICAL07	.447	.599	.139	.745	.461	-.769	1.662	.276	3.624
	FOOD07	-.567	.649	-.143	-.873	.388	-1.884	.750	.362	2.765
	SUGAR07	-.285	.614	-.078	-.465	.645	-1.530	.959	.342	2.926
	TEXTILE07	-.473	.573	-.217	-.826	.414	-1.635	.689	.139	7.186
	TECHNOLOGY07	1.401	.665	.317	2.108	.042	.053	2.748	.426	2.347
	CEMENT07	.224	.575	.080	.390	.699	-.942	1.390	.227	4.401
	GLASS07	-.248	.701	-.049	-.354	.726	-1.670	1.174	.498	2.008
	ENERGY07	.018	.667	.006	.027	.979	-1.334	1.369	.223	4.481
	ENGINEERING07	.166	.594	.057	.279	.782	-1.039	1.370	.231	4.332
	PAPER07	.659	.712	.130	.926	.361	-.785	2.103	.489	2.046
	FERTILIZER07	-.453	1.029	-.052	-.440	.663	-2.541	1.635	.684	1.461
	ROE 2007	.105	.246	.058	.428	.672	-.394	.604	.522	1.917
	BOARDSIZE 2007	.143	.668	.027	.214	.832	-1.213	1.499	.585	1.711
	CEO FAMILY 2007	-.242	.221	-.125	-1.094	.281	-.691	.207	.735	1.360
	CEO DUALITY 2007	1.406	.679	.228	2.071	.046	.029	2.783	.797	1.255
	INDEPENDENT DIR 2007	-.001	.004	-.021	-.181	.858	-.010	.008	.738	1.355
	FIRMSIZE2007	.325	.099	.432	3.283	.002	.124	.526	.557	1.795

a. Dependent Variable: TRANSFORMET CEO PAY 2008

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Appendix 3

For year 2009 one year lag without firm size

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.642^a	.413	.238	.95203
2	.700^b	.490	.235	.95363

a. Predictors: (Constant), fertilizer08, paper08, galss08, tecnology08, food08, sugar08, energy08, chemical08, engineering08, cement08, textile08

b. Predictors: (Constant), fertilizer08, paper08, galss08, tecnology08, food08, sugar08, energy08, chemical08, engineering08, cement08, textile08, CEO DUALITY 2008, pinnonexe08, CEO FAMILY 2008, TRANS ROE 2008, TRANS BOARD SIZE 2008

c. Dependent Variable: TRANSFORMED CEO PAY 2009

ANOVA^c

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.550	11	2.141	2.362	.025^a
	Residual	33.535	37	.906		
	Total	57.085	48			
2	Regression	27.984	16	1.749	1.923	.056^b
	Residual	29.101	32	.909		
	Total	57.085	48			

a. Predictors: (Constant), fertilizer08, paper08, galss08, tecnology08, food08, sugar08, energy08, chemical08, engineering08, cement08, textile08

b. Predictors: (Constant), fertilizer08, paper08, galss08, tecnology08, food08, sugar08, energy08, chemical08, engineering08, cement08, textile08, CEO DUALITY 2008, pinnonexe08, CEO FAMILY 2008, TRANS ROE 2008, TRANS BOARD SIZE 2008

c. Dependent Variable: TRANSFORMED CEO PAY 2009

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(CONSTANT)	15.795	.622		25.392	.000	14.535	17.055		
	CHEMICAL08	.074	.762	.020	.098	.923	-1.470	1.618	.369	2.711
	FOOD08	-1.984	.835	-.435	-2.377	.023	-3.675	-.292	.473	2.114
	SUGAR08	-.530	.803	-.127	-.660	.514	-2.157	1.098	.431	2.319
	TEXTILE08	-.918	.679	-.368	-1.352	.185	-2.293	.458	.214	4.669
	TECNOLOGY08	1.381	.880	.273	1.569	.125	-.402	3.163	.525	1.904
	CEMENT08	-.522	.727	-.163	-.718	.477	-1.994	.950	.307	3.253
	GALSS08	-.903	.950	-.155	-.950	.348	-2.828	1.023	.593	1.687
	ENERGY08	.304	.780	.078	.390	.699	-1.276	1.885	.397	2.518
	ENGINEERING08	-.122	.736	-.037	-.166	.869	-1.614	1.369	.325	3.078
	PAPER08	.333	.950	.057	.350	.728	-1.593	2.258	.593	1.687
	FERTILIZER08	-.163	1.391	-.016	-.117	.908	-2.982	2.656	.810	1.235
2	(CONSTANT)	13.553	2.185		6.203	.000	9.102	18.004		
	CHEMICAL08	.361	.779	.098	.464	.646	-1.225	1.947	.354	2.821
	FOOD08	-1.628	.875	-.357	-1.861	.072	-3.410	.153	.432	2.314
	SUGAR08	-.258	.829	-.062	-.311	.758	-1.947	1.431	.406	2.464
	TEXTILE08	-.585	.734	-.234	-.796	.432	-2.080	.911	.184	5.440
	TECNOLOGY08	1.558	.892	.308	1.747	.090	-.258	3.374	.513	1.948
	CEMENT08	-.183	.760	-.057	-.241	.811	-1.732	1.365	.282	3.550
	GALSS08	-.588	.986	-.101	-.596	.555	-2.596	1.421	.553	1.810
	ENERGY08	.399	.839	.102	.475	.638	-1.310	2.108	.344	2.905
	ENGINEERING08	.028	.765	.008	.037	.971	-1.530	1.586	.302	3.311
	PAPER08	.548	.965	.094	.568	.574	-1.418	2.514	.577	1.734
	FERTILIZER08	-.299	1.414	-.030	-.212	.834	-3.179	2.581	.787	1.271
	ROE 2008	-.029	.235	-.019	-.125	.902	-.509	.450	.708	1.413
	BOARD SIZE 2008	.418	.915	.069	.457	.651	-1.445	2.282	.699	1.430
	CEO FAMILY 2008	-.502	.327	-.227	-1.537	.134	-1.167	.163	.732	1.365
	CEO DUALITY 2008	1.453	.982	.206	1.480	.149	-.546	3.453	.826	1.211
	INDEPENDENT DIR 2008	-.001	.006	-.018	-.123	.903	-.014	.012	.756	1.322

a. Dependent Variable: TRANSFORMED CEO PAY 2009

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For year 2009 one year lag with firm size

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.642[a]	.413	.238	.95203
2	.795[b]	.633	.431	.82258

a. Predictors: (Constant), fertilizer08, paper08, galss08, tecnology08, food08, sugar08, energy08, chemical08, engineering08, cement08, textile08

b. Predictors: (Constant), fertilizer08, paper08, galss08, tecnology08, food08, sugar08, energy08, chemical08, engineering08, cement08, textile08, CEO DUALITY 2008, pinnonexe08, CEO FAMILY 2008, TRANS ROE 2008, TRANS BOARD SIZE 2008, TRANS NET SALES 2008

c. Dependent Variable: TRANSFORMED CEO PAY 2009

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.550	11	2.141	2.362	.025[a]
	Residual	33.535	37	.906		
	Total	57.085	48			
2	Regression	36.109	17	2.124	3.139	.003[b]
	Residual	20.976	31	.677		
	Total	57.085	48			

a. Predictors: (Constant), fertilizer08, paper08, galss08, tecnology08, food08, sugar08, energy08, chemical08, engineering08, cement08, textile08

b. Predictors: (Constant), fertilizer08, paper08, galss08, tecnology08, food08, sugar08, energy08, chemical08, engineering08, cement08, textile08, CEO DUALITY 2008, pinnonexe08, CEO FAMILY 2008, TRANS ROE 2008, TRANS BOARD SIZE 2008, TRANS NET SALES 2008

c. Dependent Variable: TRANSFORMED CEO PAY 2009

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Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(CONSTANT)	15.795	.622		25.392	.000	14.535	17.055		
	CHEMICAL08	.074	.762	.020	.098	.923	-1.470	1.618	.369	2.711
	FOOD08	-1.984	.835	-.435	-2.377	.023	-3.675	-.292	.473	2.114
	SUGAR08	-.530	.803	-.127	-.660	.514	-2.157	1.098	.431	2.319
	TEXTILE08	-.918	.679	-.368	-1.352	.185	-2.293	.458	.214	4.669
	TECNOLOGY08	1.381	.880	.273	1.569	.125	-.402	3.163	.525	1.904
	CEMENT08	-.522	.727	-.163	-.718	.477	-1.994	.950	.307	3.253
	GALSS08	-.903	.950	-.155	-.950	.348	-2.828	1.023	.593	1.687
	ENERGY08	.304	.780	.078	.390	.699	-1.276	1.885	.397	2.518
	ENGINEERING08	-.122	.736	-.037	-.166	.869	-1.614	1.369	.325	3.078
	PAPER08	.333	.950	.057	.350	.728	-1.593	2.258	.593	1.687
	FERTILIZER08	-.163	1.391	-.016	-.117	.908	-2.982	2.656	.810	1.235
2	(CONSTANT)	7.289	2.611		2.791	.009	1.963	12.616		
	CHEMICAL08	.172	.674	.047	.256	.800	-1.202	1.547	.352	2.840
	FOOD08	-1.636	.754	-.359	-2.168	.038	-3.175	-.097	.432	2.314
	SUGAR08	-.126	.716	-.030	-.177	.861	-1.587	1.334	.405	2.471
	TEXTILE08	-.675	.634	-.271	-1.065	.295	-1.967	.618	.184	5.450
	TECNOLOGY08	1.271	.773	.251	1.643	.111	-.307	2.848	.508	1.970
	CEMENT08	-.254	.656	-.079	-.387	.701	-1.592	1.084	.281	3.554
	GALSS08	-.490	.851	-.084	-.576	.569	-2.225	1.246	.552	1.812
	ENERGY08	-.186	.743	-.048	-.250	.804	-1.702	1.330	.327	3.063
	ENGINEERING08	-.109	.661	-.033	-.165	.870	-1.457	1.239	.301	3.323
	PAPER08	.486	.833	.084	.584	.563	-1.212	2.185	.576	1.735
	FERTILIZER08	-.806	1.228	-.081	-.656	.517	-3.311	1.699	.775	1.290
	ROE 2008	.192	.213	.122	.902	.374	-.242	.626	.644	1.553
	BOARD SIZE 2008	-.559	.838	-.092	-.667	.510	-2.268	1.150	.620	1.613
	FIRMSIZE2008	.412	.119	.508	3.465	.002	.170	.655	.552	1.813
	CEO FAMILY 2008	-.356	.285	-.161	-1.249	.221	-.937	.225	.716	1.396
	CEO DUALITY 2008	.832	.866	.118	.962	.344	-.933	2.598	.790	1.265
	INDEPENDENT DIR 2008	.001	.006	.024	.194	.847	-.010	.012	.749	1.335

a. Dependent Variable: TRANSFORMED CEO PAY 2009

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Appendix 4

For year 2008 and 2009 lag of one year with firm size

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.629[a]	.395	.315	.84530
2	.786[b]	.617	.535	.69593

a. Predictors: (Constant), year09, fertilizer0708, paper0708, glass0708, technology0708, food0708, sugar0708, energy0708, chemical0708, engineering0708, cement0708, textile0708

b. Predictors: (Constant), year09, fertilizer0708, paper0708, glass0708, technology0708, food0708, sugar0708, energy0708, chemical0708, engineering0708, cement0708, textile0708, ceoduality0708, pinddir0708, ceofamily0708, roe0708, board0708, sale0708

c. Dependent Variable: pay0809

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42.018	12	3.502	4.900	.000[a]
	Residual	64.308	90	.715		
	Total	106.326	102			
2	Regression	65.644	18	3.647	7.530	.000[b]
	Residual	40.683	84	.484		
	Total	106.326	102			

a. Predictors: (Constant), year09, fertilizer0708, paper0708, glass0708, technology0708, food0708, sugar0708, energy0708, chemical0708, engineering0708, cement0708, textile0708

b. Predictors: (Constant), year09, fertilizer0708, paper0708, glass0708, technology0708, food0708, sugar0708, energy0708, chemical0708, engineering0708, cement0708, textile0708, ceoduality0708, pinddir0708, ceofamily0708, roe0708, board0708, sale0708

c. Dependent Variable: pay0809

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(CONSTANT)	15.484	.418		37.022	.000	14.653	16.315		
	CHEMICAL0708	.258	.488	.075	.528	.599	-.712	1.227	.336	2.979
	FOOD0708	-1.384	.531	-.323	-2.607	.011	-2.438	-.329	.437	2.289
	SUGAR0708	-.467	.512	-.119	-.912	.364	-1.484	.551	.396	2.526
	TEXTILE0708	-.694	.440	-.297	-1.580	.118	-1.568	.179	.191	5.246
	TECHNOLOGY0708	1.536	.557	.323	2.756	.007	.429	2.642	.489	2.045
	CEMENT0708	-.149	.467	-.050	-.319	.750	-1.078	.780	.277	3.608
	GLASS0708	-.664	.598	-.122	-1.111	.269	-1.851	.523	.556	1.797
	ENERGY0708	.511	.493	.144	1.037	.303	-.469	1.491	.348	2.871
	ENGINEERING0708	.167	.473	.053	.353	.725	-.773	1.107	.294	3.405
	PAPER0708	.566	.599	.104	.945	.347	-.624	1.756	.557	1.794
	FERTILIZER0708	.125	.862	.013	.145	.885	-1.589	1.838	.786	1.272
	YEAR09	.066	.167	.033	.397	.692	-.265	.398	.999	1.001
2	(CONSTANT)	7.165	1.527		4.692	.000	4.128	10.201		
	CHEMICAL0708	.302	.410	.088	.738	.463	-.513	1.118	.322	3.101
	FOOD0708	-1.116	.451	-.261	-2.472	.015	-2.014	-.218	.409	2.444
	SUGAR0708	-.222	.430	-.056	-.516	.607	-1.076	.633	.381	2.623
	TEXTILE0708	-.610	.391	-.261	-1.560	.123	-1.388	.168	.163	6.128
	TECHNOLOGY0708	1.318	.465	.277	2.834	.006	.393	2.243	.476	2.103
	CEMENT0708	-.038	.398	-.012	-.094	.925	-.829	.754	.259	3.861
	GLASS0708	-.389	.502	-.072	-.776	.440	-1.387	.609	.535	1.870
	ENERGY0708	-.128	.452	-.036	-.283	.778	-1.028	.772	.281	3.565
	ENGINEERING0708	-.009	.403	-.003	-.023	.982	-.811	.793	.274	3.654
	PAPER0708	.538	.499	.099	1.078	.284	-.455	1.530	.544	1.839
	FERTILIZER0708	-.630	.730	-.067	-.862	.391	-2.082	.823	.743	1.345
	YEAR09	.012	.138	.006	.090	.929	-.262	.287	.991	1.009
	ROE0708	.096	.133	.057	.721	.473	-.168	.360	.732	1.367
	BOARDSIZE0708	-.157	.486	-.028	-.323	.747	-1.125	.810	.613	1.631
	FIRM SIZE0708	.358	.069	.457	5.207	.000	.221	.495	.591	1.692
	CEOFAMILY0708	1.110	.502	.167	2.212	.030	.112	2.107	.798	1.253
	CEODUALITY0708	-.309	.164	-.148	-1.878	.064	-.635	.018	.730	1.370
	INDEPENDENT DIR 0708	-1.111E-5	.003	.000	-.003	.997	-.006	.006	.751	1.332

a. Dependent Variable: pay0809

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For both years 2008 and 2009 without firm size

Model Summary[c]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.629[a]	.395	.315	.84530
2	.703[b]	.494	.393	.79570

a. Predictors: (Constant), year09, fertilizer0708, paper0708, glass0708, technology0708, food0708, sugar0708, energy0708, chemical0708, engineering0708, cement0708, textile0708

b. Predictors: (Constant), year09, fertilizer0708, paper0708, glass0708, technology0708, food0708, sugar0708, energy0708, chemical0708, engineering0708, cement0708, textile0708, ceoduality0708, pinddir0708, ceofamily0708, roe0708, board0708

c. Dependent Variable: pay0809

ANOVA[c]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	42.018	12	3.502	4.900	.000[a]
	Residual	64.308	90	.715		
	Total	106.326	102			
2	Regression	52.510	17	3.089	4.879	.000[b]
	Residual	53.816	85	.633		
	Total	106.326	102			

a. Predictors: (Constant), year09, fertilizer0708, paper0708, glass0708, technology0708, food0708, sugar0708, energy0708, chemical0708, engineering0708, cement0708, textile0708

b. Predictors: (Constant), year09, fertilizer0708, paper0708, glass0708, technology0708, food0708, sugar0708, energy0708, chemical0708, engineering0708, cement0708, textile0708, ceoduality0708, pinddir0708, ceofamily0708, roe0708, board0708

c. Dependent Variable: pay0809

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(CONSTANT)	15.484	.418		37.022	.000	14.653	16.315		
	CHEMICAL0708	.258	.488	.075	.528	.599	-.712	1.227	.336	2.979
	FOOD0708	-1.384	.531	-.323	-2.607	.011	-2.438	-.329	.437	2.289
	SUGAR0708	-.467	.512	-.119	-.912	.364	-1.484	.551	.396	2.526
	TEXTILE0708	-.694	.440	-.297	-1.580	.118	-1.568	.179	.191	5.246
	TECHNOLOGY0708	1.536	.557	.323	2.756	.007	.429	2.642	.489	2.045
	CEMENT0708	-.149	.467	-.050	-.319	.750	-1.078	.780	.277	3.608
	GLASS0708	-.664	.598	-.122	-1.111	.269	-1.851	.523	.556	1.797
	ENERGY0708	.511	.493	.144	1.037	.303	-.469	1.491	.348	2.871
	ENGINEERING0708	.167	.473	.053	.353	.725	-.773	1.107	.294	3.405
	PAPER0708	.566	.599	.104	.945	.347	-.624	1.756	.557	1.794
	FERTILIZER0708	.125	.862	.013	.145	.885	-1.589	1.838	.786	1.272
	YEAR09	.066	.167	.033	.397	.692	-.265	.398	.999	1.001
2	(CONSTANT)	12.737	1.245		10.227	.000	10.261	15.213		
	CHEMICAL0708	.507	.467	.147	1.086	.280	-.421	1.434	.325	3.073
	FOOD0708	-1.134	.516	-.265	-2.197	.031	-2.160	-.108	.409	2.444
	SUGAR0708	-.285	.491	-.072	-.580	.564	-1.261	.692	.382	2.621
	TEXTILE0708	-.421	.445	-.180	-.944	.348	-1.306	.465	.165	6.075
	TECHNOLOGY0708	1.657	.527	.349	3.146	.002	.609	2.704	.485	2.062
	CEMENT0708	.108	.454	.036	.239	.812	-.794	1.011	.260	3.842
	GLASS0708	-.404	.574	-.074	-.704	.484	-1.544	.737	.535	1.870
	ENERGY0708	.595	.492	.168	1.210	.230	-.383	1.574	.310	3.228
	ENGINEERING0708	.258	.458	.083	.564	.574	-.652	1.168	.278	3.595
	PAPER0708	.711	.569	.130	1.248	.215	-.422	1.843	.546	1.831
	FERTILIZER0708	-.099	.827	-.011	-.119	.905	-1.743	1.545	.758	1.319
	YEAR09	.070	.157	.034	.442	.659	-.243	.382	.998	1.002
	ROE0708	.039	.151	.023	.255	.799	-.262	.340	.737	1.358
	BOARDSIZE0708	.560	.533	.099	1.050	.297	-.501	1.621	.667	1.500
	CEOFAMILY0708	1.748	.556	.263	3.144	.002	.642	2.853	.849	1.178
	CEODUALITY0708	-.414	.186	-.199	-2.222	.029	-.785	-.043	.741	1.349
	INDEPENDENT DIR 0708	-.002	.004	-.037	-.413	.681	-.009	.006	.757	1.321

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Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(CONSTANT)	15.484	.418		37.022	.000	14.653	16.315		
	CHEMICAL0708	.258	.488	.075	.528	.599	-.712	1.227	.336	2.979
	FOOD0708	-1.384	.531	-.323	-2.607	.011	-2.438	-.329	.437	2.289
	SUGAR0708	-.467	.512	-.119	-.912	.364	-1.484	.551	.396	2.526
	TEXTILE0708	-.694	.440	-.297	-1.580	.118	-1.568	.179	.191	5.246
	TECHNOLOGY0708	1.536	.557	.323	2.756	.007	.429	2.642	.489	2.045
	CEMENT0708	-.149	.467	-.050	-.319	.750	-1.078	.780	.277	3.608
	GLASS0708	-.664	.598	-.122	-1.111	.269	-1.851	.523	.556	1.797
	ENERGY0708	.511	.493	.144	1.037	.303	-.469	1.491	.348	2.871
	ENGINEERING0708	.167	.473	.053	.353	.725	-.773	1.107	.294	3.405
	PAPER0708	.566	.599	.104	.945	.347	-.624	1.756	.557	1.794
	FERTILIZER0708	.125	.862	.013	.145	.885	-1.589	1.838	.786	1.272
	YEAR09	.066	.167	.033	.397	.692	-.265	.398	.999	1.001
2	(CONSTANT)	12.737	1.245		10.227	.000	10.261	15.213		
	CHEMICAL0708	.507	.467	.147	1.086	.280	-.421	1.434	.325	3.073
	FOOD0708	-1.134	.516	-.265	-2.197	.031	-2.160	-.108	.409	2.444
	SUGAR0708	-.285	.491	-.072	-.580	.564	-1.261	.692	.382	2.621
	TEXTILE0708	-.421	.445	-.180	-.944	.348	-1.306	.465	.165	6.075
	TECHNOLOGY0708	1.657	.527	.349	3.146	.002	.609	2.704	.485	2.062
	CEMENT0708	.108	.454	.036	.239	.812	-.794	1.011	.260	3.842
	GLASS0708	-.404	.574	-.074	-.704	.484	-1.544	.737	.535	1.870
	ENERGY0708	.595	.492	.168	1.210	.230	-.383	1.574	.310	3.228
	ENGINEERING0708	.258	.458	.083	.564	.574	-.652	1.168	.278	3.595
	PAPER0708	.711	.569	.130	1.248	.215	-.422	1.843	.546	1.831
	FERTILIZER0708	-.099	.827	-.011	-.119	.905	-1.743	1.545	.758	1.319
	YEAR09	.070	.157	.034	.442	.659	-.243	.382	.998	1.002
	ROE0708	.039	.151	.023	.255	.799	-.262	.340	.737	1.358
	BOARDSIZE0708	.560	.533	.099	1.050	.297	-.501	1.621	.667	1.500
	CEOFAMILY0708	1.748	.556	.263	3.144	.002	.642	2.853	.849	1.178
	CEODUALITY0708	-.414	.186	-.199	-2.222	.029	-.785	-.043	.741	1.349
	INDEPENDENT DIR 0708	-.002	.004	-.037	-.413	.681	-.009	.006	.757	1.321

a. Dependent Variable: pay0809

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