

DO CORPORATE GOVERNANCE PRACTICES AFFECT CEO  
COMPENSATION? THE MODERATING EFFECT OF ECONOMIC  
FREEDOM ON CORPORATE GOVERNANCE - CEO COMPENSATION  
RELATIONSHIP: AN INTERNATIONAL STUDY

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ŞAHİN AKGÜN

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Assoc. Prof. Dr. Sadettin Kirazcı  
Director (Acting)

I certify that this thesis satisfies all the requirements as a thesis for the degree of Master of Business Administration.

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Prof. Dr. Nuray Güner  
Head of Department

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Master of Business Administration.

---

Assist. Prof. Dr. Naz Sayarı Marcum  
Supervisor

**Examining Committee Members**

Assoc. Prof. Dr. Seza Danişođlu (METU, BA) \_\_\_\_\_

Assist. Prof. Dr. Naz Sayarı Marcum (METU, BA) \_\_\_\_\_

Assoc. Prof. Dr. Can Öztürk (Çankaya Uni., BA) \_\_\_\_\_



**I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.**

**Name, Surname :** Şahin Akgün

**Signature :**

## **ABSTRACT**

### **DO CORPORATE GOVERNANCE PRACTICES AFFECT CEO COMPENSATION? THE MODERATING EFFECT OF ECONOMIC FREEDOM ON CORPORATE GOVERNANCE - CEO COMPENSATION RELATIONSHIP: AN INTERNATIONAL STUDY**

Akgün, Şahin

Department of Business Administration

Supervisor: Assist. Prof. Dr. Naz Sayarı Marcum

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This study analyzes the association between corporate governance and CEO compensation adopting the “Agency Theory” and “Managerial Power Theory”. First, we examine the direct relationship between corporate governance indicators (such as board structure, employee representatives on board, CEO duality, board independence, institutional share ownership, and insider share ownership) and CEO compensation. Second, the study concentrates on the moderating effect of firm performance on corporate governance – CEO compensation relationship. Third, the moderating effect of economic freedom on corporate governance – CEO compensation relationship is investigated. Our sample includes companies from the United States, and 30 European Union Member and Western European countries. The results show that there is a significant relationship between corporate governance indicators and CEO compensation. In addition, findings indicate that firm performance moderates the relationship between corporate governance and CEO compensation. Moreover, the level of economic freedom in a country has a significant effect on the relationship

between corporate governance and CEO compensation for the percentage of independent directors on boards and the percentage of outstanding shares held by insiders.

The results of this study show that corporate governance has a strong effect on CEO compensation. Additionally, firm performance and the level of economic freedom in countries moderates the effectiveness of governance indicators and create a change in the level of CEO compensation. The context of this study is closely related to companies' internal and external environments, that both directors and managers might consider enforcing certain governance practices to reduce CEO power that is potentially harmful to corporations.

**Keywords:** Corporate Governance, CEO Compensation, Economic Freedom, Firm Performance, Board Structure

## ÖZ

### KURUMSAL YÖNETİM UYGULAMALARI CEO TAZMİNATLARINI ETKİLER Mİ? EKONOMİK ÖZGÜRLÜĞÜN KURUMSAL YÖNETİM – CEO TAZMİNATI İLİŞKİSİ ÜZERİNDEKİ İKİ TARAFLI ETKİSİ: ULUSLARARASI BİR ÇALIŞMA

Akgün, Şahin  
Yüksek Lisans, İşletme Bölümü  
Danışman: Dr. Naz Sayarı Marcum

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Bu çalışma, “Vekalet Teorisi” ve “Yönetimsel Güç Teorisi” benimsenerek kurumsal yönetim ile CEO tazminatı arasındaki ilişkiyi analiz eder. Öncelikle, kurumsal yönetim göstergeleri (yönetim kurulu yapısı, yönetim kurulu çalışan temsilcileri, CEO ikiliği, yönetim kurulu bağımsızlığı, kurumsal hisse sahipliği ve şirket içerisinde hisse sahipliği gibi) ve CEO tazminatı arasındaki doğrudan incelenmiştir. İkinci olarak, çalışma, firma performansının kurumsal yönetim - CEO tazminatı ilişkisi üzerindeki iki taraflı etkisine odaklanır. Üçüncü olarak, ekonomik özgürlüğün kurumsal yönetim – CEO tazminatı ilişkisi üzerindeki iki taraflı etkisi incelenmiştir. Çalışmada kullanılan örneklem ABD, toplam 30 farklı Avrupa Birliği Üyesi ve Batı Avrupa ülkelerinden şirketleri içerir. Sonuçlar, kurumsal yönetim göstergeleri ile CEO tazminatı arasında önemli bir ilişki olduğunu göstermektedir. Ek olarak, bulgular firma performansının kurumsal yönetim ve CEO tazminatı arasındaki ilişkiyi değiştirdiğini göstermektedir. Ayrıca, bir ülkedeki ekonomik özgürlük seviyesinin, yönetim kurullarındaki bağımsız yönetim kurulu üyelerinin yüzdesi ve şirket içerisindeki hissedar



hisselerinin yüzdesi göz önünde bulundurulduğunda, kurumsal yönetim ile CEO tazminatı arasındaki ilişki üzerinde önemli bir etkisinin var olduğu sonucuna ulaşılmıştır.

Bu çalışmanın sonuçları, kurumsal yönetimin CEO tazminatına güçlü bir etkisi olduğunu göstermektedir. Ek olarak, firma performansı ve ülkelerdeki ekonomik özgürlük düzeyi, yönetim göstergelerinin etkinliğini iki taraflı etkilemekte ve CEO tazminat düzeyinde bir değişiklik yaratmaktadır. Diğer taraftan, bu çalışmanın kapsamı şirketlerin hem iç hem de dış ortamları ile yakından ilgilidir. Dolayısıyla hem yönetim kurulu üyeleri hem de yöneticiler, şirketlere potansiyel olarak zarar verebilecek CEO'nun yönetim gücünü azaltmak için belirli yönetim uygulamalarını hayata geçirmeyi düşünebilirler.

**Anahtar Kelimeler:** Kurumsal Yönetim, CEO Tazminatı, Ekonomik Özgürlük, Firma Performansı, Kurul Yapısı

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## LIST OF ABBREVIATIONS

- CEO** : Chief Executive Officer
- ESG** : Environmental, Social, and Governance
- EU** : European Union
- G20** : Group of Twenty
- GDP** : Gross Domestic Product
- ICB** : Industry Classification Benchmark
- OECD**: Organisation for Economic Co-operation and Development
- R&D** : Research and Development
- SEC** : Securities and Exchange Commission
- SOX** : Sarbanes-Oxley
- U.K.** : United Kingdom
- U.S.** : United States
- WDI** : World Development Indicators





## CHAPTER 1

### INTRODUCTION

Corporate governance is a mechanism that separates the benefits of shareholders and managers by ensuring efficient decision-making and maximizing firm value (Cuervo, 2002). For this reason, corporate governance became a highly debated concept as the beginning of the twenty-first century after some serious business failures and corporate scandals such as WorldCom and Enron came out. Subsequently, many countries have announced or improved their own governance principles and mandated companies to follow them. The most well-known example, “Sarbanes-Oxley Act”, was signed in July 2002 and was aimed to increase investors’ confidence in the U.S. capital market (Engel, Hayes, & Wang, 2007).

Since there are different corporate governance principles adopted by countries (such as UK Corporate Governance Code and Modernisation of Company Law and Enhancement of Corporate Governance in EU), they may result in distinctive administrative mentality and processes, which are known as shareholder (Anglo-Saxon) and stakeholder (German-Japanese) approaches. The shareholder value approach is a traditional model that relates the corporations with instruments that maximize the shareholders’ interests, whereas, in the stakeholder approach, non-investing parties such as employees, suppliers, worker representatives, and banks’ interests are given more importance and are better represented. (Tirole, 2001; Ayuso, Rodriguez, Garcia-Castro, & Arino, 2014)

Theories like “Agency Theory” and “Managerial Power Theory” provide sufficient information about how corporate governance practices work in corporations. Agency Theory explains the utility relationship between owners of companies (principals) and managers of the companies (agents) (Jensen & Meckling, 1976). On the other hand, Managerial Power Theory asserts that

members of a company's control mechanism such as independent members cannot operate close enough to management by arranging pay contracts only, so managers are able to influence decision-makers and gain further benefits (Bebchuck, Fried, & Walker, 2002). Fama and Jensen (1983) relate this problem with the separation of "ownership" and "control" and argues that companies can solve such agency problems by distinguishing management and monitoring functions.

Based on different governance approaches and related theories, many scholars investigate the outcomes of corporate governance practices in businesses. Since governance approaches and theories are mostly related to the interests of different parties of companies, corporate governance practices are closely related to the financial benefits of all stakeholders in a company. In this regard, some researchers focus on the effect of board independence on CEO compensation (Bebchuck et al., 2002; Chhaochharia & Grinstein, 2009; Kim, Mauldin, & Patro, 2014) while others investigate the relationship between CEO duality and CEO compensation (Core, Holthausen, & Larcker, 1999; Boyd, 1994; Fosberg, 1999). Besides the direct relationship between governance practices and CEO compensation, other studies show some governance practices are related to the effectiveness of control mechanisms in companies such as board structure (Cromme, 2005; Milles-Reyes & Zhao, 2010; Belot, Ginglinger, Slovin, & Sushka, 2014), employee representation on boards (Hopt, 1984; Kassalow, 1989; Fauver & Fuerst, 2006; Huse, Nielsen, & Hagen, 2009), institutional shares (Heard & Sherman, 1987; David, Kochhar, & Levitas, 1998; Bebchuck & Fried, 2003; Milles-Reyes & Zhao, 2010) and insider shares (Jensen & Meckling, 1976; Morck, Shleifer, & Vishny, 1989; Boyd, 1994; Cordeiro & Veliyath, 2003).

This study aims at providing empirical evidence on the relationship between governance indicators and CEO compensation. Although there are many studies that investigate the effect of governance indicators on CEO compensation, according to our knowledge, there is no study considering the effect of board structure (unitary and two-tier board structures) and employee representation on CEO compensation. In this regard, this study will provide empirical evidence and

contributes to the related literature by examining the association between those governance indicators and CEO compensation.

Besides studying the direct relationship between corporate governance indicators and CEO compensation, this study also considers the moderating effect of firm performance on corporate governance-CEO compensation relationship. Also, we investigate the moderating effect of the level of economic freedom on the corporate governance and CEO compensation relationship. At this point, we also contribute to the literature by providing empirical evidence regarding how the economic freedom level in a country moderates the effectiveness of corporate governance indicators on CEO compensation.

In this study, we first examine the direct relationship between governance indicators and CEO compensation. The results reveal that except for the outstanding shares held by insiders, all other governance indicators have significant effect on CEO compensation, but contrary to the literature, CEO duality is negatively associated with CEO compensation. Secondly, we examine the moderating effect of firm performance on the relationship between each governance indicator and CEO compensation. In this examination, results indicate that firm performance has significant and negative moderating effect on board independence and CEO compensation relationship where the other variables are not statistically significant. Finally, we examine the moderating effect of economic freedom on the association between each governance indicator and CEO compensation. Empirical results show that economic freedom significantly and positively moderates the effectiveness of board independence and institutional shares on CEO compensation.

Additionally, we do several tests to check the robustness of our estimations. Majority of our sample we collect consists of firms from the United States. For this reason, we examine governance indicators-CEO compensation relationship and moderating effect of firm performance on governance indicators-CEO compensation association for U.S. and non-U.S. firms separately. The robustness results for the direct relationship show that the effects of board structure and employee representatives on CEO compensation diverge among these groups

mostly because almost none of the firms in the U.S. has two-tier board structure or has employee representatives on their corporate boards. Except for this limitation, results are robust only for institutional shares but not for CEO duality, board independence and insider shares as we lose the significance of these variables for the non-U.S. sample. Yet, CEO duality and board independence have qualitatively similar effects on CEO compensation. For the moderating effect of firm performance, findings show that results for the interaction of Tobin's Q and institutional share ownership are significant and positive, but remaining variables are not significant for the non-U.S. sample. However, the signs of the coefficients except for CEO duality and Tobin's Q interaction are qualitatively similar to that of the main model.

Since we couldn't achieve the expected results for CEO duality, we consider adding firm age and its interaction with CEO duality because we expect that as firm's age increases the managerial power of CEO and firm becomes more dependent to CEO/Chairman. This is because mature firms have fewer opportunities to find profitable areas to operate in and lower profit margins compared to younger firms. For this reason, CEO/Chairman gains more managerial power and in return higher compensation. According to our results, the interaction of firm age with CEO duality is significant and positive on CEO compensation. Therefore, we conclude that when CEO duality exists in maturer companies, CEO compensation increases as the company age increases.

Together with its contributions to the related literature, this study also provides important results for businesses and governments. The results indicate that with effective corporate governance, boards are able to control CEOs' benefits including compensation and thus protect the rights and interests of all stakeholders in a company. On the other hand, governments that ensure a proper basis for effective corporate governance by implementing laws and regulations, protect the property rights of all individuals and thus prevent gaining excess benefits of any member of a company.

Our study continues as follows. The next section, Chapter 2, is about the conceptual background and development of the hypotheses. Chapter 3 provides

data source, variables that are used in the study, empirical methodology, summary statistics, regression results, and robustness checks. Finally, Chapter 4 provides a summary, discussion, and limitations.

## CHAPTER 2

### CONCEPTUAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

#### 2.1. Theoretical Background of Corporate Governance

Corporate Governance became a popular topic at the beginning of the twenty-first century. In the literature, many scholars and organizations have defined this concept in different ways. According to Cuervo (2002), corporate governance is a mechanism that separating the benefits of shareholders and managers by providing efficient decision-making and maximizing the value of the firm. Those mechanisms, which can be both institutional and market based, convince decision-makers of the company regarding company's operations to act responsibly to increase the value of the organization to suppliers of capital (Denis & McConnell, 2003). Corporate governance also provides a set of procedures that enable outside investors (minor shareholders and creditors) to protect themselves against expropriation by both managers and major shareholders (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000). Shleifer and Vishny (1997) state that "Corporate Governance deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment".

The Organization for Economic Co-operation and Development (OECD) describes the concept of corporate governance in The G20/OECD Principles of Corporate Governance as:

Corporate governance involves a set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined. (OECD, 2015).

The purpose of governance is determined in the OECD (2015) report as building trust, transparency, and accountability, which is a necessity for encouraging not

only short-term but also long-term investments and financially stabilization to achieve healthier growth.

Of course, corporate governance is not a new concept but became more familiar to all parties in the world after several corporate scandals come out such as Enron and WorldCom. Subsequent to these scandals, many countries have announced or improved their own corporate governance principles and mandate the companies to follow them. One of the most well-known examples, “Sarbanes-Oxley Act” (SOX), was signed in July 2002. By SOX, which was a response to major corporate scandals, was aimed at increasing the investors’ confidence in the capital market (Engel et al., 2007). Engel et al. (2007) also add that according to some parties, increased requirements of disclosure and penalties for corporate exploitation lead to enhanced transparency, and thus contribute to the investors’ benefits.

Like in the United States, there are several corporate governance principles adopted by other countries such as the UK Corporate Governance Code, UK Stewardship Code and Modernisation of Company Law and Enhancement of Corporate Governance in EU. The first version of the UK Corporate Governance Code was introduced in 1992 by Cadbury Committee and the corporate governance definition which separates shareholders’ and management boards’ role in a company is still valid (Council, 2010). Also by The UK Stewardship Code, the principles of effective administration and control of investors over the board regarding their responsibilities on regulating the actions of its management are announced and are given force to the “comply or explain” system (Council, 2012). European Commission announced Modernization of Company Law and Enhancement of Corporate Governance action plan in 2003 and proposed a set of rules aimed at enhancing shareholder rights, reinforcing the protection of creditors, fostering efficiency and competitiveness of business (Europea, 2003).

Besides corporate governance principles, there are different governance approaches adopted by firms in different countries may result in distinctive administrative mentality and processes which are known as shareholder (Anglo-Saxon) and stakeholder (German-Japanese) approaches. These two approaches

differ in some ways related to goals of the organizations, governance structures and agreements (Ayuso et al., 2014) The shareholder approach is more commonly seen in Anglo-Saxon countries than in other developed countries (Tirole, 2001). The shareholder value approach is a traditional model that relates the corporations with instruments that maximize the shareholders' interests, whereas, in the stakeholder approach, non-investing parties such as employees, suppliers, worker representatives, and banks' interests are given more importance and are better represented. (Ayuso et al., 2014; Tirole, 2001)

Theories like "Agency Theory" and "Managerial Power Theory" are developed to explain conceptually how corporate governance should work in businesses. Although this study benefits from both theories, the main idea will be based on the "Agency Theory". The theory is about the utility relationship between "the principals" (the owners of the company) and "the agents" (the managers of the company) (Jensen & Meckling, 1976). The utility relationship is actually universal because the agreements that are conducted between two parties like employer and employee are very similar to the relation of state and citizen (Ross, 1973).

Consequently, one can define the "utility relationship" as the delegation of work to managers (or the agents) by owners of the company with some decision-making authority in order to increase their benefits (Jensen & Meckling, 1976). If both of these parties have different goals regarding utility maximization, this relationship turns into an "Agency Problem" (Eisenhardt, 1989). The reasons for agency problem are twofold. The first reason is that principals and agents have different goals in maximizing utilities; the second reason is that owners of the company are facing difficulty to understand and follow up the managers' operations and decisions (Eisenhardt, 1989). To interpret these two reasons, one can say that if there is an information asymmetry between control and management mechanisms, managers are prone to exercise their managerial power over control mechanisms in order to extract benefit for themselves. Bebchuk et al. (2002) states that the control mechanisms set compensation contracts in the purpose of maximizing shareholder value, but "The Managerial Power Theory"



asserts that the members of the control mechanisms cannot operate in arm's length by arranging pay contracts, and for this reason, managers can influence the compensation decisions and gain further benefits. Also, Fama and Jensen (1983) similarly relate this problem with the separation of "ownership" and "control" by asserting that organizations can solve the agency problems by distinguishing the management and monitoring of decisions.

Based on governance principles and related theories, this study will analyze the relationship between governance indicators (two-tier boards, employee representation on boards, independent directors on boards, CEO duality, percentage of institutional and insider shares) and CEO compensation in the following sections.

## **2.2. Two-Tier Boards and CEO Compensation**

Regarding companies all over the world, two types of board structures come to the forefront in general; one-tier (unitary) and two-tier board structures. The first type is the unitary board structure where the firms have only one board, called the board of directors. This board is composed of both executive and non-executive members, who generally choose a single executive to assume both chairperson's and CEO's duties. On the other hand, in the companies adopted a two-tier board structure, there are basically two types of boards in their organizational structures. First one is the management board which is responsible for day-to-day operations and the second one is the supervisory board consisting of directors who determine the direction of firm's operations, appoint the managers and take charge in advisory and monitoring functions on behalf of shareholders (Belot et al., 2014). Of course, not all organizations have two boards structurally because through traditions or regulations firms in different countries have to choose either one-tier (unitary) or a two-tier board structure.

Previously it is discussed that the shareholder approach is more common in Anglo-Saxon countries like U.S. and U.K. Since this approach stands for

maximizing shareholders' interests, companies are more likely to have a one-tier board structure in those countries. In this type of board structure, shareholders have the right to appoint members of the board by the law. However, in practice, CEO/Chairperson choose board members and this results in increasing CEOs managerial power and passivity of the board members (Millet-Reyes & Zhao, 2010). To prevent dominance by CEOs, corporations may include non-executive and independent members in the board but as the information asymmetry between members of the board and CEO increases, the CEO gains dominance over the board members and act in his/her own interests.

On the other hand, two-tier board structured firms are more common in other developed countries such as Germany, France, and Japan. In Germany for example, the law mandates the use of two-tier board structure for all publicly traded large corporations where the second board, which is called as the supervisory board, consists of executives of stakeholders such as banks, suppliers, customers and worker representatives (Tirole, 2001).

Supervisory boards of the firms adopted the stakeholder approach composed of non-executive and independent members, and their duty is monitoring the operations of the firm (Cromme, 2005). By this way, power of the management and supervisory boards are separated from each other and this result in more accountability and transparency, and less dominance by managers unlike the situation in one-tier board structured firms. Also, two-tier board structures enable the supervisory board to perform advisory services and involve in decision-making processes (Cromme, 2005).

As a result, consideration of stakeholder perspective, there are more control mechanisms to follow CEOs operations in two-tier board structured firms when compared with unitary board structured firms. For this reason, the supervisory board and all shareholders are able to keep an eye on investments and operations and hence on CEOs of the firm. Thus, for those kinds of organizations, there are not many opportunities for CEOs to change the direction and rules in firms according to their own interests

Boards are identified as a key control mechanism for setting CEO compensation. CEOs want to maximize their own interests by taking advantage of low board control for this reason CEO compensation will be greater in firms with lower levels of control (Boyd, 1994). Following academic literature, we state our first hypothesis as follows:

**H1a:** *A two-tier board structure is associated with less CEO compensation than a one-tier board structure.*

### **2.3. Employee Representation on Boards and CEO Compensation**

Prior academic literature reveals the importance of employee representation in corporate boards for governance practices in firms. In some countries like Germany and France, it is mandated that employees be represented on corporate boards (Ginglinger, Megginson, & Waxin, 2011). Employee representation on corporate boards is important because employee directors are more willing to have long-time survival of the firm than shareholders and also environment, safety and reputation issues (Huse et al., 2009). Kassalow (1989) compares employee representation between U.S. and German corporate boards and observes that labor representation on boards brings important contributions to companies. One and the most important one is that employee representatives have the ability to influence the decisions of other board members in line with long-time survival of workers and the company.

On the other hand, Fauver and Fuerst (2006) propose that representation of labor in the supervisory board of a firm give valuable “first-hand” operational information to members and thus employee representation strengthens monitoring function. According to Hopt (1984), the most explicit contribution of labor representation on corporate boards is the creation of an additional control mechanism both on the supervisory and management boards. Since employee representatives are different from other members of the board like outside directors

who may be considered as passive members tied to management because of their other business relationships because they stay on the board by their own rights and their loyalty to employees.

As mentioned before making use of information asymmetry, CEOs may tend to maximize their own interests instead of shareholders or stakeholders. Hopt (1984) asserts that the labor representatives contribute to the monitoring function by information flow to non-executive board members from work councils and unions. Fauver and Fuerst (2006) conduct a study showing that employee representation reduces agency costs of management and lowers information asymmetry between management and supervisory boards. They also show that employee representation decreases excessive management board salaries and perking.

As a result, the existence of employee representatives on corporate boards provides valuable information about the operations of firms and contribute to monitoring function of boards. Also, labor representatives contribute to the interests of all stakeholders in firms by influencing other board members' decisions regarding the survival of the firm and employees. All these contributions result in a decrease in CEOs managerial power by decreasing information asymmetry and increasing board control over managerial decisions of CEOs. Therefore, CEOs will have less control over their own interests, eventually their compensations. Accordingly, we state our hypothesis as follows:

**H1b:** *Employee representation on corporate boards is negatively associated with CEO compensation.*

## **2.4. Independent Directors on Boards and CEO Compensation**

The academic literature shows us that the presence of independent directors in firms' corporate boards affects the governance practices of firms. Nasser and Agrawal (2011) have found that firms having independent directors in their boards

promote better CEO contracting and monitoring. Also, the trend among firms in the last decade is increasing the number and power of the outside directors because of their positive effect on nomination and compensation control mechanisms (Bebchuck et al., 2002). Previously, we draw attention to managerial power theory which predicts that compensation will be higher or less dependent on the performance of CEOs. CEOs would tend to have more power when the boards' control mechanisms do not work efficiently enough (Bebchuck & Fried, 2003). This implies that, although independent directors may not have sufficient information about the operations conducted by management, they contribute to the monitoring function of boards. Yet, even if they don't have sufficient information about the managerial operations, Kim et al. (2014) state that outsider directors' performance in both advising and CEO compensation monitoring increases as their tenure increase.

When firms' board characteristics are compared, the firms with the majority of their board members composed of independent directors have lower CEO compensation than the ones with the minority (Chhaochharia & Grinstein, 2009). In addition to their findings, Kim et al. (2014) observe that incremental CEO compensation decreases as outside directors' tenure increases because they obtain necessary information about the company as well as managers timely which allows them to limit their interests. This leads to our hypothesis as follows:

**H1c:** *Increase in the percentage of independent directors on corporate boards is negatively associated with CEO compensation.*

## **2.5. CEO Duality and CEO Compensation**

CEO duality means the head of the management is also the chairman of the board (Boyd, 1994). The relationship between CEO duality and CEO compensation is discussed by many scholars. Morck et al. (1989) state that the firms where the top management composed of a single individual who holds the

titles of CEO and Chairman together, the degree of board control is low. This is because of the fact that when CEO duality exists, the power of the individual directors may decrease, since many directors in the board start to act as part of the management team rather than using their monitoring, rewarding or penalizing powers to critically evaluate the performance of CEOs (Weidenbaum, 1986). Similarly, Mallette and Fowler (1992) state that if a single individual serves for both positions, s/he exercises more managerial power because his/her goals are more consistent with the management rather than shareholders and she or he is more likely to act in his/her best interest rather than the corporation's.

According to Core et al. (1999), there is a positive association between CEO duality and CEO compensation. In other words, when CEO duality exists, corporate governance is interpreted as weak and hence the CEO/Chair would be able to extract additional compensation from the firm. The weakness of governance may be associated with the absence of separation of decision management and decision control. According to agency theory, organizations suffer more while competing with other firms when there is no separation between the CEO and the chairman of boards (Fama & Jensen, 1983). Thus, the separation of CEO and chair positions contributes to the creation of an effective governance mechanism.

The monitoring function of the boards is very important for controlling CEOs performance and also their compensation. Peasnell, Pope, and Young (2005) suggest that monitoring ability of the board of directors declines with the increase in managerial power which interacts with board monitoring of compensation management. Boyd (1994) finds that CEO duality has a negative relationship with the degree of board control such that when the board control is low, the CEO compensation increases. Fosberg (1999) compares the CEOs of the firms with unitary and dual leadership in terms of their compensations and finds that CEOs of firms where CEO duality exists receive significantly higher levels of salary, bonus and total compensation than the ones with no duality. Here we state our next hypothesis as follows:

**H1d:** *CEO Duality is positively related to CEO compensation.*

## **2.6. Institutional Shares and CEO Compensation**

The firms with stakeholder approach carry on their operations by debt financing, which means raising money from creditors like individual or institutional investors by issuing debt, in which they pay the principal and a predetermined interest in return (Investopedia, 2019). In this regard, a CEO's primary duty is coordinating the operations of firms so that firms can pay their debts on time, while the supervisory board is responsible for determining the direction of the company and overseeing the operations accordingly. To improve access to debt, institutional investors and banks gain much more importance in the eyes of shareholders and the members of the supervisory board.

Availability of banks and institutional investors are critical for a company's future operations. Thus, many banks and institutional investors are offered to have an equity stake in the firm's equity and they become members of the supervisory boards. This may bring some serious advantages to firms. Millet-Reyes and Zhao (2010) summarize these advantages of having institutional investors in boards of firms such as strengthening monitoring, reducing conflict of interest between shareholders, creditors and managers, getting access to capital markets by becoming long-term holders of blocks of equity and possessing private information about the investments of firms.

Although CEO compensation decreases when there are larger shareholdings by institutional investors since the existence of them positively affects the monitoring function of the board of directors and increase the control over compensation of CEO, in practice usually the opposite is true. David et al. (1998) divide the effect of institutional shareholders on CEO compensation into two types: the institutional shareholders without any other business relationship with the firm (pressure-resistant institutions) and those that have another relationship with the firm (like managing a pension fund) and that are open to management pressure (pressure-sensitive institutions). With the pressure-resistant

institutional shareholders, as the managerial power theory suggests, the CEO's managerial power will decrease and consequently, their compensation will be negatively affected (Bebchuk & Fried, 2003). This is because institutions may use their shareholder power to resist CEO's preferences on higher compensation. On the other hand, for pressure-sensitive institutions, CEOs may make use of the business relations with institutional shareholders to work together and penalizing them if they resist CEOs' own preferences (Heard & Sherman, 1987).

Although in the literature, there are two types of institutional shareholders, which have opposite effects on CEO compensation, in line with the agency theory, we argue that the institutional shareholders want to generate profit for their own interests and guarantee their investments in the companies, given that their investments in the company are at stake. For this particular reason, they are likely to authorize and give more power to CEOs. Thus, this leads us to the following hypothesis.

**H1e:** *Increase in the percentage share held by institutional shareholders in firms is positively associated with CEO compensation.*

## **2.7. Insider Shares and CEO Compensation**

In the extant literature, scholars debate about outstanding shares held by insiders and its effect on CEO performance and compensation. Some of them suggest that as insider ownership in a firm increases, agency cost will decrease and which in turn improve performance of managers because the results of their operations eventually affect their own interests as well (Morck et al., 1989). Similarly, Jensen and Meckling (1976) define insider shareholders as managers and directors who own the firm's shares and therefore they are supposed to act responsibly and are willing to increase the firm's stock value.

From another point of view, Cordeiro and Veliyath (2003) show that insider ownership and CEO compensation have a negative relationship. In this study, they consider CEO compensation in two different ways: First as salary plus



bonuses, and second as total compensation. The results reveal that insider ownership is significant and negatively related to CEO compensation only where CEO compensation is considered as salary and bonuses. The reason is that managers are interested more to increase stock values rather than being paid out.

On the other hand, some researchers argue that insider ownership may have negative effects on firm performance. Although Morck et al. (1989) state that insider ownership decreases agency costs and increases firm and managerial performance. They find that the relationship is not unilateral. If ownership is up to five percent or above twenty-five percent, the firm's performance tends to increase, however, if it is between five and twenty-five percent, self-serving interests of management fortification in this range of ownership exceeds the income generated by managers' shares in the firm. Also, Boyd (1994) states that when insider ownership is considered as common stocks owned by the board of directors, but not by the CEO of the firm, the insider ownership has a positive relationship with board control mechanisms. Thus, consistent with agency theory, insider ownership by the board of director is an incentive for performing monitoring responsibilities by members of the board.

As a result, although insider share ownership is a controversial issue, it is clear that there is a non-negligible effect on control mechanisms and CEO compensation, we argue that the insider shareholders will tend to increase CEO's compensation in the hopes of generating more profit from their own investments in the company. Thus, this leads us to the next hypothesis.

**H1f:** *Increase in the percentage held by insider shareholders in firms is positively associated with CEO compensation.*

## **2.8. The Moderating Effect of Firm Performance on the Relationship Between Corporate Governance and CEO Compensation**

In the previous section, we explained the direct relationship between corporate governance indicators and CEO compensation. The main idea of the previous section is the effectiveness of control mechanisms in the firm and monitoring function of the board of directors and their effects on CEO compensation. In this part, firm performance is taken into consideration as a moderator that influences the impact of governance indicators on CEO compensation.

In academic literature, a significant number of researchers analyze the relationship between corporate governance practices and firm performance. Besides different governance indicators which describe the governance level, there are also many indicators that examine the financial performance of firms. Modern firms use several types of performance measures such as equity returns, stock returns, firm value and other financial ratios depending on the approaches adopted in governance research. Therefore, researchers have different points of view for governance and performance relationship.

Brown and Caylor (2004) correlate several firm performance measures with governance indicators. In their findings, accounting ratios such as return on equity, net profit margin, dividend yield, stock repurchases, and Tobin's Q are positively correlated with the firms' governance scores. Thus, they draw a conclusion that poor governance results in lower profits (lower return on equity and profit margin), lower firm value (lower Tobin's Q) and a smaller amount of cash distribution to shareholders (lower dividend yield and stock repurchases).

According to Belot et al. (2014), there is little evidence for the relationship between board structure and firm value. The results of their study show that an effective monitoring function of two-tier boards is not associated with a lower degree of firm value, i.e. firms with effective monitoring function ensured by two-tier board structure have generally high degree of firm value. Increasing the effectiveness of the monitoring function of corporate boards results in a decrease

in CEO's managerial power over the decisions of the board of directors and this leads to achieving higher financial performance and firm value. On the other hand, Millet-Reyes and Zhao (2010) examine the effect of board structure on firm performance. They measure the effect on the firm performance in two different ways: first as operating performance measured by operating cash flow and return on equity, second as firm stock performance by Tobin's Q. The results show that two-tier boards have a significantly positive effect on operating performance, but not on stock performance. The difference between the measures for operating and stock performance is explained by the potential conflict of interests among stakeholders. Since above findings support the idea that high firm performance is associated with effective monitoring function of the board and board structure – stock performance relationship is affected by the conflict of interests among stakeholders, we expect firm performance to positively moderate the board structure and CEO compensation relationship.

Besides board structure and firm performance relationship, Brown and Caylor (2004) analyze different corporate governance indicators with each firm performance measures. According to the results of their study, the ownership structure is strongly significant with firm performance. Also, Bhagat and Bolton (2008) find corporate governance measures affect firm performance. According to findings, better governance, measured by Gompers, Ishii, and Metrick (2003) and Bebchuk, Cohen, and Ferrell (2004), as stock ownership of directors' board has a significantly positive association with firm's operating performance. In addition, Mehran (1995) states that firm performance which is represented by Tobin's Q and return on assets is positively related to the percentage of executive compensation that is equity-based and the percentage of equity held by managers. These studies suggest that ownership structure is related to firm performance and for this reason, we expect the firm performance change the effects of institutional share ownership and insider share ownership over CEO compensation because as the firm performance increase, institutional shareholders generate more profits and want to give more power to CEOs. Similarly, insider shareholders with their hopes of generating more income from their own investments in the company will likely to

increase the CEO's compensation in a firm with high financial performance. Thus, we expect that firm performance moderates positively the institutional/insider share ownership and CEO compensation relationship.

In addition to the association of ownership structure with firm performance, Bhagat and Bolton (2008) find CEO-Chair separation as another variable that has a significant and positive effect on firm performance. Looking at the governance perspective, if CEO duality exists, the decisions of individual directors on board are likely to be affected by management decisions and they start to act as a part of the management. For this reason, CEO/Chairman becomes to take managerial decisions faster according to their own benefits and this situation leads to higher firm performance together with higher compensation. Thus, we expect that firm performance positively moderates CEO duality and CEO compensation association.

Valenti, Luce, and Mayfield (2011) find that the firm's financial performance has a negative association with independent directors. Their study shows that as the firm performance increases the number of independent members on corporate boards decrease. Similarly, Bhagat and Bolton (2008) state that board independence is negatively correlated with performance. As mentioned before, we expect that higher the percentage of independent directors on corporate boards is associated with a lower level of CEO compensation. Since firm performance and board independence are negatively correlated, we consider firm performance to affect board independence and CEO compensation relationship positively.

Labor representatives contribute to the monitoring function by reducing information asymmetry between management and non-executive board members (Hopt, 1984). This means, their existence on corporate boards enable the company to decrease agency costs of management, also decreases excessive salaries of managers (Fauver & Fuerst, 2006). By this means, in a company with high financial performance, CEOs tend to explain the reasons for the high performance of the company linking to their operational efforts. But employee representatives enable board members to assess the actual reasons for high firm performance by information flow from work councils and unions. Thus, their presence in corporate

boards gains more importance where firm performance is high. Therefore, we expect to see positive moderation of firm performance on employee representation on boards and CEO compensation relationship.

When firm performance, governance indicators, and CEO compensation are considered together, firm performance is likely to affect governance – performance relationship positively. Prior literature shows that firm performance is significantly associated with governance indicators such as CEO duality, board independence and general governance score (Bhagat & Bolton, 2008; Brown & Caylor, 2004; Valenti et al., 2011). Likewise, studies that analyze firm performance and CEO compensation relationship find performance and compensation is significantly related to each other (Mehran, 1995; Joskow & Rose, 1994). Therefore, we state our next hypothesis as follows:

**H2:** *Firm performance positively moderates the association between CEO compensation and corporate governance.*

## **2.9. The Definition of Economic Freedom**

In this section, as for the firm performance, economic freedom and its effect on governance indicators and CEO compensation will be analyzed.

The Heritage Foundation, founded in 1973 as a think tank, defines economic freedom as:

Economic freedom is the fundamental right of every human to control his or her own labor and property. In an economically free society, individuals are free to work, produce, consume, and invest in any way they please. In economically free societies, governments allow labor, capital, and goods to move freely and refrain from coercion or constraint of liberty beyond the extent necessary to protect and maintain liberty itself. (The Heritage Foundation, 2019).

Gwartney and Lawson (2003) summarize the essential premises of economic freedom as a personal choice, voluntary exchange, freedom to compete and protection of individuals' property. Also, they add that economic freedom strengthens the effect of individual choices on the production of goods and

services. This effect is strengthened by economic freedom because individuals in an economically free society would have the right to choose to work, produce, consume and invest in any way they want to, permitted by the law (Miller & Kim, 2013). According to this point of view, governments, institutions, and policies have important roles in promoting economic freedom in a society. Governments make laws and create legal structures to promote economic freedom by protecting the rights of individuals, implementing contracts objectively and also by providing stable and sound currency. When institutions and policies, on the other hand, are consistent with economic freedom, they provide an optimal environment for voluntary exchange, by protecting individuals and their properties. Therefore, legal and monetary contracts are particularly important (Gwartney & Lawson, 2003).

To measure economic freedom in different countries, The Economic Freedom of the World Index was first produced by Gwartney, Lawson, and Block (1996) and updated annually since. According to Gwartney et al. (1996), the index of economic freedom should measure the extent to which legally purchased property is protected and individuals are free to engage in voluntary transactions. Similarly, Hall and Lawson (2014) state that the index is designed to measure the consistency of a nation's policies and institutions, which indicates their level of economic freedom. Economic freedom index puts emphasis on private property rights, rule of law, free-trading, sound currency and a limited role for governments. When properties are secured, individuals can trade more freely, the currency is more stable, government spending is lower and there are fewer regulations. Such countries get higher scores of economic freedom.

In line with Hall and Lawson (2014), The Heritage Foundation determined twelve measures for economic freedom and grouped them into four main titles: 'Rule of Law', 'Government Size', 'Regulatory Efficiency' and 'Market Openness'. Under 'Rule of Law', there are three measures which are the protection of property rights, judicial effectiveness and government integrity to individuals. 'Government Size' basically is related to government's principles, practices and their effects on individuals. It is measured by tax burden on individuals' economies, government's spending and fiscal health. Another category under

economic freedom ‘Regulatory Efficiency’ consists of three aspects of freedom: business, labor and monetary. Business freedom is an individual’s right to start and run a business without any interference from the government where labor freedom measures the freedom of individuals’ right to work whenever and wherever they desire. Also, monetary freedom is related to the stability and reliability of a country’s currency (Miller & Kim, 2013). Finally, ‘Market Openness’ is measured by trade freedom, investment freedom and financial freedom showing to what extent the economic activities in a country considered as free in terms of trading, investing and access to financing.

#### **2.10. The Moderating Effect of Economic Freedom on the Relationship Between Corporate Governance and CEO Compensation**

As stated in the previous section of this study, institutions and academic literature identify economic freedom and describe its measures similarly. Each of them emphasizes different aspects of freedom and its importance on a country’s prosperity. In this part, we will explore how different levels of economic freedom in countries change the effectiveness of corporate governance indicators on CEO compensation.

The Heritage Foundation, as stated above, determined basically four sets of measures to evaluate economic freedom level of a country which was ‘Rule of Law’, ‘Government Size’, ‘Regulatory Efficiency’ and ‘Market Openness’. Starting from these main measures, an economically free country can be defined as a country where properties and purchasing rights are secured, judicial effectiveness is high, the government treats people equally in terms of law, government spending is low, fewer regulations on business activities, more stable currency, and freer market transactions in terms of trading, investing and financing (Hall & Lawson, 2014). All the measures that determine the level of economic freedom are in fact take into account the protection of individuals and organizations. Therefore,

it should have an effect on corporations, which consist of individuals who have different goals and interests.

In this section, mainly the impact of economic freedom on the relationship between six corporate governance indicators (board structure, employee representation on board, independent directors on board, CEO duality, institutional shares, and insider shares) and CEO compensation will be analyzed. So in the following paragraphs, we will put emphasis on the relation of economic freedom on each governance indicator.

As previously mentioned, corporations may have either a single board which consists of both executive and non-executive members together or a two-tier board structure which composed of a supervisory board and management board. In a firm with a unitary board structure, the board is responsible for all aspects of the company. Thus, advisory and monitoring functions are carried out by managers (who deals with daily operations of the firm), dependent, and independent directors together. Also, the chief executive manager is generally chosen as a member of the board and for this reason s/he may have influence over other executive and non-executive members of the board. As managerial power theory and agency theory suggests, the CEO of the firm gains managerial power and may use it to extract self-oriented benefits from the operations of the firm instead of protecting interests of shareholders and other stakeholders. On the other hand, in a two-tier structured firm, there are two boards; the management board handles the daily operations and the supervisory board oversees the firm's activities and monitor managers. Therefore, in this case, the control mechanisms are more improved and the interests of all stakeholders are better protected as opposed to a firm with a unitary board.

Economic freedom is a concept that affects both individuals and corporations because it is related to both laws, judicial effectiveness and protection of rights. Thus, in case of corporate governance, one can say that it creates a positive influence over effectiveness of governance practices because if the economic freedom level is high, there are more effective laws for corporations to protect the rights of all individuals to pursue their economic objectives without



interference including the stakeholders of a firm (Gwartney, Lawson, & Hall, 2011). Therefore, a higher degree of economic freedom results in more efficient control mechanisms and lower managerial power of the CEO over the board of directors in a two-tier board structured firm. We state our next hypothesis as follows:

**H3a:** *Economic freedom level of a country positively moderates the association between CEO compensation and two-tier board structure.*

Employee representation puts employees in a formal structure where their voice in the decision-making process of organizations is heard more often. Including these representatives in supervisory boards gives many opportunities to companies, such as providing operational information to directors in the board and decreasing information asymmetry between management and supervisory boards and therefore reducing excessive management board salaries and perk-taking (Fauver & Fuerst, 2006).

In countries that have high economic freedom properties and rights are secured by law. From corporations' perspective, economic freedom means protection of interests of all parties of an organization. Thus, economic freedom will increase the effectiveness of employee representation and control over CEO compensation by providing a basis for the representation of labor in boards and protecting their interests by developed laws and regulations. We state our next hypothesis as follows:

**H3b:** *Economic freedom level of a country positively moderates the association between CEO compensation and employee representation on boards.*

Having independent directors on supervisory boards of companies strengthens corporate governance practices of firms in terms of better CEO contracting, monitoring of management, nomination, and compensation control mechanisms (Bebchuk et al., 2002; Agrawal & Nasser, 2011). As in two-tier

structured firms, economic freedom has an additive effect on the effectiveness of control mechanisms and reduces managerial monopoly in firms by empowering the rule of law. This is because of the fact that in an economically free country, the rights of all stakeholders are protected by law. Thus, including independent directors on supervisory boards brings an objective perspective to the company and supports economic freedom in terms of protecting the rights of all stakeholders by providing fairer contracts, improving control mechanisms and reducing managerial power of the CEOs. We state our next hypothesis as follows:

**H3c:** *Economic freedom positively moderates the association between CEO compensation and independent directors of boards.*

CEO duality creates a negative impact on corporate governance mechanisms in a firm because when the CEO and the chairman of the board are the same individuals, the power of independent directors is likely to decrease because most of the directors, in this case, take sides with the management rather than acting as objective members of boards, who actively monitor management, reward or penalize the performance of CEOs. As previously said, economic freedom contributes to the company's control mechanisms and also protects the rights of all stakeholders. From this point of view, economic freedom will reduce the negative effect of CEO duality on monitoring function of the board and also help to prevent CEOs from exercising their managerial power on other stakeholders to create extra benefits for their own behalves. We state our next hypothesis as follows:

**H3d:** *Economic freedom level of a country negatively moderates the association between CEO compensation and CEO duality.*

Institutional ownership of outstanding shares of a company is an advantageous way to ease access to capital. Therefore, institutional investors gain more and more importance from the view of other shareholders and the board of

directors. Since they constitute a critical mission for the company, they are generally offered to be members of the board of directors and have a voice on future plans and operations of the firm. Existence of institutional investors on supervisory boards increases the effectiveness of the monitoring function of the board, reducing conflict of the interests and provide financial information and support for the company's operations.

As previously mentioned, there are mainly two types of institutional investors as proposed by David et al. (1998); pressure-resistant institutions and pressure-sensitive institutions. These two types of institutions differ in several aspects but the most critical one is the level of tolerance exerted on CEOs' own interests and preferences about the company. Pressure-resistant institutions are able to use their shareholder power against the CEO's managerial power to resist his/her preferences for higher compensation. Although they are able to resist the preferences of CEOs for higher compensation, they may support them if they can get more income from the shares of the firm. On the other hand, pressure-sensitive institutions stick more to CEOs preferences as they don't have any other business relationship. Thus, this type of institutional investors is more prone to support the CEO's actions and preferences in order to generate more income.

According to the degree of economic freedom, countries may implement laws and regulations not only to control and protect the investments of investors but also to protect the rights and interests of all stakeholders in a firm. Thus, although they are investors who want as much income as they can acquire, if the degree of economic freedom is high, the interests of all stakeholders will be protected by law, which in turn creates a pressure upon institutional investors' desires. Thus, from this point of view, economic freedom creates a positive effect on governance practices and negatively affect CEO compensation. We state our next hypothesis as follows:

**H3e:** *Economic freedom level of a country negatively moderates the association between CEO compensation and institutional ownership.*

In the previous section, we show that insider ownership and CEO compensation have a multilateral relationship. In case 'insider' is a CEO or a manager, even though their compensation as salary and bonuses do not change, management will act to increase stock values in order to double their total compensations (Cordeiro & Veliyath, 2003). On the other hand, Boyd (1994) asserts that when 'insider' is a member of the board of directors, instead of a CEO, the insider ownership will have a positive relationship with board control mechanisms. Thus, the relationship will be negative in this case.

Economic freedom brings rules and regulations in corporations. Regulations for a company in an economically free country are fewer but effective in protecting workers and investors. By rule of law, economic freedom provides assurance for individuals to protect their incomes, savings, real and intellectual properties from unfair confiscation or theft. Thus, it may bring regulations to companies to take under control the CEO's or the management's actions and investments in order to protect other investors and stakeholders in the firm. Thus, economic freedom will have an incremental effect on governance practices and eventually result in a negative association with CEO compensation. We state our next hypothesis as follows:

**H3f:** *Economic freedom level of a country negatively moderates the association between CEO compensation and insider ownership.*

## **CHAPTER 3**

### **EMPIRICAL ANALYSIS**

#### **3.1. Sources of Data**

The main source of data used in this study is Bloomberg Data. It is actually used heavily and regarded highly by institutional investors and created for the financial marketplace. For this reason, it provides almost every type of financial data related to companies, economies, stock exchanges, governance, and many other subjects. Bloomberg Database, compared to its largest competitor Thomson Reuters with its Eikon platform, give place to companies in corporate governance data more than other databases. Because of its wide coverage in terms of corporate governance indicators and inclusion of companies worldwide, we retrieve governance and financial data from Bloomberg. In addition to corporate governance data, we use country-based data which is gathered from the World Bank Database such as economic freedom index and gross domestic product growth rate.

We obtain financial data (on corporate governance and financial performance) for the period 2013 - 2017. Our sample is built with data of firms from the United States and 30 European Union Member and Western European countries. The sample consists of 7,146 firm-year observations and 2,075 firms that have Environmental, Social and Governance (ESG) Disclosure Score availability in the Bloomberg Database.

#### **3.2. Variables**

##### **3.2.1. Corporate Governance Indicators**

In this study, we use seven corporate governance measures which are total CEO compensation, board structure, the percentage of employee representatives

on the board of directors, the percentage of independent directors on board of directors, CEO duality, percentage of shares outstanding held by institutions and percentage of shares outstanding held by insiders.

Total CEO compensation indicates the total amount of compensation paid to the CEO. We use this variable as a dependent variable and observe the effects of governance variables on total CEO compensation. In order to make the distribution of variable less skewed, this variable is measured in logarithmic form.

We use six governance measures as independent variables in our models. Our most critical independent variable is the board structure. We want to separate the firms with unitary board structure (firms with a single board composed of both executive and non-executive members) and the firms with two-tier board structure (firms with two boards, namely supervisory and management). We measure board structure as a dummy variable that is equal to 1 if the firm has a two-tier board structure, and 0 otherwise.

Another corporate governance measure is the percentage of employee representatives on the board of directors. This measure is calculated by using two separate variables: the number of employee representatives on the board of directors and board size. Bloomberg Database provides the first data as the number of employee representatives on the board when companies have non-executive employee representatives on board. For the board size, it gives the available number of directors on the company's board. Where the company has a supervisory board and a management board, this variable shows the number of directors in the supervisory board. The percentage of employee representatives on boards is measured by the number of employee representatives on board divided by board size.

Our next governance measure is the percentage of independent directors on the board of directors, which is calculated as the number of independent directors on the board divided by board size.

CEO duality is a dummy variable which indicates whether the company's chief executive manager is also the chairman of the board. It equals 1 if the CEO is also the Chairman, and 0 otherwise.

Another governance measure is the percentage of shares outstanding held by institutions. This data represents institutions including institutional investors from Securities and Exchange Commission's (SEC) Form 13F Quarterly Report, the United States and International Mutual Funds, Schedule Ds (U.S. insurance companies) and institution's stake holdings that appear on the aggregate level.

Finally, we used the percentage of shares outstanding held by insiders as a governance indicator in the study. Insiders represent a director or senior officer of a company, as well as any person or entity that owns more than some defined percentage of a company's voting shares (Investopedia, 2019).

### **3.2.2. Firm Performance**

In order to determine firms' financial performance, we use Tobin's q, which plays an important role in financial markets. It is defined as the ratio of the market value of a firm to the replacement cost of its assets (Chung & Pruitt, 1994). This financial indicator represents not only the firm-specific financial conditions but also pictures the perspectives of the market. Although Tobin's q is widely used by scholars in theory as a financial firm performance indicator, there are different methods to calculate it (Perfect & Wiles, 1994). We adopt the method used by Bloomberg Database since it is one of the most commonly used methods in the literature (Chung and Pruitt, 1994):

- $(\text{Market Capitalization} + \text{Total Liabilities} + \text{Preferred Equities} + \text{Minor Interests}) / \text{Total Assets}$

Since Tobin's Q not only shows market effects on firm performance but also takes into account firm-specific financial performance, we expect that this measure has a significant impact on CEO compensation.

### **3.2.3. Economic Freedom Index**

As the degree of economic freedom increases, the effectiveness of laws for firms to protect the rights of all individuals to pursue their economic objectives without interference increases (Gwartney et al., 2011). Using economic freedom as a moderator between the corporate governance and CEO compensation, this study intends to explain how the effect of governance indicators on CEO compensation change as the degree of economic freedom in a country changes. For this reason, economic freedom is considered as a country-level variable.

Economic Freedom Index data is obtained from The Heritage Foundation. The economic freedom index is composed of twelve different measures. These are Property Rights, Judicial Effectiveness, Government Integrity, Tax Burden, Government Spending, Fiscal Health, Business Freedom, Labor Freedom, Monetary Freedom, Trade Freedom, Investment Freedom and finally Financial Freedom. In order to cover all aspects of economic freedom, we prefer to use overall economic freedom index which shows the mean of all the above measures. All measures' scores range from 0 to 100, so as the overall index. As the score increases from 0 to 100, the economic freedom in that country also increases.

### **3.2.4. Firm-Level Control Variables**

In this study, we use firm-level control variables to separate firm-specific effects on CEO compensation because compensation is distributed from firms' financial income, which may change according to the firm's financial performance. In order to control this type of effect, Brown and Caylor (2004) use the natural logarithm of total assets of the companies, which shows the size of companies.

Total assets shows the total amount of cash and cash equivalents, receivables, investments and other assets as represented in firms' financial statements. All in all, it is the total of all short- and long-term assets as reported on the firms' balance sheets in USD and it is used in logarithmic form.



Another firm characteristic is financial risk. To measure financial risk, we use beta from Bloomberg Database. Bloomberg performs a regression of the historical stock exchange prices against the S&P 500 using weekly data over a two-year period. (Byu Library, 2019). We obtain beta for fiscal year ends of each firm in the sample for the 2013-2017 period.

The ratio of total liability to total assets is the next firm-specific measure that we use in this study. The ratio is calculated by dividing the company's total liabilities by total assets. This measure shows the percentage of a company's assets that are financed by issuing debt. This ratio enables comparisons of leverage to be made across different companies in our sample (Investopedia, 2019). The ratio also is an indicator of the financial risk of a company because it shows to what extent the assets of a company is enough to meet the liabilities. For these reasons, we decide to use also this measure to determine financial performance and calculate it as follows:

- $(Total\ Assets - Total\ Liabilities) / Total\ Assets.$

The last measure is the ratio of research and development (R&D) expenses to total assets. The number of R&D expenses can vary from industry to industry. In some industries such as pharmaceuticals and technology, this type of expenses can easily go up to millions or billions of dollars. We used the ratio of R&D expenses to total assets because it is useful in comparing the effectiveness of R&D expenses between the firms in the same industry.

### **3.2.5. Industry-Level Control Variables**

The corporate governance practices, firm performances, practices, and regulations may change according to industries that firms operate. For this reason, the firms in our sample are categorized related to which industry they operate in. We use, Industry Classification Benchmark (ICB) since it includes industry codes of firms worldwide. The ICB classifies industries in ten categories (ICB, 2014),

Table 1 shows these categories and the number of firms included in this study, which belong to these industries:

**Table 1.** Number of Firms by Industry

<b>ICB Industry Code</b>	<b>ICB Industry Name</b>	<b>Number of Firms</b>
1	Oil & Gas	136
1000	Basic Materials	111
2000	Industrials	391
3000	Consumer Goods	185
4000	Health Care	233
5000	Consumer Services	252
6000	Telecommunications	30
7000	Utilities	62
8000	Financials	525
9000	Technology	150
	<b>Total</b>	<b>2075</b>

To measure industry-level effects, we turn these ICB industry codes into ten dummy variables.

### **3.2.6. Country-Level Control Variables**

Besides the industry-level effects on CEO compensation, it is also important to consider country-level effects like in the case of economic freedom. This study not only analyzes the firm-specific or internal dynamics but also changes regarding different industries and countries. As Tobin's Q and CEO compensation rely to a certain extent on a country's economic performance, we use the GDP growth rate to control for economic growth. It is obtained from the World Bank World Development Indicators (WDI) Database.

### **3.2.7. Interaction of Corporate Governance Indicators and Firm Performance.**

In this study, we want to measure the moderating effect of firm performance on the relationship between firms' corporate governance and CEO compensation. For this reason, we decide on Tobin's Q as an indicator of firm performance because it not only shows the firm's financial performance but also gives an idea about firms' performance in financial markets. Thus, we multiply each governance indicator by Tobin's Q and create six interaction variables.

### **3.2.8. Interaction of Corporate Governance Indicators and Economic Freedom Index**

We use interaction variables to examine the moderating effect of economic freedom on the relationship between corporate governance and CEO compensation. Each interaction variable is calculated as multiplying six corporate governance indicators by overall economic freedom index.

## **3.3. Methodology**

In this section, we provide information about the methodology used in this study. To determine the relationship between corporate governance indicators and CEO compensation, as well as the moderating effect of economic freedom and firm performance on this relationship we apply three regression models.

We first examine the direct effect of corporate governance on CEO compensation (Model 1). In this model, we use CEO compensation as the dependent variable and six governance indicators as independent variables as follows:

$$\begin{aligned} COMP_{it} = & \beta_0 + \beta_1 TWO\_TIER_{it} + \beta_2 EMP_{it} + \beta_3 BOARD\_IND_{it} + \\ & \beta_4 DUALITY_{it} + \beta_5 INSIDER_{it} + \beta_6 INSTITUTION_{it} + \beta_7 Q_{it} + \beta_8 BETA_{it} + \\ & \beta_9 TA_{it} + \beta_{10} TL\_TA_{it} + \beta_{11} RD\_TA_{it} + \beta_{12} GDP_{it} + Industry\ Dummies \end{aligned} \quad (1)$$

where COMP represents the natural logarithm of total compensation for CEO or equivalents, TWO\_TIER stands for the board structure, and it equals to 1 if the firm uses two-tier board structure and 0 if the firm uses a one-tier board structure. EMP shows the percentage of employee representatives on the board of directors, and BOARD\_IND indicates the percentage of independent directors on the board of directors. DUALITY is a dummy variable, which equals 1 when the CEO is also the Chairman, otherwise 0. Finally, INSIDER and INSTITUTION show the percentage of outstanding shares held by insiders and institutions, respectively.

For the control variables, Q stands for Tobin's Q value, BETA for systematic risk, TA for the natural logarithm of total assets, TL\_TA for total liabilities to total assets, RD\_TA for the R&D expenses divided by total assets and finally GDP for the percentage of annual GDP growth for the countries.

In the second model (Model 2), we examine the effect of firm performance on the relationship between corporate governance and CEO compensation. We construct our second model as follows:

$$\begin{aligned}
COMP_{it} = & \beta_0 + \beta_1 TWO\_TIER_{it} + \beta_2 EMP_{it} + \beta_3 BOARD\_IND_{it} + \\
& \beta_4 DUALITY_{it} + \beta_5 INSIDER_{it} + \beta_6 INSTITUTION_{it} + \beta_7 Q_{it} + \\
& \beta_8(Q_{it}*TWO\_TIER_{it}) + \beta_9(Q_{it}*EMP_{it}) + \beta_{10}(Q_{it}*BOARD\_IND_{it}) + \\
& \beta_{11}(Q_{it}*DUALITY_{it}) + \beta_{12}(Q_{it}*INSIDER_{it}) + \beta_{13}(Q_{it}*INSTITUTION_{it}) + \\
& \beta_{14}BETA_{it} + \beta_{15}TA_{it} + \beta_{16}TL\_TA_{it} + \beta_{17}RD\_TA_{it} + \beta_{18}GDP_{it} \\
& + Industry Dummies
\end{aligned} \tag{2}$$

Basically, we modify Model 1 and include interaction variables by multiplying each corporate governance indicator with Q in order to measure the effect of firm performance on the relationship between governance indicators and CEO compensation.

In the last model (Model 3), similar to firm performance, we want to determine the effect of economic freedom on the relationship between corporate governance indicators and CEO compensation. Therefore, our third model is constructed as follows:

$$\begin{aligned}
COMP_{it} = & \beta_0 + \beta_1 TWO\_TIER_{it} + \beta_2 EMP_{it} + \beta_3 BOARD\_IND_{it} + \\
& \beta_4 DUALITY_{it} + \beta_5 INSIDER_{it} + \beta_6 INSTITUTION_{it} + \beta_7 Q_{it} + \beta_8 EFI_{it} + \\
& \beta_9 (EFI_{it} * TWO\_TIER_{it}) + \beta_{10} (EFI_{it} * EMP_{it}) + \beta_{11} (EFI_{it} * BOARD\_IND_{it}) + \\
& \beta_{12} (EFI_{it} * DUALITY_{it}) + \beta_{13} (EFI_{it} * INSIDER_{it}) + \beta_{14} (EFI_{it} * INSTITUTION_{it}) \\
& + \beta_{15} BETA_{it} + \beta_{16} TA_{it} + \beta_{17} TL\_TA_{it} + \beta_{18} RD\_TA_{it} + \beta_{19} GDP_{it} \\
& + Industry\ Dummies
\end{aligned} \tag{3}$$

where EFI represents the Index of Economic Freedom. In Model 3, we modify Model 1 by adding Economic Freedom and its interaction variables by each governance indicators.

Our data consists of observations that are collected over a five-year period using a panel structure, or in other words longitudinal data. Given that we use a panel setting, there are some points required to take into consideration. One of them is to check autocorrelation. For this reason, we apply the Wooldridge Test. The test results are shown in the following table:

**Table 2.** Wooldridge Autocorrelation Test Results

Model 1
H0: no first-order autocorrelation
F (1, 1458) = 10.899
Prob > F = 0.0010
Model 2
H0: no first-order autocorrelation
F (1, 1458) = 10.749
Prob > F = 0.0011
Model 3
H0: no first-order autocorrelation
F (1, 1458) = 10.901
Prob > F = 0.0010

Looking at the test results, F-statistics are significant which means there is significant autocorrelation in each model. To eliminate autocorrelation, we apply

robust standard errors estimation method., which provides heteroskedasticity-consistent or “White” standard errors (Hoechle, 2007).

### 3.4. Summary Statistics

Summary statistics and correlation matrix for the sample is given in Table 3 and Table 4, respectively. Table 3 represents the distributions for the variables used in the analysis. The dependent variable (COMP) has mean and median scores of 14.966 and 15.121, respectively where the standard deviation is equal to 1.551. Since there isn’t a significant difference between mean and median scores, the data set almost resembles a symmetrical distribution over firms for this variable. On the other hand, the independent variables, TWO\_TIER and EMP have mean values (0.043 and 1.919, respectively) which are low, suggesting that only 4.3 percent of total-firm year observations contain firms with two-tier board structure and nearly two percent of companies’ boards composed of employee representatives on average.

Table 4 shows that CEO compensation is significantly correlated at %1 level with CEO duality, percentage of independent directors, percentage of institutional and insider shares of outstanding, beta, total assets, total liability to total assets, R&D expenses to total assets ratio and economic freedom. Except for the percentage of insider shares of outstanding and ratio of R&D expenses to total assets, all other variables are positively associated with CEO compensation.

**Table 3.** Summary Statistics of the Sample

Variable	N	Mean	Std.Dev.	p25	Median	p75
COMP	7,146	14.966	1.551	14.289	15.121	15.840
TWO_TIER	7,146	0.043	0.202	0	0	0
EMP	7,146	1.919	7.919	0	0	0
DUALITY	7,146	0.327	0.469	0	0	1.000
BOARD_IND	7,146	73.709	17.340	63.636	77.780	87.500
INSTITUTION	7,146	79.269	30.028	60.417	85.510	101.349

**Table 3.** Summary Statistics of the Sample (cont'd)

Variable	N	Mean	Std.Dev.	p25	Median	p75
INSIDER	7,146	4.713	9.104	0.354	1.370	4.480
Q	7,146	2.070	1.646	1.120	1.540	2.310
BETA	7,146	1.044	0.833	0.805	0.998	1.232
TA	7,146	8.078	2.115	6.854	8.114	9.342
TL_TA	7,146	0.606	0.263	0.441	0.598	0.784
GDP	7,146	2.143	1.157	1.677	2.273	2.569
RD_TA	7,146	0.038	0.119	0	0	0.018
EFI	7,146	74.536	3.398	75.100	75.500	76.000

In this table, COMP means the natural logarithm of total CEO compensation, TWO\_TIER is a dummy variable which takes 1 if the firm has two-tier board structure, 0 otherwise, EMP represents the percentage of employee representatives on board of directors, DUALITY is a dummy variable which takes 1 if CEO is also a Chairman, 0 otherwise, BOARD\_IND represents the percentage of independent directors on board of directors, INSTITUTION means the percentage of outstanding shares held by institutions, INSIDER means the percentage of outstanding shares held by insiders, Q means Tobin's Q ratio, BETA is for systematic risk of a company's portfolio, TA means the natural logarithm of total assets, TL\_TA represents the ratio of total liabilities divided by total assets, GDP stands for the annual GDP growth, RD\_TA represents the ratio of R&D expenses divided by total assets, and EFI represents Economic Freedom Index.

**Table 4.** Correlation Matrices

	COMP	TIER	EMP	DUAL	IND	INST	INSD
COMP	1.0000						
TIER	0.0182 0.1140	1.0000					
EMP	-0.0232 0.0439	0.5247* 0.0000	1.0000				
DUAL	0.0488* 0.0000	-0.2026* 0.0000	-0.1532* 0.0000	1.0000			
IND	0.2168* 0.0000	-0.0135 0.2054	-0.1484* 0.0000	0.0653* 0.0000	1.0000		
INST	0.3170* 0.0000	-0.1933* 0.0000	-0.1840* 0.0000	0.0565* 0.0000	0.2402* 0.0000	1.0000	

**Table 4.** Correlation Matrices (cont'd)

	<b>COMP</b>	<b>TIER</b>	<b>EMP</b>	<b>DUAL</b>	<b>IND</b>	<b>INST</b>	<b>INSD</b>
<b>INSD</b>	-0.1598* 0.0000	-0.0803* 0.0000	-0.0792* 0.0000	0.0910* 0.0000	-0.1104* 0.0000	-0.3023* 0.0000	1.0000
<b>Q</b>	0.0115 0.3200	-0.0796* 0.0000	-0.0667* 0.0000	0.0092 0.3763	0.0227 0.0342	-0.0324* 0.0017	0.0865* 0.0000
<b>BETA</b>	0.0663* 0.0000	-0.0482* 0.0000	-0.0369* 0.0004	0.0299* 0.0041	0.0705* 0.0000	-0.0130 0.2010	0.0197 0.0522
<b>TA</b>	0.3328* 0.0000	0.1807* 0.0000	0.1821* 0.0000	0.0354* 0.0006	0.0203 0.0570	0.1898* 0.0000	-0.2746* 0.0000
<b>TL_TA</b>	0.0663* 0.0000	0.0185 0.0740	0.0307* 0.0030	0.0224 0.0305	0.0137 0.1988	-0.0563* 0.0000	-0.0609* 0.0000
<b>GDP</b>	0.0219 0.0551	-0.0785* 0.0000	-0.0657* 0.0000	-0.0074 0.4769	0.0849* 0.0000	0.0919* 0.0000	0.0308* 0.0024
<b>RD_TA</b>	-0.0693* 0.0000	-0.0557* 0.0000	-0.0377* 0.0003	-0.0390* 0.0002	0.0695* 0.0000	-0.1131* 0.0000	0.0525* 0.0000
<b>EFI</b>	0.1227* 0.0000	-0.1686* 0.0000	-0.1245* 0.0000	0.0304* 0.0033	0.4322* 0.0000	0.2122* 0.0000	0.0752* 0.0000

**Table 4.** Correlation Matrices (cont'd)

	<b>Q</b>	<b>BETA</b>	<b>TA</b>	<b>TL_TA</b>	<b>GDP</b>	<b>RD_TA</b>	<b>EFI</b>
<b>Q</b>	1.0000						
<b>BETA</b>	0.0084 0.4134	1.0000					
<b>TA</b>	0.4269* 0.0000	0.0391* 0.0001	1.0000				
<b>TL_TA</b>	-0.0385* 0.0002	-0.0023 0.8205	0.2203* 0.0000	1.0000			



**Table 4.** Correlation Matrices (cont'd)

	<b>Q</b>	<b>BETA</b>	<b>TA</b>	<b>TL_TA</b>	<b>GDP</b>	<b>RD_TA</b>	<b>EFI</b>
<b>GDP</b>	0.0554* 0.0000	0.0030 0.7690	-0.0639* 0.0000	-0.0242 0.0165	1.0000		
<b>RD_TA</b>	0.4273* 0.0000	0.0891* 0.0000	-0.3743* 0.0000	0.0208 0.0395	0.0057 0.5730	1.0000	
<b>EFI</b>	0.1138* 0.0000	0.0095 0.3494	-0.2039* 0.0000	-0.0238 0.0184	0.2577* 0.0000	0.0776* 0.0000	1.0000

In this table, TIER stands for TWO\_TIER, DUAL means DUALITY, IND represents BOARD\_IND, INST represents INSTITUTION, INSD represents INSIDER, and all variables are defined in Table 3.

### 3.5. Regression Results

As previously stated, there are 2,075 firms from Europe and the U.S. and totally 7,146 firm-year observations for the sample. Table 5 shows the results of the three models. The first column (Model 1) represents the results for the direct relationship between CEO compensation and corporate governance indicators. The second column (Model 2) presents the results for the moderating effect of firm performance on the CEO compensation – corporate governance relationship in Model 1. Finally, the third column (Model 3) indicates the results for the moderating effect of economic freedom level of a country on the association between CEO compensation and corporate governance.

**Table 5.** The Main Regression Results for the Sample

	<b>(Model 1)</b>	<b>(Model 2)</b>	<b>(Model 3)</b>
<b>TWO_TIER</b>	-0.1547*** (0.005)	-0.0928 (0.324)	0.4607 (0.575)
<b>EMP</b>	-0.0664*** (0.000)	-0.0836*** (0.002)	-0.1289 (0.643)
<b>DUALITY</b>	-0.1254*** (0.000)	0.0109 (0.919)	0.0936 (0.881)

**Table 5.** The Main Regression Results for the Sample (cont'd)

	(Model 1)	(Model 2)	(Model 3)
<b>BOARD_IND</b>	0.0717*** (0.000)	0.1207*** (0.000)	0.4973** (0.031)
<b>INSTITUTION</b>	0.0925*** (0.000)	0.0536 (0.149)	1.0256* (0.053)
<b>INSIDER</b>	0.0183 (0.419)	-0.0136 (0.655)	0.4375 (0.127)
<b>Q</b>	0.0506 (0.247)	0.1590** (0.038)	0.0528 (0.227)
<b>BETA</b>	0.0996 (0.191)	0.0966 (0.202)	0.1013 (0.190)
<b>TA</b>	0.4681*** (0.000)	0.4730*** (0.000)	0.5124*** (0.000)
<b>TL_TA</b>	0.0365 (0.357)	0.0327 (0.352)	0.0346 (0.383)
<b>GDP</b>	0.0058 (0.249)	0.0057 (0.261)	0.0010 (0.844)
<b>RD_TA</b>	0.0078 (0.614)	0.0089 (0.578)	0.0122 (0.428)
<b>EFI</b>			0.3300*** (0.000)
<b>Q*TWO_TIER</b>		-0.0236 (0.340)	
<b>Q*EMP</b>		0.0227 (0.358)	
<b>Q*DUALITY</b>		-0.0865 (0.216)	
<b>Q*BOARD_IND</b>		-0.1651* (0.068)	
<b>Q*INSTITUTION</b>		0.0829 (0.226)	
<b>Q*INSIDER</b>		0.0470 (0.272)	
<b>EFI*TWO_TIER</b>			-0.1782 (0.453)
<b>EFI*EMP</b>			0.0667 (0.812)
<b>EFI*DUALITY</b>			-0.0979 (0.731)
<b>EFI*BOARD_IND</b>			-0.4805* (0.055)

**Table 5.** The Main Regression Results for the Sample (cont'd)

	(Model 1)	(Model 2)	(Model 3)
<b>EFI*INSTITUTION</b>			-0.9728* (0.073)
<b>EFI*INSIDER</b>			-0.4210 (0.150)
<b>Constant</b>	0.1973*** (0.001)	0.1534*** (0.002)	0.0856 (0.702)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	7146	7146	7146
<b>D.F.</b>	25	31.0000	32
<b>Chi<sup>2</sup></b>	892.2	952.9	1104.7

In this table, Q\*TWO\_TIER, Q\*EMP, Q\*DUALITY, Q\*BOARD\_IND, Q\*INSTITUTION and Q\*INSIDER are the interaction variables of Tobin's Q with board structure, the percentage of employee representatives on board, CEO duality, the percentage of independent directors on board, the percentage of outstanding shares held by institutions and the percentage of outstanding shares held by insiders, respectively. Also, EFI\*TWO\_TIER, EFI\*EMP, EFI\*DUALITY, EFI\*BOARD\_IND, EFI\*INSTITUTION and EFI\*INSIDER are the interaction variables of Economic Freedom Index with board structure, the percentage of employee representatives on board, CEO duality, the percentage of independent directors on board, the percentage of outstanding shares held by institutions and the percentage of outstanding shares held by insiders, respectively. The table indicates the standardized coefficients for each variable and p-values are in parentheses. \*, \*\*, and \*\*\* denotes statistical significance at 10%, 5%, and 1% levels respectively.

The results of Model 1 reveal that all the corporate governance indicators are statistically significant at 1% except the percentage of outstanding shares held by insiders (INSIDER). In terms of coefficients, results show that both TWO\_TIER and EMP are negatively associated with CEO compensation (COMP). These findings support both hypotheses 1a and 1b. Results for TWO\_TIER suggest that the existence of a two-tier board structure results in stronger governance by separating management and supervisory functions and for this reason, it is associated with a lower level of CEO compensation. Similarly, results show that higher percentage of employee representatives (EMP) on corporate boards strengthen governance in firms by decreasing information asymmetry and increasing the effectiveness of monitoring ability of the board of directors, and this leads to a lower level of CEO compensation. Also, the

percentage of outstanding shares held by institutions (INSTITUTION) is positively associated with COMP which also provides support for our hypothesis 1e.

In contrast with the literature and our hypothesis, results suggest that DUALITY is negatively associated with COMP. According to several studies, firms have weaker governance and higher CEO compensation where CEO duality exists (Boyd, 1994; Fosberg, 1999). For this reason, this result will be further analyzed in the robustness section of the study.

For the board independence (BOARD\_IND), findings show that as the percentage of independent board members is positively correlated with COMP, i.e. CEO compensation is higher with the higher levels of board independence. As Kim et. al (2014) states, independent directors may not have sufficient information about the managerial operations in the firm and this may result in having weaker control mechanism by the board of directors where their tenure in the firm is low. From this perspective, the monitoring ability of the board may decrease as the percentage of lower-tenure independent directors in boards increases. For this reason, we can conclude that the positive relationship between BOARD\_IND and COMP may be related to directors' tenure.

Among the firm-specific indicators in Model 1, only total assets (TA) has a positive and statistically significant effect on CEO compensation where others are not significant.

To test hypothesis 2, we modify Model 1 to include interaction terms of firm performance and corporate governance indicators. We expect that, as the effectiveness of governance practices increases in a firm with high financial performance, CEO compensation will be higher. Results of Model 2 indicate that none of the interaction terms is statistically significant except the interaction of Tobin's Q and board independence (Q\*BOARD\_IND) which is negative and significant at 10% ( $\beta = -0.1651$ ). Moreover, the direct effect of the percentage of independent directors on CEO compensation (BOARD\_IND) is also significant and positive ( $\beta = 0.1207$ ). Unlike Model 1, when we add the interaction terms in Model 2, Tobin's Q (Q) variable becomes significant and positive ( $\beta = 0.159$ ). These findings suggest that the effect of having more independent directors on the

board of directors on CEO compensation changes dependent on the level of firm performance. Looking at the coefficients, the effect of board independence on CEO compensation can be calculated as  $0.1207 - 0.1651*Q$  where the interaction term is included. This means that when there is a very low level of Tobin's Q for a firm, the more board independence results in higher CEO compensation. However, for the higher levels of Tobin's Q, the effect of board independence becomes negative on CEO compensation and as the percentage of independent directors increases, CEO compensation decreases.

For hypothesis 3, we modify Model 1 by including the Index of Economic Freedom and its interaction variables with each corporate governance indicators and construct Model 3. We predict that stronger governance in firms with higher levels of economic freedom results in lower levels of CEO compensation. Findings from Model 3 show that economic freedom index (EFI) and its interactions with the percentage of independent directors on boards and percentage of institutional shares (EFI\*BOARD\_IND and EFI\*INSTITUTION) are statistically significant at 1%, 10%, and 10% significance level, respectively. The coefficient for EFI is equal to 0.33, which shows that the higher level of economic freedom in a country itself has an incremental effect on CEO compensation in a firm. On the other hand, consistent with our hypotheses H3c and H3e, the interaction terms EFI\*BOARD\_IND and EFI\*INSTITUTION are statistically significant and have negative coefficients of -0.4805 and -0.9728 respectively. In this case, the effect of board independence on CEO compensation under the effect of economic freedom can be calculated as  $0.4973 - 0.4805*EFI$ . This provides new evidence that board independence has a negative effect on CEO compensation for the high levels of economic freedom as stated in hypothesis H3c. In addition, the effect of institutional shares on CEO compensation by the moderating effect of economic freedom is equal to  $1.0256 - 0.9728*EFI$ , which means that for the high levels of economic freedom, the effect of insider shares will be negative on CEO compensation and as the percentage of insider shares increases, CEO compensation will decrease as in the hypothesis H3e.

### 3.6. Robustness Checks

As mentioned in the previous section, some of the regression results are not consistent with our hypotheses. For this reason, we analyze the dataset in terms of countries and the number of observations. We notice that the majority of firm-year observations are from the United States. Table 6 below shows the top 10 countries regarding the number of firms in the sample.

**Table 6.** Number of Firms by Country

<b>Country Name</b>	<b>Number of Firms</b>	<b>Percentage to Grand Total</b>
United States	1314	63,3
Britain	175	8,4
France	85	4,1
Germany	80	3,9
Sweden	60	2,9
Spain	52	2,5
Italy	44	2,1
Norway	42	2,0
Switzerland	40	1,9
Netherlands	32	1,5
<b>Total</b>	<b>1924</b>	<b>92,7</b>
<b>Grand Total</b>	<b>2075</b>	<b>100,0</b>

According to the table, 63,3 percent of the firms in the sample are from the United States. Actually, 2,058 firms from the United States have 5,088 firm-year observations in the sample and this constitutes approximately %71 of total observations in the sample. Such a high percentage of observations from the U.S. may create bias because corporate governance practices may differ regarding different governance approaches such as Anglo-Saxon and German-Japanese. These approaches differ in the goals of companies and governance structures (Ayuso et al., 2014). For instance, U.S. firms mostly have unitary board structure and there are no employee representatives in their boards, whereas in other countries we can see various combinations of the board and board member

structures. For this reason, it is important to test our hypotheses also for U.S. and non-U.S. firms individually.

In order to eliminate a possible bias as a result of a greater percentage of firm-year observations of the U.S. firms in the sample, we modify Model 1 and Model 2 by excluding U.S. firms. We do not apply this test to Model 3 because economic freedom could only be tested in a multi-country setting. If the initial results are parallel to non-U.S. firms' case, we can conclude that the conflicts result from the difference of approaches in U.S. and non-U.S. firms. Table 7 and Table 8 shows the results for Model 1 and Model 2, respectively. Also, initial results are denoted as (1), results from non-U.S. sample are denoted as (2) and finally, results from only U.S. sample are denoted by (3).

**Table 7.** The Reduced Estimation Results for Model 1

	(1)	(2)	(3)
<b>TWO_TIER</b>	-0.1547*** (0.005)	-0.0200 (0.696)	
<b>EMP</b>	-0.0664*** (0.000)	-0.0121 (0.446)	
<b>DUALITY</b>	-0.1254*** (0.000)	-0.1152 (0.199)	-0.1589*** (0.000)
<b>BOARD_IND</b>	0.0717*** (0.000)	0.0366 (0.107)	0.0382 (0.105)
<b>INSTITUTION</b>	0.0925*** (0.000)	0.0470* (0.058)	0.0702** (0.027)
<b>INSIDER</b>	0.0183 (0.419)	-0.0027 (0.866)	0.0104 (0.757)
<b>Q</b>	0.0506 (0.247)	0.1931*** (0.000)	0.0424 (0.366)
<b>BETA</b>	0.0996 (0.191)	0.0263 (0.928)	0.0380 (0.540)
<b>TA</b>	0.4681*** (0.000)	0.4736*** (0.000)	0.5615*** (0.000)
<b>TL_TA</b>	0.0365 (0.357)	-0.0392 (0.309)	0.0396 (0.367)

**Table 7.** The Reduced Estimation Results for Model 1 (cont'd)

	(1)	(2)	(3)
<b>GDP</b>	0.0058 (0.249)	0.0107** (0.028)	
<b>RD_TA</b>	0.0078 (0.614)	-0.0587 (0.439)	0.0120 (0.441)
<b>Constant</b>	0.1973*** (0.001)	-0.1998** (0.048)	0.3862*** (0.000)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	7146	2058	5088
<b>D.F.</b>	25	25	22
<b>Chi<sup>2</sup></b>	892.2	248.9	996.6

All variables are defined in Table 3. The table indicates the standardized coefficients for each variable and p-values are in parentheses. \*, \*\*, and \*\*\* denotes statistical significance at 10%, 5%, and 1% levels respectively.

The results for Model 1 for non-U.S. companies show that two-tier board structure and percentage of employee representatives on board are not statistically significant but the results of these variables are qualitatively similar for initial and non-U.S. estimations. Although CEO duality - CEO compensation relationship is significant in the main model (column 1), the results show that it is no more significant for the non-US sample. On the contrary, the percentage of independent directors has no longer significant effect on CEO compensation in the non-US sample. On the other hand, percentage of institutional shares outstanding is still positive and significant effect even though the level of significance drops down to 10% level whereas insider shares is not significant which is parallel with the overall sample results. Unlike the initial results (1), Tobin's Q is now statistically significant and positively associated to CEO compensation at 1% significance level and annual GDP growth is also positively related to CEO compensation at 5% significance level. The result for R&D expenses to total assets shows that the relationship is not significant in line with the initial estimation (1). For the remaining variables BETA and TL\_TA, we find no significant relationship with CEO compensation, parallel with the initial results (1).



On the other hand, the results of Model 1 for the U.S. companies show that CEO duality continues to be statistically significant and negatively associated with CEO compensation. At this point, we conclude that this negative relationship cannot be explained by differentiating country-setting of the sample. One reason behind this result may be related to CEOs' corporate perquisites. It does not have a direct significant association with CEO compensations according to Yermack (2006). However, perquisites may arise where a firm's governance or incentives are insufficient to take control of the use of assets by managers and in optimal CEO contracts (Jensen & Meckling, 1976; Fama, 1980). Another reason why CEO compensation-CEO Duality relationship is not parallel with our expectations may be related to company age. Until now, we don't measure the effect of company age on the CEO's managerial power and its effect on compensation. According to Fredrickson, Hambrick, and Baumrin (1988), as firms get larger both in terms of size and age, a dissatisfied board of directors becomes more likely to fire CEOs since s/he has readily available alternatives within the firm. For this reason, the effect of company age on CEOs' managerial power and its ability to increase CEO compensation will be further analyzed in this section.

The percentage of institutional shares outstanding (INSTITUTION) and the natural logarithm of total assets (TA) are significant and positive parallel to other results in columns (1) and (2). Unlike our expectations, board independence is not significantly associated with CEO compensation for U.S. firms. The unitary board structure is common in U.S. firms and for this reason, managers gain more power on board decisions. Thus, we may conclude that independent directors in unitary boards are unable to affect CEO compensation and reduce CEO's managerial power in the U.S. For remaining variables, BETA and TL\_TA, the results are not statistically significant in different estimations of Model 1.

As mentioned above, board structure (TWO\_TIER), the percentage of employee representatives on board (EMP), CEO duality (DUALITY), the percentage of independent directors (BOARD\_IND) and insider share ownership (INSIDER) are not statistically significant with CEO compensation. However, looking at the direction of their effects on CEO compensation, we notice that the

signs of their coefficients do not change for non-U.S. case except for INSIDER variable. Therefore, one can say that results for those variables are qualitatively similar for the non-U.S. case.

**Table 8.** The Reduced Estimation Results for Model 2

	(1)	(2)	(3)
<b>TWO_TIER</b>	-0.0928 (0.324)	0.0940 (0.305)	
<b>EMP</b>	-0.0836*** (0.002)	-0.0248 (0.397)	
<b>DUALITY</b>	0.0109 (0.919)	-0.1814 (0.201)	-0.0219 (0.846)
<b>BOARD_IND</b>	0.1207*** (0.000)	0.0372 (0.275)	0.0812* (0.065)
<b>INSTITUTION</b>	0.0536 (0.149)	-0.0282 (0.478)	0.0300 (0.539)
<b>INSIDER</b>	-0.0136 (0.655)	-0.0326 (0.250)	-0.0340 (0.442)
<b>Q</b>	0.1590** (0.038)	0.0154 (0.912)	0.1211 (0.176)
<b>Q*TWO_TIER</b>	-0.0236 (0.340)	-0.0428 (0.130)	
<b>Q*EMP</b>	0.0227 (0.358)	0.0162 (0.620)	
<b>Q*DUALITY</b>	-0.0865 (0.216)	0.0491 (0.321)	-0.0841 (0.241)
<b>Q*BOARD_IND</b>	-0.1651* (0.068)	-0.0028 (0.983)	-0.1285 (0.244)
<b>Q*INSTITUTION</b>	0.0829 (0.226)	0.1907*** (0.003)	0.0737 (0.356)
<b>Q*INSIDER</b>	0.0470 (0.272)	0.0550 (0.112)	0.0561 (0.252)
<b>BETA</b>	0.0966 (0.202)	0.0370 (0.897)	0.0350 (0.582)
<b>TA</b>	0.4730*** (0.000)	0.4761*** (0.000)	0.5667*** (0.000)
<b>TL_TA</b>	0.0327 (0.352)	-0.0414 (0.278)	0.0357 (0.361)

**Table 8.** The Reduced Estimation Results for Model 2 (cont'd)

	(1)	(2)	(3)
<b>GDP</b>	0.0057 (0.261)	0.0102** (0.035)	
<b>RD_TA</b>	0.0089 (0.578)	-0.0269 (0.711)	0.0112 (0.486)
<b>Constant</b>	0.1534*** (0.002)	-0.1820* (0.097)	0.3524*** (0.000)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	7146	2058	5088
<b>D.F.</b>	31	31	26
<b>Chi<sup>2</sup></b>	952	292	1007

All variables are defined in Table 3 and Table 5. The table indicates the standardized coefficients for each variable and p-values are in parentheses. \*, \*\*, and \*\*\* denotes statistical significance at 10%, 5%, and 1% levels respectively.

The results for Model 2 with non-U.S. firms show that the interaction variable, Q\*INSTITUTION is positive and significant at %1 significance level. However, since this variable is not significant in the main model (1), we can conclude that such a major presence of U.S. firms in the sample affects the outcomes. Even if it is not statistically significant, higher institutional share ownership is associated with lower CEO compensation in non-U.S. companies regarding the direction of their correlations. With the significant effect of firm performance on this relationship, the effect of institutional shares turns out to be positive if the company's performance is high. Results suggest that outstanding shares of non-U.S. firms with high performance attract other institutional investor's attention regarding profits, for this reason, more institutions purchase the shares of these firms. For this reason, as the firm performance increase, more institutional investors want to purchase the shares of the firm and generate profit for their own interests and also guarantee their investments. Therefore, institutional investors are more likely to authorize and give managerial power to CEOs and increase their compensation. However, the presence of U.S. firms in the sample makes this relationship insignificant on CEO compensation.

The annual GDP growth is also significantly associated with CEO compensation at a 5% significance level for non-U.S. companies. Another important finding is observed for Q and Q\*BOARD\_IND. These variables are statistically significant in the initial results (1), but not in column (2). In non-U.S. firms, the effectiveness of independent directors on CEO compensation decreases as firm performance increases when compared to U.S. firms. as Kim et al. (2014) argued this difference may be related to the degree of operational knowledge of independent directors in supervisory boards in non-U.S. companies because in unitary boards both dependent and independent members are working together and independent members' operational knowledge increasing more rapidly, so as the efficiency of monitoring functions of the board of directors. Other variables in estimation (2) has no significant effect on CEO compensation in line with the initial estimation.

For the U.S. firms, results show that the percentage of independent directors on board (BOARD\_IND), which is significant in the initial results (in column 1), is also significant in column (3). Although its significance level drops from 1% to 10%, the direction of the relationship does not change in column (3). Thus, we can conclude that the U.S. sample findings support our initial results for this variable. However, Tobin's Q (Q) and its interaction with the percentage of independent directors on board (Q\*BOARD\_IND) are not significant for U.S. firms although they are significant in the initial estimation. Yet, the results are qualitatively similar for those variables because signs are consistent for all estimations (1), (2) and (3).

Consequently, as stated earlier, we cannot test our two variables, TWO\_TIER and EMP, for the U.S. sample because there is no firm with a two-tier board structure or employee representatives on their boards for country-specific reasons. However, the initial estimations for Model 1 and Model 2 are biased to a certain extent because the governance approaches are quite different in the U.S. firms compared to non-U.S. firms.

In model 1, the results for INSTITUTION and TA are robust in all estimations. The percentage of outstanding shares held by institutions is positively

and significantly associated with CEO compensation, parallel with our expectations. The effect of this variable doesn't change for U.S. and non-U.S. sample because institutions control and direct managers' decisions according to their own interests. Since this relationship is based on mutual interest, CEOs try to increase their own benefits by asking for higher compensation. The natural logarithm of total assets is also positively and significantly associated with CEO compensation both for the U.S and non-U.S. sample. On the other hand, the significance of the results for DUALITY varies by the country setting of the samples (non-U.S. vs. U.S.-only). Since we mostly deal with corporate governance indicators in Model 1, we will further analyze the effect of CEO duality on CEO compensation.

In model 2, we investigate that the interaction of board independence and Tobin's Q is significantly and negatively related to CEO compensation. However, among non-U.S. firms, this interaction has no significant effect on CEO compensation. Moreover, even though the interaction of Tobin's Q with institutional share ownership is not significant in the initial sample, they are not only significant but also positive in the non-U.S. sample. Similarly, annual GDP growth is positively and significantly related to CEO compensation in non-U. S sample, although it is not significant in the main model. Consequently, like in the robustness check for the first model, results of almost each interaction variable are qualitatively similar in all estimations but there are quantitative differences between the U.S. and non-U.S. sample.

As stated previously, CEO duality is negatively and significantly associated with CEO compensation in the main model (Model 1) while it is not significant in Model 2 and Model 3. Also, CEO duality is still negatively and significantly associated with CEO compensation in the main model (1) and in the U.S.-only estimation. Even if the results show that CEO duality has a negative effect on CEO compensation, we expect that this effect will be lower as the firm's age getting larger. Thus, in the following section, we check whether the firm age has any effect on CEO duality.

**Table 9.** The Moderating Effect of Firm Age on CEO duality and CEO Compensation Relationship

	<b>(Model 1)</b>	<b>(Model 2)</b>	<b>(Model 3)</b>
<b>TWO_TIER</b>	-0.1781*** (0.002)	-0.1200 (0.227)	0.0486 (0.956)
<b>EMP</b>	-0.0729*** (0.000)	-0.0921*** (0.001)	-0.3279 (0.208)
<b>DUALITY</b>	-0.2106*** (0.000)	-0.0677 (0.585)	-0.4143 (0.569)
<b>BOARD_IND</b>	0.0684*** (0.000)	0.1156*** (0.000)	0.9348*** (0.000)
<b>INSTITUTION</b>	0.0774*** (0.000)	0.0382 (0.310)	0.5281 (0.168)
<b>INSIDER</b>	0.0114 (0.632)	-0.0211 (0.522)	0.1055 (0.762)
<b>Q</b>	0.0532 (0.235)	0.1534* (0.059)	0.0540 (0.228)
<b>FIRM_AGE</b>	-0.0248 (0.130)	-0.0235 (0.158)	-0.0241 (0.134)
<b>FIRM_AGE*DUALITY</b>	0.0447*** (0.007)	0.0403** (0.019)	0.0477*** (0.004)
<b>BETA</b>	0.0589 (0.336)	0.0561 (0.365)	0.0648 (0.303)
<b>TA</b>	0.4803*** (0.000)	0.4855*** (0.000)	0.5139*** (0.000)
<b>TL_TA</b>	0.0192 (0.626)	0.0152 (0.659)	0.0178 (0.653)
<b>GDP</b>	0.0091* (0.087)	0.0088* (0.099)	0.0060 (0.249)
<b>RD_TA</b>	0.0039 (0.776)	0.0054 (0.712)	0.0086 (0.534)
<b>Q*TWO_TIER</b>		-0.0228 (0.388)	
<b>Q*EMP</b>		0.0252 (0.314)	
<b>Q*DUALITY</b>		-0.0849 (0.236)	
<b>Q*BOARD_IND</b>		-0.1573* (0.099)	

**Table 9.** The Moderating Effect of Firm Age on CEO duality and CEO Compensation Relationship (cont'd)

	(Model 1)	(Model 2)	(Model 3)
<b>Q*INSTITUTION</b>		0.0823 (0.246)	
<b>Q*INSIDER</b>		0.0460 (0.301)	
<b>EFI</b>			0.3267*** (0.000)
<b>EFI*TWO_TIER</b>			-0.0668 (0.790)
<b>EFI*EMP</b>			0.2675 (0.308)
<b>EFI*DUALITY</b>			0.0925 (0.777)
<b>EFI*BOARD_IND</b>			-0.9437*** (0.000)
<b>EFI*INSTITUTION</b>			-0.4720 (0.233)
<b>EFI*INSIDER</b>			-0.0976 (0.781)
<b>Constant</b>	0.2407*** (0.000)	0.1941*** (0.000)	0.2800 (0.273)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	6796	6796	6796
<b>D.F.</b>	27	33	34
<b>Chi<sup>2</sup></b>	952.1	1014.3	1154.4

In this table, FIRM\_AGE represents the firms' age and FIRM\_AGE\*DUALITY represents the interaction of firm age and CEO duality. All other variables are defined in Table 3 and Table 5. The table indicates the standardized coefficients for each variable and p-values are in parentheses. \*, \*\*, and \*\*\* denotes statistical significance at 10%, 5%, and 1% levels respectively.

Table 9 shows that FIRM\_AGE\*DUALITY is statistically significant and positive in all models. When we further analyze the results in model 1, CEO duality (DUALITY) and its interaction with firm age (FIRM\_AGE\*DUALITY) are statistically significant at 1% significance level with coefficients of -0.2106 and 0.0447, respectively. In this case, the effect of CEO duality on CEO compensation under the effect of firm age is calculated as -0.2106 +

0.0447\*FIRM\_AGE, which indicates that the negative effect of CEO duality on CEO compensation decreases as the firm age increases. In fact, at the beginning and growth stages of a firm, even if CEO has more managerial power, s/he may act in a way to increase the value of the firm because CEO will be able to gain more benefits at mature stages of the firm. Consequently, results reveal that CEOs have more power to increase their compensation where CEO duality exists in more mature firms.

As the results in Table 9 indicate, CEO duality and its interaction with firm age are statistically significant and direction of their effects on CEO compensation are also the same in all our models. Therefore, as mainly intended, we include non-U.S. and U.S.-only comparison in Model 1 to further investigate the effect of firm age on the direct relationship between CEO duality and CEO compensation. Results in Table 10 show that CEO duality (DUALITY) and its interaction with firm age (FIRM\_AGE\*DUALITY) is significant for U.S. companies but not for non-U.S. companies. Therefore, we conclude that our previous comment on the results of firm age and duality is valid only for U.S. firms and the maturity level of a firm has no effect on CEO duality for non-U.S. firms.

**Table 10.** The Reduced Model for the Moderating Effect of Firm Age on CEO duality and CEO Compensation Relationship

	(1)	(2)	(3)
<b>TWO_TIER</b>	-0.1781*** (0.002)	-0.0406 (0.429)	
<b>EMP</b>	-0.0729*** (0.000)	-0.0140 (0.328)	
<b>DUALITY</b>	-0.2106*** (0.000)	-0.0638 (0.748)	-0.2318*** (0.000)
<b>BOARD_IND</b>	0.0684*** (0.000)	0.0485** (0.025)	0.0325 (0.168)
<b>INSTITUTION</b>	0.0774*** (0.000)	0.0423* (0.056)	0.0646** (0.045)



	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>
<b>INSIDER</b>	0.0114 (0.632)	-0.0109 (0.541)	0.0098 (0.775)
<b>Q</b>	0.0532 (0.235)	0.1987*** (0.000)	0.0428 (0.380)
<b>FIRM_AGE</b>	-0.0248 (0.130)	-0.0057 (0.764)	0.0335 (0.150)
<b>FIRM_AGE*DUALITY</b>	0.0447*** (0.007)	-0.0448 (0.579)	0.0385** (0.011)
<b>BETA</b>	0.0589 (0.336)	-0.1262 (0.656)	0.0133 (0.819)
<b>TA</b>	0.4803*** (0.000)	0.4724*** (0.000)	0.5549*** (0.000)
<b>TL_TA</b>	0.0192 (0.626)	-0.0348 (0.314)	0.0234 (0.604)
<b>GDP</b>	0.0091* (0.087)	0.0119** (0.020)	
<b>RD_TA</b>	0.0039 (0.776)	-0.0668 (0.357)	0.0091 (0.525)
<b>Constant</b>	0.2407*** (0.000)	-0.2141* (0.071)	0.4241*** (0.000)
<b>Industry Dummies</b>	Included	Included	Included
<b>N</b>	6796	1814	4982
<b>D.F.</b>	27	27	24
<b>Chi<sup>2</sup></b>	952.1	282.8	1077.9S

All variables are defined in Table 3 and Table 9. The table indicates the standardized coefficients for each variable and p-values are in parentheses. \*, \*\*, and \*\*\* denotes statistical significance at 10%, 5%, and 1% levels respectively.

As mentioned before, the reason why the relationship between CEO duality and CEO compensation is not significant may be originated from the benefits apart from compensation. In the literature, this type of benefits is called as CEO's corporate perquisites. According to Yermack (2006), perquisites do not have a direct significant association with CEO compensation, but perquisites may arise where a firm's governance or incentives are insufficient to take control of the use of assets by managers and in optimal CEO contracts (Jensen & Meckling, 1976; Fama, 1980).

## CHAPTER 4

### CONCLUSION

#### 4.1. Discussion

This study examines the effect of corporate governance indicators on CEO compensation. While corporate governance became a popular topic in the last decade after several serious business failures and corporate scandals, very few researchers focus on the direct effect of board characteristics (i.e. board structure and employee representation) on CEO compensation. Additionally, we expect to provide empirical evidence on how the level of economic freedom moderates the effect of governance indicators on CEO compensation. In this regard, this study contributes to the related literature significantly concerning the direct effect of board characteristics and the moderating effect of economic freedom on CEO compensation.

We examine the direct effect of governance indicators on CEO compensation as well as the moderating effect of performance and economic freedom on governance-CEO compensation relationship in three different models. The regression results for the direct effects suggest that board structure has a significant and negative association with CEO compensation. Existence of two-tier board structure results in stronger governance by separating management and supervisory functions and thus it is associated with lower levels of CEO compensation. Similarly, this study documents higher percentage of employee representatives on corporate boards strengthen governance in firms by decreasing information asymmetry and increasing the effectiveness of monitoring ability of the board of directors, which in turn leads to a lower level of CEO compensation. These results are consistent with our hypotheses and contribute to the related literature. Additionally, the percentage of outstanding shares held by institutions is

another governance indicator that significantly affects CEO compensation. The results show that an increase in the percentage share held by institutional shareholders in companies leads to higher CEO compensation in line with our expectations. According to the findings, the percentage of outstanding shares held by insiders, however, has no significant impact on CEO compensation.

However, we also observe that board independence, measured by the percentage of independent directors, is significantly and positively associated with CEO compensation in contrast with our hypothesis. The most possible reason for such a result may be associated with the level of managerial knowledge of independent directors. Kim et al. (2014) assert that independent directors may not have sufficient information to analyze and control the managerial operations in case the tenure of the directors is low. Thus, the higher percentage of independent directors in boards may result in weaker control mechanisms in this regard.

The results of the direct effects model also contradict with our hypothesis and related literature regarding CEO duality and CEO compensation relationship. Our findings show that there is a negative and significant relationship between CEO duality and CEO compensation, suggesting that CEO compensation is lower if the CEO is also the Chairman of the board. Since this contradicts our expectations, we further analyze this relationship and conduct an additional analysis by adding company age to our main model. We expect that as the firm's age increases companies become more dependent on CEO/Chairman. Results show that firm age and its interaction are significant on CEO compensation and that when CEO duality exists in more mature companies, CEO compensation increases as the company age increases.

In the second model, we examine the moderating effect of firm performance, measured by Tobin's Q, on corporate governance and CEO compensation relationship. Our results document that none of the interaction terms is statistically significant except the interaction of Tobin's Q and board independence. For the higher levels of Tobin's Q, indicating higher firm performance, the effect of board independence becomes negative on CEO compensation. Moreover, as the percentage of independent directors increases,

CEO compensation decreases. Thus, we contribute to the related literature regarding the moderating effect of firm performance on board independence and CEO compensation.

In the last model, which has critical importance for the related literature, we examine the moderating effect of countries' level of economic freedom on corporate governance and CEO compensation relationship. We measure economic freedom by Overall Index of Economic Freedom, provided by The Heritage Foundation. Our findings show that economic freedom significantly moderates the relationship between board independence and CEO compensation. Results provide new evidence that board independence has a negative effect on CEO compensation for the high levels of economic freedom parallel with our hypothesis. In addition, economic freedom moderates also the association between institutional share ownership and CEO compensation, that is, for the higher levels of economic freedom, insider share ownership reduces CEO compensation.

Since not all regression results are consistent with our hypotheses, we analyze our sample regarding the number of firms in each country and observe that the majority of the firms in our sample comes from the United States. This kind of structure may create biased results because corporate governance practices may differ regarding governance approaches such as Anglo-Saxon and German-Japanese approaches. After examining the sample for non-U.S. and the U.S. firms separately, we observe that the results are robust only for institutional share ownership regarding their direct effects on CEO compensation. However, the significance is not preserved for board structure, employee representatives, board independence, CEO duality, and insider share ownership when we run the first model for non-U.S. firms. Although they are not significant, we get qualitatively similar results for non-U.S. firms because the signs of the variables do not change among the reduced models except insider share ownership. Moreover, for the model with firm performance, the results are similar to our main model. Although some variables that are initially significant regarding CEO compensation and governance relationship become insignificant for non-U.S. firms or vice versa, the signs of the coefficients do not change. In other words, the results are qualitatively

similar when we compare the main model with the reduced model including non-U.S. firms.

#### **4.2. Managerial Implications**

As mentioned earlier, strong corporate governance helps firms to protect the interests of all stakeholders in a company. From this point of view, this study provides empirical results that are directly related with companies' both internal and external environments, by considering governance practices, firm performance and the level of economic freedom in countries. For this reason, the results of this study contribute to directors' practices regarding corporate governance to solve agency problems arising from conflicts of interests between management and other stakeholders.

The results of this study may also encourage corporations to set their board as two-tier structure, allow employee representation on boards, separate CEO and Chairman positions especially in companies at the maturity stage, increase board independence, limit institutional share ownership to eliminate self-oriented operations conducted by CEOs. In this way, companies may overcome the agency problems, take under control the managerial power of CEOs, and eventually achieve long-term survival of corporations.

#### **4.3. Limitations**

We tackle with several limitations while conducting the study. One of them is the limited extent of data in Bloomberg Database. Although Bloomberg Database contains comprehensive financial and governance data when compared to other databases, companies generally do not transparently disclosure compensation-related information. Since the main purpose of the study is to investigate the relationship between CEO compensation, governance indicators and the level of economic freedom, the data limits the study to a certain extent. In

addition to missing data issue, the number of firms in each country is limited. As mentioned before, the results for some variables used in the study cannot be maintained for non-U.S. firms because the sample size is very low compared to U.S. firms.

Besides the availability issue of governance data, there are only a limited number of firms having governance data from each country included in the Bloomberg Database. For instance, there is only one firm from Romania, two firms from Hungary and eight firms from Greece in the sample. Such a low number of firms and observations result in a limited statistical impact on the overall sample and affects the generalizability of the results. Moreover, some countries among European Union such as Bulgaria and Lithuania are completely excluded from the sample because there is not any firm that has governance data from those countries. Missing data and exclusion of the countries affect the generalizability of the empirical results of the study.

Although we consider adding more detailed variables related to CEO compensation, i.e. analyzing bonuses and salaries of CEOs separately, and variables that are related to board characteristics, i.e. the existence of audit, compensation or nomination committees, we cannot find such variables in Bloomberg Database. In fact, these committees are important indicators for effective monitoring function of the board of directors. For example, audit committees in corporate boards facilitate coordination between internal and external auditors to control accounting, audit processes and financial statements. In other words, their existence helps to reduce information asymmetry between boards and management (Klein, 1998). Compensation committees, on the other hand, are responsible for controlling the level of all compensations for top executives of a firm where nomination committees giving recommendations on the criteria for electing board members, appointing the members of the board and ensuring the independence of board members.

#### **4.4. Suggestions for Future Research**

For future research, the sample of the study may be considered in a different setting because the majority of our sample consists of firms from the United States and there are few firms from other countries. Adding more firms and countries to the sample would increase the generalizability of the results.

Additionally, the existence of board committees may also be considered. As mentioned above, audit, compensation, and nomination committees have some contributions to corporate governance. For example, audit committees are crucial for ensuring effective control mechanism in a company and helps to overcome agency problems between management and board of directors. On the other hand, compensation committees are important to control the interests of top executives including CEOs. Adding these variables to our models may provide a new understanding of corporate governance, economic freedom, and CEO compensation relationship.

Finally, our study does not clarify the direct relationship between CEO duality and CEO compensation for non-U.S. firms. Therefore, the effect of perquisites on CEO duality and CEO compensation relationship for non-U.S. firms may be further investigated.

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## APPENDICES

### A. TURKISH SUMMARY / TÜRKE ÖZET

#### KURUMSAL YÖNETİM UYGULAMALARI CEO TAZMİNATLARINI ETKİLER Mİ? EKONOMİK ÖZGÜRLÜĞÜN KURUMSAL YÖNETİM – CEO TAZMİNATI İLİŞKİSİ ÜZERİNDEKİ İKİ TARAFLI ETKİSİ: ULUSLARARASI BİR ÇALIŞMA

##### **Kurumsal Yönetimin Teorik Arka Planı**

Kurumsal yönetim, etkin karar alma ve firma değerini maksimize ederek paydaşların ve yöneticilerin yararlarını ayıran bir mekanizmadır (Cuervo, 2002). Bu nedenle, kurumsal yönetim, bazı ciddi ticari başarısızlıklar ve WorldCom ve Enron gibi kurumsal skandalların ortaya çıkmasından sonra yirmi birinci yüzyılın başı olarak tartışılan bir kavram haline geldi. Daha sonra, birçok ülke kendi yönetişim ilkelerini açıkladı veya geliştirdi ve şirketlerin takip etmelerini istedi. En bilinen örnek olan “Sarbanes-Oxley Yasası” Temmuz 2002'de imzalandı ve yatırımcıların ABD'nin sermaye piyasasına olan güvenini arttırmayı hedefledi (Engel, Hayes ve Wang, 2007).

Ülkeler tarafından kabul edilen farklı kurumsal yönetim ilkeleri olduğu için (İngiltere Kurumsal Yönetim Kanunu ve Şirketler Hukukunun Modernizasyonu ve AB'de Kurumsal Yönetişimin Geliştirilmesi gibi), bu ilkeler hissedar yaklaşımı (Anglo-Sakson) ve paydaş (Alman-Japon) yaklaşımı olarak bilinen ayırt edici idari zihniyet ve süreçlerle sonuçlanabilir. Hissedar değeri yaklaşımı, şirketleri hissedar menfaatlerini en üst düzeye çıkaran araçlarla ilişkilendiren geleneksel bir model iken, paydaş yaklaşımında; çalışanlar, tedarikçiler, işçi temsilcileri ve bankaların çıkarları gibi yatırım yapmayan taraflara daha fazla önem verilir ve daha iyi temsil edilir (Tirole, 2001; Ayuso, Rodriguez, Garcia-Castro ve Arino, 2014).

“Vekalet Teorisi” ve “Yönetmel Güç Teorisi” gibi teoriler, kurumsal yönetim uygulamalarının kurumlarda nasıl çalıştığı hakkında yeterli bilgi sağlar. Vekalet Teorisi, şirket sahipleri ile şirket yöneticileri arasındaki fayda ilişkisini açıklar (Jensen ve Meckling, 1976). Öte yandan, Yönetim Gücü Teorisi, bir şirketin bağımsız üyeler gibi kontrol mekanizmalarının üyelerinin yalnızca ödeme sözleşmeleri düzenleyerek yönetimle yeterince çalışamayacağını, dolayısıyla yöneticilerin karar vericileri etkileyebileceğini ve daha fazla fayda sağlayabileceğini iddia eder (Bebchuck, Fried, ve Walker, 2002). Fama ve Jensen (1983) bu sorunu “mülkiyet” ve “kontrol” ayrımı ile ilişkilendirip şirketlerin yönetim ve izleme işlevlerini ayırt ederek bu tür vekalet sorunlarını çözebileceklerini savunuyorlar.

Sonuç olarak, “fayda ilişkisini”, şirket sahiplerinin faydalarını arttırmak için bazı karar alma yetkisi olan yöneticilere delegasyonu olarak tanımlayabiliriz (Jensen ve Meckling, 1976). Bu tarafların her ikisinin de fayda maksimizasyonu konusunda farklı hedefleri varsa, bu ilişki vekalet sorununa dönüşür (Eisenhardt, 1989). Vekalet sorununun nedenleri iki yönlüdür. İlk sebep, şirket sahipleri ve yöneticilerin, faydaları en üst düzeye çıkarmada farklı hedefleri olduğu; İkinci sebep, şirket sahiplerinin yöneticilerin operasyonlarını ve kararlarını anlama ve takip etmekte zorlandıklarıdır (Eisenhardt, 1989). Bu iki sebebi yorumlamak gerekirse, kontrol ve yönetim mekanizmaları arasında bir bilgi asimetrisi varsa, yöneticilerin kendilerine fayda sağlamak için yönetsel güçlerini kontrol mekanizmaları üzerinde kullanma eğiliminde oldukları söylenebilir. Bebchuk ve diğ. (2002), kontrol mekanizmalarının hissedar değerini maksimize etmek amacıyla tazminat sözleşmeleri koyduğunu belirtmektedir, ancak “Yönetmel Güç Teorisi”, kontrol mekanizmalarının üyelerinin ücret sözleşmeleri düzenleyerek dirsek dirseğe çalışamayacağını ve bu nedenle yöneticiler tazminatlar üzerindeki kararları etkileyebilmekte ve kendilerine daha fazla fayda sağlayabilmektedirler. Ayrıca, Fama ve Jensen (1983) de benzer şekilde, kuruluşların kararların yönetimini ve izlenmesini ayırt ederek vekalet sorunlarını çözebileceğini iddia ederek “mülkiyet” ve “kontrol” ayrımı ile ilişkilendirmektedir.



## **Kurumsal Yönetim - CEO Tazminatı İlişkisi**

Bu çalışmada kurumsal yönetim ile CEO tazminatı ilişkisi toplam 6 değişken kullanılarak analiz edilmektedir. Bunlar: kurul yapısı, yönetim kurulundaki çalışan temsilcileri, yönetim kurulu bağımsızlığı, CEO ikililiği, kurumsal hissedarlık ve şirket içi hisse hissedarlığı olarak sıralanabilir.

Tüm dünyadaki şirketlere gelince, genel olarak iki tür kurul yapısı ön plana çıkmaktadır; tek katmanlı (üniter) ve iki katmanlı kurul yapıları. İlk tür, firmaların yönetim kuruluna denilen tek bir kurulun bulunduğu üniter kurul yapısıdır. Bu kurul, hem başkanın hem de CEO'nun görevlerini üstlenmek için genellikle tek bir yönetici seçen, hem icracı hem de icracı olmayan üyelerden oluşur. Öte yandan, iki katmanlı bir kurul yapısını benimseyen şirketlerin örgütsel yapılarında temel olarak iki tür kurul vardır. Birincisi, günlük operasyonlardan sorumlu olan icra kurulu, ikincisi ise firma operasyonlarının yönünü belirleyen, yöneticileri tayin eden ve hissedarlar adına danışma ve izleme işlevlerinde görev alan yöneticilerin oluşturduğu yönetim kurulu. (Belot ve diğerleri, 2014). Tabii ki, tüm organizasyonlar yapısal olarak iki kurula sahip değildir, çünkü gelenekler veya düzenlemeler yoluyla farklı ülkelerdeki firmalar tek katlı (üniter) veya iki katmanlı kurul yapıları seçmek zorundadır.

Daha önce, ABD ve İngiltere gibi Anglo-Saxon ülkelerinde hissedarlar yaklaşımının daha yaygın olduğu tartışılmıştı. Bu yaklaşım, hissedarların çıkarlarını en üst seviyeye çıkarmak anlamına geldiğinden, şirketlerin bu ülkelerde tek katmanlı bir yönetim kurulu yapısına sahip olma olasılığı daha yüksektir. Bu tip kurul yapısında, hissedarlar, kurulun üyelerini yasa ile tayin etme hakkına sahiptir. Bununla birlikte, uygulamada CEO / Başkan, yönetim kurulu üyelerini seçmekte ve bu da CEO'ların yönetim gücünü ve yönetim kurulu üyelerinin pasifliğini arttırmaktadır (Millet-Reyes ve Zhao, 2010). CEO'ların hakimiyetini önlemek için şirketler, yönetim kurulunda icracı olmayan ve bağımsız üyeler içerebilir, ancak yönetim kurulu üyeleri ve CEO üyeleri arasındaki bilgi asimetrisi arttıkça, yönetim kurulu üyeleri üzerinde hakimiyet kazanır ve kendi çıkarlarına göre hareket eder.

Diğer taraftan, iki katmanlı kurul yapılarını benimsemiş şirketlerin yönetim kurulları icracı olmayan ve bağımsız üyelere oluşan paydaş yaklaşımını benimsemiştir ve görevleri şirketin faaliyetlerini izlemektir (Cromme, 2005). Bu şekilde, yönetim ve denetim kurullarının gücü birbirinden ayrılır ve bu, tek katmanlı yönetim kuruluna sahip şirketlerdeki durumun aksine yöneticiler tarafından daha fazla hesap verebilirlik ve şeffaflık ve daha az baskınlık ile sonuçlanır. Ayrıca, iki aşamalı kurul yapıları, yönetim kurulunun danışmanlık hizmetleri vermesini ve karar alma süreçlerinde daha aktif şekilde yer almasını sağlar (Cromme, 2005).

Önceki akademik literatür, çalışanların temsil edilmesinin şirket kurullarındaki yönetim uygulamaları için önemini ortaya koymaktadır. Almanya ve Fransa gibi bazı ülkelerde, çalışanların şirket kurullarında temsil edilmesi zorunludur (Ginglinger, Megginson ve Waxin, 2011). Şirket kurullarında çalışanların temsili önemlidir çünkü çalışan yöneticileri firmanın uzun süre hayatta kalmasına ve ayrıca çevre, güvenlik ve itibar konularına hissedarlara göre daha çok önem verirler (Huse vd., 2009). Kassalow (1989), ABD ile Alman şirket kurulları arasındaki çalışan temsili karşılaştırır ve kurullardaki işçi temsili şirketlere önemli katkılar sağladığını gözlemler. Bunlardan en önemlisi, çalışan temsilcilerinin, diğer kurul üyelerinin kararlarını, işçilerin ve şirketin uzun süre hayatta kalmasıyla aynı doğrultuda etkileme becerisine sahip olmalarıdır.

Bilgi asimetrisinden yararlanma konusunda daha önce belirtildiği gibi, CEO'lar hissedarlar veya menfaat sahipleri yerine kendi menfaatlerini maksimize etme eğiliminde olabilirler. Hopt (1984), işçi temsilcilerinin yönetimde pay sahibi olmayan üyelere sağladıkları çalışma konseylerinden ve sendikalardan gelen bilgi akışıyla izleme işlevine katkıda bulunduğunu belirtmektedir. Fauver ve Fuerst (2006), çalışan temsiliyetinin yönetimin vekalet maliyetlerini düşürdüğünü ve icra ve yönetim kurulları arasındaki bilgi asimetrisini düşürdüğünü gösteren bir çalışma yürütmektedir. Ayrıca, çalışan temsiliyetinin yüksek icra kurulu tazminatlarını azalttığını göstermektedir.

Akademik literatür bize firmaların yönetim kurullarında bağımsız yöneticilerin bulunmasının firmaların yönetim uygulamalarını etkilediğini

göstermektedir. Nasser ve Agrawal (2011), yönetim kurullarında bağımsız yöneticileri bulunan firmaların daha iyi CEO sözleşme ve izlemeyi desteklediğini bulmuşlardır. Ayrıca, son on yıl içinde firmalar arasındaki eğilim, aday gösterme ve tazminat kontrol mekanizmaları üzerindeki olumlu etkilerinden dolayı dış yöneticilerin sayısını ve gücünü arttırmaktadır (Bebchuck ve ark. 2002). Önceki bölümlerde, tazminatın CEO'ların performansına daha az bağlı olacağını öngören yönetsel güç teorisine dikkat çekmiştik. CEO'lar, kurulların kontrol mekanizmaları yeterince verimli çalışmadığında daha fazla güce sahip olma eğiliminde olacaktır (Bebchuck ve Fried, 2003). Bu, bağımsız yöneticilerin yönetim tarafından yürütülen operasyonlar hakkında yeterli bilgiye sahip olmamasına rağmen, kurulların izleme fonksiyonuna katkıda buldukları anlamına gelir. Ancak, yönetim işlemleri hakkında yeterli bilgiye sahip olmasalar bile, Kim ve diğ. (2014), yabancı yöneticilerin hem danışmanlık hem de CEO tazminat izlemedeki performanslarının görev süreleri arttıkça arttığını belirtmiştir.

CEO dualitesi, icranın başının aynı zamanda yönetim kurulu başkanı olduğu anlamına gelir (Boyd, 1994). CEO dualitesi ve CEO tazminatı arasındaki ilişki birçok bilim adamı tarafından tartışılmaktadır. Morck ve diğ. (1989), üst yönetimin CEO ve Yönetim Kurulu unvanını elinde bulunduran tek bir bireyden oluştuğu durumlarda yönetim kurulu kontrol etkinliğinin düşük olduğunu belirtmektedir. Bunun nedeni, CEO dualitesi olduğu zaman yönetim kurulundaki birçok yöneticinin CEO'ların performansını eleştirel bir şekilde değerlendirmek için izleme, ödüllendirme veya cezalandırma faaliyetlerini yerine getirmesi yerine icra ekibinin bir parçası olarak hareket etmeye başladığından, bireysel yöneticilerin gücünün düşmesi olabilir (Weidenbaum, 1986). Benzer şekilde Mallette ve Fowler (1992), tek bir bireyin her iki pozisyon için de hizmet vermesi durumunda, hedeflerin hissedarlardan ziyade icra ile daha tutarlı olmasının muhtemel olduğunu belirtir.

Bir şirketin gelecekteki operasyonları için bankaların ve kurumsal yatırımcıların mevcudiyeti kritik öneme sahiptir. Böylelikle birçok bankanın ve kurumsal yatırımcının firmanın öz sermayesinde bir özkaynak hissesine sahip olmaları sağlanır ve yönetim kurullarının üyeleri olurlar. Bu firmalara bazı ciddi

avantajlar getirebilir, keza Millet-Reyes ve Zhao (2010), şirket yatırımcılarının izlemenin güçlendirilmesi, hissedarlar, alacaklılar ve yöneticiler arasındaki çıkar çatışmasının azaltılması, sermaye piyasasına erişim sağlama ve firmaların yatırımları hakkında özel bilgilere sahip olmak gibi avantajlarını özetlemektedir. Ancak, vekalet teorisi doğrultusunda, kurumsal hissedarların kendi çıkarları için kar elde etmek istediklerini ve şirketteki yatırımlarının risk altında olduğu göz önüne alındığında, şirketlerdeki yatırımlarını garanti altına almak istediklerini savunuyoruz. Bu nedenle, CEO'lara yetki ve daha fazla güç vermeleri muhtemeldir.

Öte yandan, bazı araştırmacılar şirket içi hisse mülkiyetinin firma performansı üzerinde olumsuz etkileri olabileceğini savunuyor. Her ne kadar Morck ve diğ. (1989) şirket içi hisse mülkiyetinin vekalet maliyetlerini düşürdüğünü ve firma ve yönetim performansını artırdığını belirtse de, ilişkinin tek yönlü olmadığını tespit etmişlerdir. Mülkiyet yüzde beşe kadar veya yüzde yirmi beşin üzerinde ise, şirketin performansı artma eğilimindedir, ancak yüzde beş ile yirmi beş arasında ise, yönetimin zenginleştirilmesinde kendi kendine hizmet eden faydalar Şirketteki yöneticilerin hisseleri tarafından elde edilen gelir aralığını aşmaktadır. Ayrıca, Boyd (1994) şirket içi hisse mülkiyetin yönetim kuruluna ait hisse senetleri olarak kabul edildiğinde, şirket içi mülkiyetin yönetim kurulu kontrol mekanizmaları ile pozitif bir ilişkisi olduğunu belirtir. Bu nedenle, vekalet teorisi ile tutarlı olarak, yönetim kurulu tarafından gerçekleştirilen hisse mülkiyeti, yönetim kurulu üyelerinin izleme sorumluluklarını yerine getirmek için bir teşviiktir. Sonuç olarak, şirket içi hisse mülkiyeti tartışmalı bir konu olmakla birlikte, kontrol mekanizmaları ve CEO'nun tazminatı üzerinde göz ardı edilemeyecek bir etkisinin olduğu aşikardır. Dolayısıyla şirket içi hissedarların şirkete yaptıkları yatırımlardan daha fazla kar elde etme amacıyla CEO'nun tazminatını artırma eğiliminde olacağını savunuyoruz.

## **Firma Performansının Kurumsal Yönetim - CEO Tazminatı İlişkisi Üzerindeki İki Tarafli Etkisi**

Önceki bölümde, kurumsal yönetim göstergeleri ile CEO'nun tazminatı arasındaki doğrudan ilişki açıklanmaktadır. İlgili bölümdeki ana fikir, şirketteki kontrol mekanizmalarının etkinliği ve yönetim kurulunun izleme işlevi ve bunların CEO tazminatına etkileri ile ilgilidir. Bu bölümde ise, firma performansının yönetim göstergeleri ve CEO tazminatı üzerindeki etkisini etkileyen bir moderatör olarak dikkate alınacaktır.

Brown ve Caylor (2004), birkaç firma performans ölçütünü yönetim göstergeleri ile ilişkilendirmiştir. Bulgularında özkaynak kârlılığı, net kar marjı, temettü getirisi, hisse geri alımları ve Tobin's Q gibi muhasebe oranları, firmaların yönetim puanlarıyla pozitif yönde ilişkilidir. Bu nedenle, kötü yönetişimin daha düşük kar (daha düşük özkaynak ve kar marjı getirisi), düşük firma değeri (düşük Tobin'in Q'su) ve hissedarlara daha az miktarda nakit dağıtımını (daha düşük temettü verimi ve hisse geri alımları) ile sonuçlandığı sonucuna varırlar.

Belot ve diğ. (2014), kurul yapısı ile firma değeri arasındaki ilişki hakkında çok az kanıt bulunmaktadır. Çalışmalarının sonuçları, iki katmanlı kurul yapısıyla sağlanan etkin bir izleme fonksiyonunun düşük bir firma değeri ile ilişkili olmadığını, yani iki katmanlı kurul yapısının sağladığı etkin izleme fonksiyonuna sahip firmaların genellikle yüksek derecede firma değerine sahip olduğunu göstermektedir. Şirket kurullarının izleme fonksiyonunun etkinliğinin artırılması, CEO'nun yönetim kurulu kararları üzerindeki yönetim gücünde bir azalmaya neden olur ve bu da daha yüksek finansal performans ve firma değeri elde edilmesine yol açar. Öte yandan, Millet-Reyes ve Zhao (2010) yönetim kurulu yapısının firma performansı üzerindeki etkisini incelemektedir. Firma performansı üzerindeki etkiyi iki farklı yolla ölçerler: birincisi, nakit akışı ve özkaynak kârlılığı ile ölçülen işletme performansı, ikincisi Tobin's Q ile ölçülen firma hisse senedi performansı. Sonuçlar, iki katmanlı kurul yapısının işletim performansı üzerinde önemli bir etkiye sahip olduğu gösterir niteliktedir. İşletme ve stok performansı ölçümleri arasındaki fark, menfaat sahipleri arasındaki potansiyel çıkar çatışması ile açıklanmaktadır. Yukarıdaki bulgular, yüksek firma performansının yönetim

kurulu – hisse senedi performans ilişkisi ve yönetim kurulu yapısının etkin izleme işlevi ile ilişkili olduğu fikrini desteklediğinden, firma performansının yönetim kurulu yapısını ve CEO tazminat ilişkisini olumlu şekilde yönetmesini bekliyoruz.

Yönetim kurulu yapısı ve firma performans ilişkisinin yanı sıra, Brown ve Caylor (2004), her bir şirket performans ölçüsü ile farklı kurumsal yönetim göstergelerini analiz etmektedir. Çalışmalarının sonuçlarına göre, mülkiyet yapısı firma performansı ile son derece ilişkilidir. Ayrıca, Bhagat ve Bolton (2008) kurumsal yönetim önlemlerinin firma performansını etkilediğini tespit etmiştir. Bulgulara göre, Gompers, Ishii ve Metrick (2003) ve Bebchuk, Cohen ve Ferrell (2004) tarafından ölçülen daha iyi yönetim, yönetim kurulunun hissedarlığı, şirketin işletme performansı ile önemli ölçüde pozitif bir ilişkiye sahiptir. Ek olarak, Mehran (1995), Tobin's Q'nun temsil ettiği firma performansının ve varlıkların geri dönüşünün, özkaynak bazlı yönetici tazminat yüzdesi ve yöneticiler tarafından elde edilen özkaynak yüzdesi ile pozitif ilişkili olduğunu belirtmektedir. Bu çalışmalar, mülkiyet yapısının firma performansı ile ilişkili olduğunu ve bu nedenle firma performansının kurumsal hissedarlık ve şirket içi hisse mülkiyetinin CEO tazminat üzerindeki etkilerini değiştirmesini bekliyoruz çünkü firma performansı arttıkça, kurumsal hissedarlar daha fazla kar elde ediyor ve CEO'lara daha fazla güç veriyor. Benzer şekilde, şirket içindeki kendi yatırımlarından daha fazla gelir elde etme umuduyla şirket içi hissedarlar, CEO'nun tazminatını yüksek bir finansal performansa sahip bir şirkette artıracaktır. Bu nedenle, firma performansının kurumsal / şirket içi hisset mülkiyeti ve CEO tazminat ilişkisini olumlu yönde etkilemesini bekliyoruz.

Mülkiyet yapısı ile firma performansı arasındaki ilişkinin yanı sıra, Bhagat ve Bolton (2008), CEO-Başkanlık ayrımını firma performansı üzerinde önemli ve olumlu bir etkiye sahip başka bir değişken olarak görüyor. Yönetişim perspektifine bakıldığında, eğer CEO dualitesi varsa, icra kararlarından bireysel yönetici kararlarının etkilenmesi muhtemeldir ve icranın bir parçası olarak hareket etmeye başlarlar. Bu sebeple CEO / Başkan, kendi çıkarlarına göre yönetim kararlarını daha hızlı alabiliyor ve bu durum yüksek firma performansıyla birlikte daha

yüksek CEO tazminatına yol açıyor. Bu nedenle, firma performansının CEO ikiliği ve CEO tazminat ilişkisini olumlu yönde etkilemesini bekliyoruz.

Valenti, Luce ve Mayfield (2011) firmanın finansal performansının bağımsız yöneticilerle negatif bir ilişkisi olduğunu bulmuşlardır. Çalışmaları, firma performansı arttıkça, şirket kurullarında bağımsız üye sayısının azaldığını göstermektedir. Benzer şekilde, Bhagat ve Bolton (2008) yönetim kurulu bağımsızlığının performansla negatif yönde ilişkili olduğunu belirtmektedir. Daha önce de belirtildiği gibi, şirket kurullarındaki bağımsız yöneticilerin oranının daha düşük bir CEO tazminat düzeyi ile ilişkili olmasını bekliyoruz. Firma performansı ve yönetim kurulu bağımsızlığı arasında negatif bir ilişki olduğu ortaya çıktığından, yönetim kurulu bağımsızlığını ve CEO tazminat ilişkisini olumlu yönde etkileyeceğini düşünüyoruz.

Çalışan temsilcileri, yönetim ve icrada pay sahibi olmayan yönetim kurulu üyeleri arasındaki bilgi asimetrisini azaltarak izleme işlevine katkıda bulunur (Hopt, 1984). Bunun anlamı, ilgili temsilcilerin yönetim kurullarında bulunması, şirketin yönetim maliyetlerini düşürmesini, ayrıca yöneticilerin aşırı maaşlarını düşürülmesini sağlar (Fauver ve Fuerst, 2006). Bu sayede, finansal performansı yüksek bir şirkette CEO'lar, şirketin yüksek performansını kendi operasyonel çabalarına bağlayarak açıklama eğilimindedirler. Ancak çalışan temsilcileri, kurul üyelerinin yüksek firma performansının gerçek nedenlerini çalışma konseylerinden ve sendikalardan gelen bilgi akışı ile değerlendirmelerini sağlar. Dolayısıyla, şirket kurullarındaki varlığı firma performansının yüksek olduğu yerlerde daha fazla önem kazanmaktadır. Bu nedenle, çalışanların yönetim kurullarında temsil edilmesi ve CEO tazminat ilişkisinde firma performansının olumlu bir etkisi olmasını bekliyoruz.

### **Ekonomik Özgürlük'ün Tanımı**

Gwardney ve Lawson (2003), ekonomik özgürlüğün temel şartlarını kişisel tercih, gönüllü değişim, rekabet etme özgürlüğü ve bireylerin mülkiyetinin korunması olarak özetlemektedir. Ayrıca, ekonomik özgürlüğün bireysel

tercihlerin mal ve hizmet üretimi üzerindeki etkisini güçlendirdiğini de ekliyorlar. Bu etki ekonomik özgürlük tarafından güçlendirilmektedir, çünkü ekonomik olarak özgür bir toplumdaki bireyler yasaların izin verdiği şekilde çalışma, üretme, tüketme ve herhangi bir şekilde yatırım yapma hakkına sahip olacaktır (Miller ve Kim, 2013). Bu görüşe göre, hükümetlerin, kurumların ve politikaların bir toplumda ekonomik özgürlüğü teşvik etmede önemli rolleri vardır. Hükümetler, bireylerin haklarını koruyarak, sözleşmeleri objektif olarak uygulayarak ve ayrıca istikrarlı ve sağlam para birimleri sağlayarak ekonomik özgürlüğü teşvik etmek için yasalar oluşturur ve yasal yapılar oluşturur. Öte yandan, kurumlar ve politikalar ekonomik özgürlükle tutarlı olduğunda, bireyleri ve mallarını koruyarak gönüllü değişim için en uygun ortamı sağlarlar. Bu nedenle, yasal ve parasal sözleşmeler özellikle önemlidir (Gwardney ve Lawson, 2003).

Farklı ülkelerdeki ekonomik özgürlüğü ölçmek için, Dünya Ekonomik Özgürlüğü Endeksi ilk olarak Gwartney, Lawson ve Block (1996) tarafından üretildi ve o zamandan beri yıllık olarak güncelleniyor. Gwartney ve diğ. (1996)'e göre, ekonomik özgürlük endeksinin yasal olarak satın alınan mülkün ne ölçüde korunduğunu ve bireylerin gönüllü işlemlere katılma özgürlüğünü ölçmesi gerekir. Benzer şekilde, Hall ve Lawson (2014), endeksin, bir ulusun ekonomik özgürlük düzeylerini belirten politika ve kurumların tutarlılığını ölçmek için tasarlandığını belirtmektedir. Ekonomik özgürlük endeksi, özel mülkiyet haklarına, hukukun üstünlüğü, serbest ticaret, istikrarlı para birimi ve hükümetler için sınırlı bir role vurgu yapmaktadır. Mülkler güvence altına alındığında, bireyler daha serbest bir şekilde ticaret yapabilir, para birimi daha kararlıdır, devlet harcamaları düşüktür ve daha az düzenleme vardır. Sayılan özelliklere sahip ülkeler ekonomik özgürlükten daha yüksek puan almaktadır.

### **Ekonomik Özgürlük'ün Kurumsal Yönetim - CEO Tazminatı İlişkisi Üzerindeki İki Tarafli Etkisi**

Ekonomik özgürlük, hem bireyleri hem de şirketleri etkileyen bir kavramdır; çünkü hem yasalar, hem de adli etkililik ve hakların korunması ile



ilgilidir. Dolayısıyla, kurumsal yönetim durumunda, yönetim uygulamalarının etkinliği üzerinde olumlu bir etki yarattığı söylenebilir, çünkü eğer ekonomik özgürlük seviyesi yüksekse, kurumların tüm bireylerin ekonomik amaçlarını yerine getirme haklarını korumaları için daha etkili yasalar vardır. bir firmanın paydaşları dahil olmak üzere müdahale etmeden (Gwartney, Lawson, & Hall, 2011). Bu nedenle, daha yüksek bir ekonomik özgürlük derecesi, daha verimli kontrol mekanizmaları ve iki kademeli bir kurulu yapılandırılmış şirkette CEO'nun yönetim kurulu üzerindeki yönetsel gücü ile sonuçlanır.

Ekonomik özgürlüğü yüksek olan ülkelerde mülkiyet ve haklar yasa ile güvence altına alınmıştır. Kurumların bakış açısına göre, ekonomik özgürlük bir örgütün tüm taraflarının çıkarlarının korunması anlamına gelir. Böylece, ekonomik özgürlük çalışanların temsil edilmesinin etkinliğini artıracak ve işgücünün kurullarda temsil edilmesine temel teşkil ederek ve çıkarlarını yasa ve yönetmeliklerle koruyarak CEO tazminatı üzerindeki kontrolünü artıracak.

Şirketlerin yönetim kurullarında bağımsız yöneticilere sahip olması, daha iyi CEO sözleşmeleri, icranın izlenmesi, aday gösterilmesi ve tazminat kontrol mekanizmaları açısından firmaların kurumsal yönetim uygulamalarını güçlendirir (Bebchuk ve diğerleri, 2002; Agrawal ve Nasser, 2011). İki kademeli yapılandırılmış firmalarda olduğu gibi, ekonomik özgürlük de kontrol mekanizmalarının etkinliği üzerinde ek bir etkiye sahiptir ve hukuk devleti kurallarını güçlendirerek firmalarda yönetim tekeli azaltır. Bunun nedeni, ekonomik olarak özgür bir ülkede, tüm paydaşların haklarının yasalarca korunmasıdır. Bu nedenle, yönetim kurullarında bağımsız üyeler de dahil olmak üzere şirkete objektif bir bakış açısı getirmekte ve daha adil sözleşmeler sunarak, kontrol mekanizmalarını iyileştirerek ve CEO'ların yönetim gücünü azaltarak tüm paydaşların haklarının korunması açısından ekonomik özgürlüğü desteklemektedir.

CEO ikiliği, bir şirkette kurumsal yönetim mekanizmaları üzerinde olumsuz bir etki yaratır, çünkü CEO ve yönetim kurulu başkanı aynı kişiler olduğunda, bağımsız yöneticilerin gücünün düşmesi muhtemeldir çünkü yöneticilerin çoğu bu durumda aktif olarak icrayı izleyen, CEO'ların performansını ödüllendiren veya cezalandıran objektif yönetim kurulu üyeleri olmak yerine icra

ile birlikte hareket etmektedir. Daha önce de belirtildiği gibi, ekonomik özgürlük, şirketin kontrol mekanizmalarına katkıda bulunur ve ayrıca tüm paydaşların haklarını korur. Bu açıdan ekonomik özgürlük, CEO dualitesinin yönetim kurulunun izleme işlevi üzerindeki olumsuz etkisini azaltacak ve aynı zamanda CEO'ların kendi menfaatlerine ekstra faydalar yaratmaları için yönetsel güçlerini diğer paydaşlar üzerinde kullanmalarını engellemeye yardımcı olacaktır.

Ekonomik özgürlük derecesine göre, ülkeler sadece yatırımcıların yatırımlarını kontrol etmek ve korumak için değil, aynı zamanda bir şirketteki tüm paydaşların haklarını ve çıkarlarını korumak için yasalar ve düzenlemeler uygulayabilir. Bu nedenle, elde edebilecekleri gelir kadar yatırım yapmak isteyen yatırımcı olsalar da, ekonomik özgürlük derecesi yüksekse, tüm paydaşların çıkarları yasalarla korunacak ve bu da kurumsal yatırımcıların istekleri üzerinde baskı yaratacaktır. Dolayısıyla, bu açıdan ekonomik özgürlük yönetim uygulamaları üzerinde olumlu bir etki yaratmakta ve CEO tazminatını olumsuz yönde etkilemektedir.

Ekonomik özgürlük kurumlarda kurallar ve düzenlemeler getiriyor. Ekonomik olarak özgür bir ülkedeki bir şirket için düzenlemeler daha az olmakla birlikte, çalışanları ve yatırımcıları korumada etkilidir. Hukukun üstünlüğü ile ekonomik özgürlük, bireylerin gelirlerini, tasarruflarını, gerçek ve fikri mülkiyetlerini haksız el koyma veya hırsızlıktan korumaları için güvence sağlar. Bu nedenle, şirketteki diğer yatırımcıları ve paydaşları korumak için CEO'ların veya yönetimin eylem ve yatırımlarını kontrol altına almak için şirketlere düzenlemeler getirebilir. Bu nedenle, ekonomik özgürlük yönetim uygulamaları üzerinde artan bir etkiye sahip olacak ve sonunda CEO tazminatı ile negatif bir ilişki içinde olacaktır.

### **Ampirik Bulgular ve Sonuç**

Yönetişim göstergelerinin CEO tazminatı üzerindeki doğrudan etkisini, firma performansı ve ekonomik özgürlüğün kurumsal yönetim-CEO tazminat ilişkisi üzerindeki ikili etkilerini üç farklı modelde inceliyoruz. Doğrudan etkiler

için yapılan regresyon sonuçları, yönetim kurulu yapısının CEO tazminatı ile önemli ve negatif bir ilişkisi olduğunu göstermektedir. İki kademeli yönetim kurulu yapısının varlığı, yönetim ve denetim işlevlerini ayırarak daha güçlü bir yönetimle sonuçlanır ve bu nedenle daha düşük CEO tazminat seviyeleri ile ilişkilendirilir. Benzer şekilde, bu çalışma şirket kurullarında çalışan temsilcilerinin daha çok yer almasının, bilgi asimetrisini azaltarak ve yönetim kurulunun izleme kabiliyetinin etkinliğini artırarak CEO'ların daha düşük bir CEO tazminatına yol açarak firmalarda yönetimi güçlendirdiğini göstermektedir. Bu sonuçlar bizim hipotezlerimizle tutarlıdır ve ilgili literatüre katkıda bulunur. Ayrıca, kurumlar tarafından sahip olunan hisse senetlerinin yüzdesi, CEO tazminatını önemli ölçüde etkileyen bir başka yönetim göstergesidir. Sonuçlar, şirketlerdeki kurumsal hissedarların yüzde oranındaki artışın beklentilerimiz doğrultusunda daha yüksek CEO tazminatına yol açtığını göstermektedir. Bulgulara göre, şirket içerisindeki tarafından alınan hisse senetlerinin yüzdesi, CEO tazminatında önemli bir etkiye sahip değildir.

Bununla birlikte, bağımsız yönetim yüzdesi ile ölçülen yönetim kurulu bağımsızlığının, hipotezimizin aksine, CEO tazminatı ile önemli ve pozitif olarak ilişkili olduğunu da gözlemliyoruz. Böyle bir sonucun en olası nedeni, bağımsız yöneticilerin yönetsel bilgi seviyesi ile ilişkilendirilebilir. Kim ve diğ. (2014) bağımsız yöneticilerin, yöneticilerin görev sürelerinin düşük olması durumunda yönetim işlemlerini analiz etmek ve kontrol etmek için yeterli bilgiye sahip olamayacağını iddia etmektedir. Dolayısıyla, yönetim kurullarındaki bağımsız yönetmenlerin daha yüksek yüzdesi bu konuda zayıf kontrol mekanizmaları ile sonuçlanabilir.

Doğrudan etki modelinin sonuçları aynı zamanda CEO dualite ve CEO tazminat ilişkisi ile ilgili hipotezimiz ve ilgili literatürle de çalışmaktadır. Bulgularımız, CEO dualitesi ile CEO tazminatı arasında negatif ve anlamlı bir ilişki olduğunu ve CEO'nun aynı zamanda Yönetim Kurulu Başkanı olması durumunda CEO tazminatının düşük olduğunu ortaya koymaktadır. Bu beklentilerimizle çeliştiğinden, bu ilişkiyi daha da analiz ediyor ve şirket yaşını ana modelimize ekleyerek ek bir analiz yapıyoruz. Firmanın yaşı arttıkça

şirketlerin CEO / Başkan'a daha bağımlı hale gelmelerini beklemekle birlikte sonuçlar firma yaşı ve etkileşiminin CEO tazminatında önemli olduğunu ve CEO çiftliği daha olgun şirketlerde mevcut olduğunda CEO tazminatının şirket yaşı arttıkça arttığını göstermektedir.

İkinci modelde, kurumsal yönetim ve CEO tazminat ilişkisi üzerindeki Tobin's Q ile ölçülen şirket performansının ikili etkisini inceledik. Sonuçlarımız, etkileşim terimlerinin hiçbirinin Tobin's Q ve yönetim kurulu bağımsızlığının etkileşimi dışında istatistiksel olarak anlamlı olmadığını belgelemektedir. Tobin's Q'nun daha yüksek seviyelerinde, daha yüksek firma performansı olduğunu belirtmek gerekirse, kurul bağımsızlığının CEO'nun tazminatı üzerindeki etkisi olumsuzdur. Ayrıca, bağımsız yöneticilerin yüzdesi arttıkça, CEO tazminatı azalmaktadır. Bu nedenle, firma performansının yönetim kurulundaki bağımsızlık ve CEO tazminatı üzerindeki ikili etkisine ilişkin literatüre katkıda bulunuyoruz.

İlgili literatür için kritik öneme sahip olan son modelde, ülkelerin ekonomik özgürlük düzeyinin kurumsal yönetim ve CEO tazminat ilişkisi üzerindeki ılımlı etkisini incelemekteyiz. Miras Vakfı tarafından sağlanan Ekonomik Özgürlük Endeksi ile ekonomik özgürlüğü ölçüyoruz. Bulgularımız ekonomik özgürlüğün yönetim kurulu bağımsızlığı ve CEO tazminatı arasındaki ilişkiyi önemli ölçüde değiştirdiğini göstermektedir. Sonuçlar, kurul bağımsızlığının hipotezimizle paralel olarak yüksek ekonomik özgürlük düzeyleri için CEO tazminatını olumsuz yönde etkilediğine dair yeni kanıtlar sunmaktadır. Ek olarak, ekonomik özgürlük aynı zamanda kurumsal hisse sahipliği ile CEO tazminatı arasındaki ilişkiyi yönetmektedir, yani daha yüksek ekonomik özgürlük seviyesi için şirketi içi hisse sahipliği CEO tazminatını düşürür.

Tüm regresyon sonuçlarının hipotezlerimizle tutarlı olmadığından, her ülkedeki firma sayısı ile ilgili örneklemimiz analiz edilmiş ve örneklemimizdeki firmaların çoğunun ABD'den geldiği gözlemlenmiştir. Bu tür bir yapı önyargılı sonuçlar yaratabilir, çünkü kurumsal yönetim uygulamaları Anglo-Saxon ve Alman-Japon yaklaşımları gibi yönetim yaklaşımlarına göre farklılık gösterebilir. ABD dışındaki ABD ve ABD şirketleri için örneği ayrı ayrı inceledikten sonra, sonuçların yalnızca CEO hissesi üzerindeki doğrudan etkileriyle ilgili olarak

kurumsal hisse sahipliği için güçlü olduğunu gözlemliyoruz. Bununla birlikte, ABD dışındaki firmalar için ilk modeli çalıştırdığımızda yönetim kurulu yapısı, çalışan temsilcileri, yönetim kurulu bağımsızlığı, CEO ikiliği ve şirket içi hisse sahipliği değişkenlerinin istatistiki önemini korumadığı görülmüş fakat istatistiki olarak önemli olmamakla birlikte, ABD dışındaki firmalar için niteliksel olarak benzer sonuçlar elde ettik, çünkü değişkenlerin işaretleri, şirket içi hisse mülkiyeti dışındaki azaltılmış modeller arasında değişmiyor. Ayrıca, firma performansına sahip model için sonuçlar ana modelimize benzemektedir. CEO tazminat ve yönetişim ilişkisi konusunda başlangıçta istatistiki olarak önemli olan bazı değişkenler ABD dışındaki şirketler için önemsiz hale gelse de, tersi durumda, katsayıların işaretleri değişmemektedir. Başka bir deyişle, ana modeli ABD dışındaki firmalar dahil olmak üzere azaltılmış modellerle karşılaştırdığımızda sonuçlar niteliksel olarak benzerdir.

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### YAZARIN / AUTHOR

**Soyadı / Surname** : Gün  
**Adı / Name** : Görkem  
**Bölümü / Department** : İşletme / Business Administration

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