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Investigating the Relationship between Managerial Entrenchment and Internal Control Weakness (Operant Conditioning Behavior Theory Test)

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Abstract

Purpose: In the shadow of separation of the ownership from the control and the problem of representation arising from it in the modern business world, there is a need to pay attention to the CEOs' approaches toward takeover as decision makers in this area. Managerial entrenchment is considered as one of the consequences of separation of ownership from control that explains the difference between the incentives in the corporate management and causes a disturbance in internal control as a communication mechanism between the corporate's performance and the capital market. Paying attention to operant conditioning behavior like tournament incentives as a functional behavioral stimulus in CEOs reduces the profit-seeking attitudes among them and increases the effectiveness of the corporates' performance mechanisms in disclosing financial reporting. The purpose of this research is to study the relationship between the managerial entrenchment and the internal control weakness by operant conditioning behavior theory test.

Design/methodology/approach: In this research, 95 companies listed in Tehran Stock Exchange were evaluated between 2013 and 2018. Considering the duality of internal control assessment, logistic regression in SPSS software was used in this research.

Findings: Results of the research showed that there is positive and significant relationship between the managerial entrenchment and the internal control weakness. But there is a negative and significant relationship between the tournament incentive and the internal control weakness. Moreover, it was found that the negative relationship between the managerial entrenchment and the corporates' internal control is mediated by the tournament incentive.

Originality/value: Considering that little attention has been paid to motivational issues of the CEOs under the representation theory over the past few years, the present research attempts to investigate managerial entrenchment approach with the effectiveness of internal controls through analysis of the operant conditioning behavior theory to provide more reliable experimental results for the investors and the shareholders.

Keywords: Managerial Entrenchment, Tournament Incentive, Internal Control Weakness.

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Introduction

The financial scandals in early 2000 led to codification of new financial reporting laws such as Sarbanes-Oxley law (SOX). One of the goals of this law is to increase the accountability of the corporates' CEOs and their obligation to certify and verify the financial statements. Since 1941, Securities and Exchange Commission led the auditors to pay attention to corporate internal control when auditing (Rezaee Pitenoei & Mohseni, 2018:440). In addition, Section 404 of the SOX law (2002), led the auditors to evaluate the effectiveness of internal control over financial reporting of the owners.

The aim of presenting the "ICFR" (Internal Control over Financial Reporting) is to warn all stakeholders about the possibility of presenting the false financial information. The importance of internal control effectiveness mechanisms is that the financial reporting is a tool in the hands of companies to exchange information with their stakeholders such as shareholders and suppliers; in this way they help them in assessing the risk of investment and decision making about allocation of resources, as well as assessment of the corporate management performance (Hajiha and M.Hosseinnejad, 2015: 120). In fact, some researchers such as MaNabb & Martin (1998); McMullen et al. (1996); Chang et al (2019) believe that the internal control mechanisms can be an effective alternative to control the company by the market, because as a result of the extent of the market, the exact control over the corporate, CEOs and board of directors' performance is mainly difficult and the existence of effective internal control mechanisms, in addition to increasing control over the company, can lead to a reduced distortion in financial statements (Tavangar

Hamzeh Kalaei & Skafiasl, 2018:189). Accordingly, it should be noted that in the first section, the present research investigates relationship between the managerial entrenchment and the effectiveness of internal control. In fact according to the theory of representation, the issues of CEOs' tenure and their performance is one of the most challenging issues among the CEOs and shareholders, because there is always an assumption that the conflict of interest brings about a suspicion among the shareholders that the CEOs are seeking their own interest (Jensen and Ruback, 1983:21).

CEOs who value control and gain a lot of interests for themselves, despite knowing they lack the required competency for the corporate management try to change the condition in various ways in their favor and consolidate their position in the corporate (Shleifer and Vishny, 1989: 125). A group of researchers such as Morck et al. (1988), Pound (1987) and Shleifer and Vishny (1989) believe that CEOs who take the control of affairs in their hands and increase their authorities for decision- making over time in different ways like lobbying with board of directors, have purportedly entrenched. In other words, managerial entrenchment refers to the extent to which a manager attempts to take the control of affairs in his hands to change the situation as he wants (Berger et al. 1997:1411). Other researchers such as De Miguel et al. (2004); Cheng et al. (2013) and Claessens et al. (2002) suggest that the managerial entrenchment doesn't essentially occur by maximizing the shareholders' wealth, and regardless of the party politics, the managerial entrenchment may be rooted in a better understanding of the market and its changes in order to adapt to these conditions, because in this way the manager can establish the stability in the company and among competitors and consolidate its position on the management platform (Pound, 1987: 356; Ambrose & Megginson, 1992: 578).

The evidence on the relationship between the managerial entrenchment and the internal control effectiveness is in ambiguity. For example, Mikkelson & Partch (1997) and Huson et al. (1998) found that the sensitivity for the replacement of the managing director at the time of effectiveness of internal control mechanisms is much less than when the internal control suffers from weaknesses. Moreover, McMullen et al. (1996) suggest that the corporate internal control effectiveness report by the management can reduce the representative costs and because the management makes a decision based on the effective internal control mechanisms, it has a higher position. Brickley & Van Drunen (1990) also suggest that with effective internal controls, because of the increased expectations toward the corporate performances and being in high competitive position, it is more likely that the managing director is replaced by a manager with more capabilities. They (1990) also suggest that the managerial entrenchment can be a main inhibitor in improving future performances of the corporate, because theoretically from the public point of view, a manager with more tenure is seeking to maintain his own interests, and in his opinion the interests of the shareholders are less important. Wilson & Hui (2016) believe that according to operant conditioning behavior theory, the existence of reward-based incentives in CEOs can reduce the existing weakness in improving the corporate performances and improve a gap in representation costs. In other words, with the operant conditioning behavior theory-based incentives, CEOs obtain more significant information on market. Thus, the issue causes to reduce managerial entrenchment approaches and also causes to improve the competitive position of the firm in the capital market. Therefore, in addition to maintain his managerial position in terms of his specialized capabilities, a CEO plays a significant role in the increase of shareholders' required returns.

In simple terms, the existence of motives in CEOs to increase the tournament incentives among them causes to reduce the lack of transparency due to their focus on management position and increase the corporate internal control effectiveness. So given the explanations and also considering that little attention has been paid to motivational issues of the CEOs under the representation theory over the past few years, the present research attempts to investigate managerial entrenchment approach with the effectiveness of internal controls through analysis of the operant conditioning behavior theory to provide more reliable experimental results for the investors and the shareholders. This research is in terms of research theories that focus on the qualitative behavioral characteristics of the CEO and whether in terms of application that reduces agency costs, it has innovation and its results help to increase stakeholder decision-making. Accordingly, the question arises that "Do the tournament incentives as operant conditioning behavior theory affect the relationship between the CEOs' behavioral orientations with the weakness of internal control system in the companies listed in Tehran Stock Exchange?" .

Literature Review

Internal Control

The Committee of Sponsoring Organizations of the Tread way Commission (COSO) presented an integrated internal control framework in 1992 and this framework is today known as a pioneer framework to plan, implement and evaluate the internal control effectiveness. After about two decades of forming the main framework, the business and operational environments have significantly changed and become more sophisticated, the technology has become more prevalent and moved toward globalization (Hoitash et al. 2009: 841). In such cases, the stakeholders and particularly the shareholders are seeking more transparency and more accountability in the operation of organizations to integrate the internal control systems sponsoring the decision-making about business and the management of organizations' affairs.

The internal control is a process in which CEOs ensure the operation effectiveness, reliability of financial reporting and the observance of relevant laws. The achievement of internal control goals requires attention to its five constituent elements: control environment, risk assessment, control activities, information & communication and supervision (Esayee & Seifee Morodi, 2017:44). Paying attention to internal controls and internal audit, regarding the legal requirement in formation of the audit committee in companies listed in Tehran Stock Exchange and also presenting the reports of internal controls affecting the financial reporting have increased in Iran. So looking at the necessity of updating the previous and new frameworks seems useful. In fact, the integration of internal controls helps the CEO to implement more effective controls on the corporate performances and achieve his predetermined goals (Kasiri & Hassanzade, 2013:14). Internal control is a dynamic system which encompasses kinds of risks, threats and deviations from politics and procedures (Chorafas, 2007:7).

Internal control is not simply a policy, method or a special form, but it is a process which allows implementing the organization operational activities. It is considered as a part of the management main duties. The purpose of internal control includes the operation efficiency, the reliability of financial reporting and the observance of relevant laws which increase the reliability of the corporate activities and the management policies in line with the interests of shareholders (Beng & Li, 2011). The internal control is one of the several mechanisms which are approved by the corporate management. Because the management is responsible for deploying and maintaining effective internal controls over the corporate, the personal and behavioral characteristics of the corporate manager have a significant impact on quality and quantity of the internal controls over the business environment and the corporate reporting (Lee, 2016:84).

Managerial Entrenchment

The basic concept of the leadership elements has been defined in a wide range as a network of relations which not only covers a corporate and its owners but also all the stakeholders including employees, customers, people, society and etc. (Nazemi et al, 2014:160). The most important element of the system is CEOs whose decision making in terms of their approaches can be significantly effective and they must be accountable to stakeholders in making their decisions (Bryant-Kutcher et al, 2013:476). One of the management approaches is the managerial entrenchment to maintain the management position. In fact, according to representation theory, CEOs do not tend to maximize the shareholders' wealth (Sanayee et al., 2016:42). This theory has been proven explicitly by Shleifer and Vishny (1989).

They suggest that in order to consolidate their position, CEOs use the authority of decision making to advance their personal plans without enough attention to the corporate's values. They do this by specific investments with a low risk to show that they play a valuable role for the interests of the shareholders (Moussa & Chichti, 2014:4). Berger et al (1997) define the entrenchment as a condition in which the CEOs by consolidating their own position, can bypass the corporate's governance and control mechanisms and seek their own interests rather than the interests of shareholders.

Tirole (2005) acknowledges that the CEOs who try to entrench are likely to manipulate the corporate's information to show investors everything is good in the firm. The CEOs with entrenchment approach are always trying to mislead the shareholders and the investors through presenting the disparate information asymmetry and increasing the shares owned by the management, and thus stabilizes their management position. Marouan (2015) defines managerial entrenchment as a set of behaviors that cause to maintain a job, increase freedom of decision-making and maintain personal interests.

Aggarwal & Samwick (2003) define the entrenchment as a disturbing factor in maximizing the interests of shareholders. They also suggest that a manager having entrenchment approach always monopolizes the free current of information and consolidates his position through communication with board of directors. On the other hand, Yu (2008) believes that CEOs having managerial entrenchment approach are constantly lobbying to consolidate their position whether against the board of directors or the stock brokers and analysts. Although the change in performance of the CEOs to maintain the management position is not tangible for public investors and the shareholders, it is very evident for stock brokers and analysts that the management seeks to maintain its own interests.

But the main point is that how can a manager instigate others to help him in the entrenchment? In this regard, Ulupinar (2018) states that the CEOs can achieve their goals in relation to managerial entrenchment through direct and indirect channels. Moreover, Berger et al. (1997) believe that a manager by offering financial proposals wants directly the analysts to exaggerate his management performances to create trust in the capital market.

The CEO's tournament incentives

Motivation is a gerund from the root of "motive", it means stimulation, incentive and the cause of something". Given the definition, motivation means a person's stimulation to do something to achieve the desired goals. Before doing something consciously, human has a purpose and motive and this is the motive that leads the human behavior (Purzamani & Tarazian, 2016:57). Motivation is a general term that sometimes refers to the needs, demands, desires or the internal force of the individuals (Huang & Boateng, 2017: 1460). Motivation is the cause of behavior. In other words, no behavior is shown without incentive or stimulus. In simple terms, motive or need is an internal state, a limitation or deprivation that leads a person to do a series of activities. What is important in motivational practices is that they can provide the required and enough motivation for more efforts and better performances in CEOs through creating a sense of ownership and paying reward during an appropriate procedure (Chen et al., 2011: 1178).

Financial instruments which cause to share the corporate ownership with the CEOs and motivate them to earn higher returns in line with the interests of shareholders by decreasing and increasing the size of corporate include: buying stock by leverage, the plan of paying additional cash to outsourced shareholders, stock repurchase, public offering, transferring the corporate shares to employees through the retirement plan, etc. By a closer look we can find that there are various motivational policies for the CEOs (Bloom & Michel). So it is always a question that what methods and principles are suitable for creating motivation among the CEOs which leads to more efforts among them to earn more returns? The capitalism approach focuses on the increase of shareholders' wealth; so it should be noted that the efficiency of the firms' CEOs is of high importance and by encouraging CEOs, the accumulation of wealth will be accelerated (Conyon & He, 2011: 1161).

One of the criteria to motivate the CEO is giving compensation. One of the benefits of considering the senior CEOs' compensation and the shareholders' wealth in long-term is reducing problems related to the CEOs' settlement. Most financial and economic experts believe that rewarding plans and sharing CEOs in the corporate's ownership have many economic interests and increase the shareholders' wealth. However the contradictory theories have been proposed by the researchers. They believe that such plans will benefit CEOs at the expense of shareholders (Brockman et al, 2010: 1125),

Stimulus-Response Theory (Operant conditioning theory)

Reinforcement is considered as one of the important factors of influencing on individuals' behavioral motives proposed by Skinner according to operant conditioning theory. The issue is of particular importance in CEOs' decision making because of principal-agent theory or representation theory (Klinger & Cox, 2004:6). In the Skinner theory, behaviors are shaped based on two types of separation reinforcement or consecutive approximations. In order to explain reinforcement, Skinner focused on the respondent and operant behaviors. The respondent behaviors are those triggered by a stimulus and cause to reinforce positively and negatively behaviors.

But the operant behaviors can be resulted from the stimulating or even inherent factors a person show (Field & Cox, 2008:12). In financial fields, due to the presence of representation, considering behavioral factors of the CEOs to create reinforcement as a stimulus on the behavior of CEOs and reduce the representation costs and move towards the shareholders' interests is important. But unfortunately less attention has been paid to the issue (Sell et al, 2000:25). Based on this theory, when rewards are distributed competitively between the manager and other CEOs or between a people with him, as a stimulus, it has responsive behaviors and it causes to reinforce the CEOs' motivations to perform more transparent performances. So over time, the operant behaviors of a person find a stable place in presenting the CEOs' personal behaviors.

Literature background

Little research has been done in relation to managerial entrenchment approach with internal control weakness. So in this section we have tried to study more research about the issue. As the first experimental background, it should be noted that Cao & Lu (2018) investigated a research under the title of "The individual characteristics of board members and internal control weakness". The statistical population of the research includes companies listed in the Chinese stock exchange, which were evaluated during the years of 2007-2015. The results showed that characteristics of the board members such as education, specialty and the integrity of CEO have a significant relationship with the internal control weaknesses. Also, it was found that the corporate management capabilities have an effective role in reducing the corporates' internal control weaknesses.

Zhang et al, (2018) conducted a research under the title of "effect of tournament incentives on financial restatements: evidence from China". In this research companies listed in the Chinese stock exchange were evaluated during the years of 2008-2015. The results of the research showed that the CEO tournament incentives have a negative and significant impact on the financial restatement and the tenure strengthens this relationship negatively, while the appointment of new CEO within the company reinforces the positive relationship of the tournament incentive with the financial restatement. Jia (2018) investigated tournament incentive and auditing costs. The research has been performed in the US stock exchange in 2000-2013. The results showed that there is a positive and significant relationship between the CEO tournament incentives and the auditing costs and replacing CEO can strengthen the relationship between the CEO tournament incentives with the auditing costs. The results of the research have provided useful information for the researchers about the relationship between the corporate rewarding policies, risk assessment of the auditors and the pricing decision-makings. It also gives economic results of the performance-based tournament incentives.

Ji et al. (2017) in a research studied the relationship between the voluntary disclosure of internal control weakness and earnings quality. The results of their research showed that the internal control is an effective tool for the corporate risk control, and the earnings quality is positively related to the voluntary disclosure of internal control weaknesses. In another research, Lee (2016) studied the effect of CEO overconfidence on internal control weaknesses over financial reporting. The research has been conducted during the years of 2004-2011 and a total of 8,438 observations were evaluated based on year- Company. The statistical population in this research included the companies listed in the South Korean stock exchange. The results showed that the CEO overconfidence has a positive and significant effect on internal control weakness over the corporates' financial reporting.

Tavangar hamzeh kolayee & Skafi asl (2018) conducted a research under the title of "The relationship between CEO power, audit committee characteristics and internal control quality. In this research, the data of 90 companies listed in Tehran Stock Exchange were tested in Logit model. The results of the study showed that among the audit committee characteristics, financial expertise of the members and the size of audit committee have a significant relationship with the internal control quality, but no significant relationship is seen between the autonomy property and the dependent variable. Moreover, the results showed that CEO power is the only moderating effect on the relationship between the size of the audit committee and the internal quality control. Taghizade Khaghah & Zeinali (2018) conducted a research under the title of "To study the effect of the corporate board characteristics and managerial entrenchment on the corporate diversification strategy. In this regard, a total of 110 companies were selected during the years of 2008- 2014. In order to study the board characteristics, the size and autonomy of the corporate board and to study managerial entrenchment, three indicators such as CEO duality, managerial ownership and excessive investment risk were used. Moreover, to measure the diversification strategy, Herfindahl index and Entropy index were used. The results showed that the size and autonomy of the board members have respectively a positive and negative impact on diversification. It means that in companies with large size boards and low autonomy in board members, the corporate diversification is in high level. Also, the results showed that the CEO duality and the increase of excessive investment risk have a positive impact on the corporate diversification, while managerial ownership has no impact on diversification. The results are consistent with the representation theory. According to the theory, the increase of conflict between the shareholders and CEOs encourages the corporate's internal CEOs to pursue their opportunistic behaviors for the purpose of diversification.

Developing hypotheses

The reduction of firm value as a disturbing factor in management stability is a matter of concern, because when the firm value is reduced due to inadequate current profit, the pressure of market will make the corporate CEOs to be susceptible to replacement. This threat causes that the CEOs try to create value for shareholders, however creating these kinds of values may be happened by distorting financial statements and reducing the effectiveness of control mechanisms (Jensen & Ruback, 1983: 10; Morck et al, 1988: 297). In fact, when CEOs do not create enough value for shareholders, they try to hide the corporate information from others and make it monopolistic for the sake of his own interests, so that people involved in the capital market rarely access to comprehensive and integrated information of the company. The pressure of the market on CEOs makes them to expose a part of information to shareholders and investors which is based on positive news of the corporate performance, because they are seeking to maintain their management position.

Under the condition, the effectiveness of internal control is reduced and in the long-term, it puts the corporate and management at risk of falling the stock price. According to the short-term insight hypothesis (Stein, 1989), the CEOs with managerial entrenchment approach try to keep the corporate's value constant in the market through investment in low-risk projects, so that they can maintain their interests for long-term takeover in the firm by taking less risk (Di Meo et al, 2017:402). If a manager makes a mistake in estimating the expected returns from investments, the pressure of market makes management position vulnerable. Bonnier & Bruner (1989) believe that the long-term takeover of the management in the corporate causes to disturb the disclosure of a transparent reporting and this raises the reaction of the capital market. Murphy & Zimmerman (1993) in the study of financial reporting performance of the CEOs with long-term takeover in the firm state that the CEOs with long-term takeover are always trying to achieve their goals by reducing the effectiveness of internal controls through presenting selected information to capital market. In this way, they are able to find more consolidated position for themselves by information monopolization.

Since managerial takeover is considered as an opportunistic behavior in the corporates' performance, it is expected that with the increase of these approaches in a firm , first, effective controls of the corporate board is affected; second, effective functions of the internal controls are mainly reduced because the manager performance is under the control. This makes the elements of internal control ineffective and is merely a tool for CEOs to maintain their positions (McNabb & Martin, 1998:7). These CEOs are always trying to consolidate their positions in different ways such as managerial ownership, CEO duality with chairman of the board, taking less risk and reducing financial leverage. They use these methods to maintain the status que in the market and avoid any decisions that may threaten their job's future. They also try to apply the internal control according to their own goals. Under the condition, it can be expected that the effectiveness of internal control is reduced. So given the description, the first hypothesis of the research is as follows:

Hypothesis 1: Managerial entrenchment is positively and significantly related to the corporates' internal control weakness.

Tournament incentives as one of the behavioral enhancement criteria of the operant conditioning theory is considered an implicit method for stimulating the performance of CEOs which create positive consequences in corporate performances and promote the expected returns of the shareholders and investors (Lazear & Rosen, 1981: 843; Lin & Lu, 2009: 155). In fact, the existence of financial incentives based on manager performance can create competitive incentives in CEOs. The competition can be based on comparison of manager compensation with other CEOs or with himself in a period or the previous period. Accordingly, they apply more efforts to maintain the interests of shareholders (Eriksson, 1999: 264; Lambert et al., 1993: 439).

Bloom & Michel (2002) suggest that the CEO tournament incentive is considered as an inhibitor in opportunistic behaviors of CEOs and it can help the corporate performance effectiveness. In other words, they believe that if the tournament incentives are applied in appropriate time and for good behavior of

CEOs, they will act as a motive to increase the efficiency of corporate performances in the capital market.

The performances such as more transparent reporting, more dynamic internal control mechanisms and more independent board of directors, each is necessary in the increase of a corporate's success in the competitive market. In fact the tournament incentives lead to a reduced managerial entrenchment as an opportunistic behavior to maintain management position, because based on operant conditioning theory or stimulus-response theory, applying financial compensations for the manager's performance lead to a somewhat expected behavior of the CEOs. The theory acts as a behavioral incentive and leads the CEOs to feel they are valued by the corporate and its board, so they try to take steps toward the corporate interests and avoid opportunistic behaviors such as managerial entrenchment. On the other hand, the CEO's tenure can be evaluated as a negative factor in the performances of the corporates, because this leads to their takeover in the management position.

In this regard Kale et al., (2009) suggest that injecting tournament incentives to CEOs who are seeking a long-term takeover in the corporate cause to reduce the internal control weakness and the possibility of manipulating financial statements, because a manager believes that his performances are controlled by the corporate board. Moreover, Hass et al (2016) suggest that the long-term takeover of the CEO stimulates more interest-seeking incentives, because by making the company more dependent on his decisions, he can control even the corporate governance control mechanisms, so it causes to increase the internal control weaknesses. Hass et al (2016) propose the tournament incentives for the reduction of managerial takeover as a strategy.

Accordingly, Kato & Long (2011) support that the stimulation of internal incentives of a CEO with a long-term takeover will be difficult, but applying the compensation strategies as a motive for changing behavior based on stimulus-response theory reduce the opportunistic and takeover approaches of the management and increase the effectiveness of financial statements transparency to reduce information asymmetry. In fact managerial entrenchment is a behavior for giving priority to personal interests of the manager, and to achieve it there is no way but reducing the information symmetry based on information monopolization behaviors or more decision making power through managerial ownership (Guo et al, 2015: 2773). Therefore, the tournament incentives according to the increase of compensation based on positive performances of CEOs in the corporates meet a part of financial needs of the CEOs. It contains this message for the CEOs that the more you try and better the result of your performance, the more compensation you will receive. Under the condition, it is likely that the managerial entrenchment is reduced and the effectiveness of the corporate internal controls is increased (Chen et al 2011: 1176). In fact, the governance mechanisms are trying to prevent the corporate CEOs from opportunistic behaviors and the avarice by controlling the CEOs' compensations and motivations and by increasing transparency.

They also try to draw a wider perspective of the corporate's future for CEOs and by more recognition of the market, shareholders and competitors make better decisions in this area (David et al., 2001:146). According to theory of operant conditioning behavior in accordance with representation theory, effective internal control mechanisms of corporates are affected by the reduction of managerial entrenchment due to the existence of tournament incentives injected as a drive to the performance of CEOs. So given the descriptions, the second hypothesis of the research is as follows:

Hypothesis 2: The positive relationship between managerial entrenchments with internal control weakness is moderated by tournament incentive.

Research method

The present research is of applied type in terms of the goal and it is a retrospective quasi-experimental study in the field of positive accounting research which has been conducted using the logistic regression method. The statistical population in this research includes the companies listed in Tehran Stock Exchange during the years of 2013-2018. The sample selected in this research includes firms with the following terms:

1. The firms whose date of their admission in the Stock Exchange was prior to 2013 and by the end of 2018 they have been on the list.
2. Their fiscal year ends in March.
3. During the mentioned years, there was no change in the activity or in the fiscal year.
4. They are not one of the investment companies or financial intermediaries (the investment companies were not included in the statistical population due to the difference in their activity nature with other companies).

After the above limitations, a total of 95 companies were selected as research sample. The data of the present research were derived from CDs of the statistical and visual archives of Tehran Stock Exchange, website of Tehran Stock Exchange and other related websites and also Rahavad Novin software. Data analysis was performed using the SPSS software regarding the duality of dependent variable of the logistic regression.

Research variables
Dependent variable
Internal control weakness

In the present research, the quality of internal control was considered as a dependent variable. It is a dual variable. To measure the variable, the independent audit report was used. Since the weaknesses of internal control system, if important, is considered in audit report as a provision and other weaknesses are presented in the management letter, in this research if the internal control system doesn't have any main weakness in independent audit report, it indicates the quality of internal control and its value is considered 1. Moreover if in the independent audit report, the weakness of internal control system has been specified, the value of this variable is considered 0 (Hajiha & Hosein Nejad, 1394).

Moderator variable
Tournament incentive

The tournament incentive as an effective criteron of the operant conditioning behavior theory is considered as a moderator variable in this research. According to the research of Graziano & Parigi (1998), Bognanno (2001), Brayan & Mason (2017) Liao et al., (2009) and Lin & Lu (2009), the natural logarithm of the CEOs' compensation gap is used which is obtained by the following equation:

$$\text{compensation gap}_{it} = \text{compensation}_{it} - \text{compensation}_{it-1} \qquad (1)$$

Compensation_{it} = compensation of company i in time t

$\text{Compensation}_{it-1}$ = compensation of company i in time t-1

Independent variable
Managerial entrenchment

In order to measure managerial entrenchment according to Di Meoa et al., (2017) and Bebchuk et al., (2009), a 0, 1 dummy variable is used and three criteria including CEO's tenure, managerial ownership and CEO duality are computed. The use of dummy variable based on the three mentioned variables is performed because it is expected that it can reduce the disturbances of each of these three dimensions (Larcker et al., 2007: 969). Now we explain each of the criteria: CEO's tenure, managerial ownership and CEO duality.

CEO's tenure

The CEO's tenure is increased over time (Shen et al., 2003:470). The CEOs need to develop their managerial skills at the beginning of their tenure to meet their new job needs. Afterwards, it is likely that they seek to meet their opportunistic needs. Fredrickson et al., (1998) also suggest that if the CEO's tenure is less than 1 year, he tries to meet his needs just in the domain of his job and later he might seek power and get a seat for himself. So, according to Di Meoa et al., (2017) and Bebchuk et al., (2009), 0 and 1 were used to measure this variable, in such a way that if the CEO's tenure is 3 years or more, the value 1, otherwise 0 is used.

Managerial ownership

According to the previous research, De Miguel et al., (2004) argue that those CEOs have managerial stability whose managerial ownerships are normal. When the managerial ownership is below the limit, the capital market reduces their opportunism by controlling over motivations of CEOs, and thus reducing the representation costs. But if the managerial ownership is above the limit, it is likely that the interests of CEOs are in higher priority than the interests of shareholders. Considering the most models, the measurement of managerial ownership based on the ratio of shareholding to total common shares on hands of the shareholders is performed. Following the model of De Miguel et al., (2004) which used the corporate value criterion to measure managerial ownership, the research found that the value of the corporates within the limit of managerial ownership between 18.8% and 50.06% is fluctuating. Accordingly if the ratio of the CEOs' shares to total common shares on hands of the shareholders is within the limit, the value 1, otherwise 0 is used.

CEO duality

According to Gompers et al., (2003) and Bebchuk et al., (2009), the CEO duality is calculated as a dual criterion of 0 and 1. If the CEO is the chairman and deputy chairman of the Board, 1, otherwise 0 is used. Finally to calculate managerial entrenchment, if there are at least two cases in the company from the total of three factors mentioned, the value 1, otherwise 0 is used.

Control variables

Investment opportunities (MKTBEQ): To measures this variable, considering the research of Abor & Godfred (2010) and Lopez & Vecente (2010), market value versus book value of the shares was used. In fact, the corporates with more investment opportunities may reflect the expected return of the investment in stock valuation by the market, but this is not reflected in the book values.

Board size (BSIZE): This variable is defined as number of people in the board of the corporates (Gompers et al., 2003; Diyanati & Malekmahmamadi, 2013).

Board Independence (BIND): In this research according to Khodadadi et al., (2016) and Bebchuk et al., (2009), to measure this variable, the ratio of non-executive members to total board members is used.

Market share: To measure this variable according to Higgins et al., (2015), the ratio of each company's sales to total industrial sales in which the company works is used. So the high value of the ratio shows more share of the corporate in the market.

Research Model

Given the computational definitions of the variables and the nature of research hypotheses, equation (2) is used to test the research hypotheses:

$$\mathrm{ICQ_{it}} = \beta_0 + \beta_1 \mathrm{Managerial\ Entrenchment_{it}} + \beta_2 \mathrm{Tournament\ incentive}_{\mathrm{it}} + \beta_3 \mathrm{Managerial\ Entrenchment_{it}} \times \mathrm{Tournament\ incentive}_{\mathrm{it}} + \beta_4 \mathrm{MKTBEQ_{it}} + \beta_5 \mathrm{BSIZE_{it}} + \beta_6 \mathrm{BIND_t} + \beta_7 \mathrm{Market\ Share_{it}} + \varepsilon_{\mathrm{it}} \qquad (2)$$

Research findings

Descriptive Statistics

In order to study the general characteristics of variables, as well as estimation of model and their exact analysis, recognizing the descriptive statistics related to variables is necessary. Table 1 shows the descriptive statistics of the tested variables including some central indexes and distribution for a sample consisting of 570 companies-years observed during the years of 2013-2018. Considering the nature of some variables of the research measured as 0 and 1, the descriptive statistics are presented in Table 1 and Table 2. Table 1 shows the mean, median, standard deviation, minimum and maximum and Table 2 shows the frequency of the research variables.

Table 1. Descriptive statistics of the research variables

Variable	Observations	Mean	Median	Minimum	Maximum	Standard Deviation
Tournament incentive	570	17.051	16.918	15.102	19.316	1.003
Compensation	570	19.810	19.088	18.620	21.639	0.512
CEO tenure	570	2.313	2.117	1	4	1.026
Managerial ownership	570	0.488	0.517	0.014	0.979	0.189
Internal Control weakness	570	0.412	0.000	0.000	1	0.494

Board size	570	5.21	5	5	7	0.348
Market share	570	0.069	0.074	0.00013	0.797	0.121
Investment opportunities	570	0.324	0.279	-3.12	3.17	0.486
Board independence	570	0.610	0.562	0.2	0.8	0.139
Tip: the mean is greater than the median. It shows the existence of big points in data, because the mean is affected by these values and in these cases, data distribution is skewed to the right.						

As shown in Table 1, the mean of the CEO tenure's descriptive statistics shows that the mean of the CEO's tenure is about 2.5 years and based on the maximum statistics, it was found that most of the CEO's tenure in the sample companies is 4 years. The mean of the CEO task duality of the studied companies is about 38%. The mean of the internal control weakness is 0.436, showing that in more than half of the samples' audit reports (43.6%); the internal control quality is assessed desirable by independent auditors.

The mean of the board independence shows that 61.6% of the total numbers of the board are non-executive CEOs. Moreover the descriptive statistics of the market share show that the total sales of the industry account for only 8.3% of each company's sales in the capital market and this was partially predictable considering the depression governing on market structure of the country and severe drop in production. In the following part, the frequency of other research variables is presented in Table 3:

Table 2, The Frequency of dual variables according to total observations

Variables	Existence (1)		Non-existence (0)		Total	
	Number	Percent	Number	Percent	Nu.	Pe.
Manage rid ownership	316	55.44	254	44.56	570	100
CEO duality	219	38.42	351	61.58	570	100
CEO tenure	394	69.12	176	30.88	570	100

Table 3 shows the descriptive statistics for dual variables or qualitative variables. According to the results it was found that 55.44% of the observations of the companies studied (316 observations) have managerial ownership and in 44.56% of the companies, the shares of the CEOs compared to total common stocks on hands of the shareholders are less than the limit determined for calculating this variable. Moreover, it was found that 394 observations (69.12%) were from the corporate CEOs with tenure more than 3 years and 176 observations (30.88%) were from the corporate CEOs with tenure less than 3 years.

The estimation of research model

In order to estimate hypotheses of the research considering the duality of the research's dependent variable that is internal control weakness, according to logistic regression, the goodness of fit test statistics and Hosmer-Lemeshow test or the adequacy of the model hypothesis were used.

Test of goodness of fit

In order to test the goodness of fit in the first hypothesis model, the omnibus test which examines the performance quality of the model was used. In this test, the Chi-square value shows that does the independent variable affect the dependent variable?

H_0 $\chi^2=0$ *managerial entrenchment doesn't affect the internal control weakness*

H_1:χ^2*eeeeeeeeeeeeeeeeeeeeeeecccccccc fffff fff ss the internal control weakness*

Table 3. Omnibus test

test	Chi-square	Degree of freedom	Significance level	Test results
Omnibus	10.882	4	0.001	Rejection of H_0

As shown, given the significance level, the Chi-square value (11.716) was yielded smaller than 5%. Therefore, the independent variable model that is managerial entrenchment over the internal control weakness (ICQ) is confirmed and it has an appropriate goodness of fit of the model. Thus in the confidence level higher than 95%, H_0 is rejected and H_1 based on the acceptance of the main hypothesis is confirmed.

Hosmer-Lemeshow test

The Hosmer-Lemeshow test also confirms the usefulness of model and provides an indicator of agreement between observed results and predicted results. This statistic is a test of H_0 and shows the model usefulness. If its significance level is less than 5%, the goodness of fit is weak and the model is not suitable. Since the significance level of Chi-square statistic value (12.640) is higher than 5%, so the results show that the data has the required adequacy for the model goodness of fit.

H_0: (adequacy of data) model is suitable

H_1: (inadequacy of data) model is not suitable

Table 4 Hosmer-Lemeshow test

test	Chi-square	Degree of freedom	Significance level	Test results
Hosmer-Lemeshow	11.777	6	0.123	Acceptance of H_0

Pearson correlation coefficient

In order to evaluate the correlation between the research variables more precisely, first according to Table 5, Pearson correlation coefficients of the variables are obtained.

Table 5. Pearson correlation coefficient

Dependent variable	Independent variable	
	Managerial Entrenchment	Tournament incentive
Interal Control weakness	0.165**	-0.303*
Tip: * shows the statistical significance at 1% error level. ** shows the statistical significance at 5% error level: Internal Control weakness (ICQ)		

As shown in the table above, according to Pearson correlation coefficient, there is a positive correlation between the managerial entrenchment and the internal control weakness (ICQ) in the significance level of 5%. It means that with the increase of managerial entrenchment approach, the internal control weakness of the corporate will be increased and it causes to reduce the internal control effectiveness. Also, it was found that there is a negative correlation between the tournament incentive and the internal control weakness in the significance level of 1%. In fact the results confirm a theoretical correlation between the research variables. Moreover, it was found that in the presence of managerial entrenchment approaches, the internal control weakness is increased, but the CEO's tournament incentives can reduce the internal control weakness and result in more efficiency in internal controls.

Testing Research Hypotheses

The results obtained from testing research hypotheses (estimation of equation (2)) are shown in Table 6:

Table 6. The result of testing first hypothesis of the research

Dependent variable: Internal Control Weakness (ICQ) Observations: 570 (year-company)		Period: 2013-2018 Number of studied companies: 95	
Variables	**Internal control weakness (ICQ)**		
	Type of correlation	Regression coefficient	Wald test
C	?	0.171	3.534
Managerial entrenchment	+	0.112*	3.715
Tournament incentive	–	-0.093*	-2.635
Tournament incentive× managerial entrenchment	–	-0.115**	-6.052
Investment opportunities	–	0.106*	-3.388
Board size	–	-0.113*	-5.545
Board independence	–	-0.099*	2.538
Market share	–	-0.104*	-5.2

Cox & Snell's coefficient of determination	11.5
Negelkerke's coefficient of determination	16.3
Likelihood statistic	132.617
Percentage of correct prediction of the internal control weakness	58.16
Percentage of correct prediction of lack of internal control weakness	41.84
Percentage of correct prediction of overall model	16.32
Internal control weakness according to observations from the total of 570 companies	225
Tip: * shows the statistical significance at a 5% error level. ** shows the statistical significance at a 1% error level. Symbols: Managerial Entrenchment ; Tournament Incentive; Board size; Board Independence; Investment opportunities (MKTBEQ); Market Share	

According to the results obtained from Table (6), it should be noted that the amounts of Cox & Snell's and Negelkerke's coefficients of determination indicate the amount of change in dependent variable explained by the model. It is the equivalent of coefficient of determination (R^2) in linear regression, of course the exact value of R^2 is not possible in logistic regression and its value is obtained in fitting model respectively as 11.5% and 16.3%. The results showed that at least 11.5% and up to 16.3% (almost the lower limit and the upper limit) of the changes in internal control weakness are explained by the independent variable, moderator variable and dependent variable through the logistic regression. The evaluation of the variables' regression coefficients showed that the significance level of the variable coefficient of managerial entrenchment is 0.101 and smaller than 5% and significant.

The results showed that at a 5% error level, the managerial entrenchment is positively and significantly related to the internal control weakness. Moreover, it was found that the regression coefficient of tournament incentive as a component of operant conditioning behavior theory is equal to (-0.096) and smaller than 5%, which indicates that there is a negative and significant relationship between the tournment incentive and the internal control weakness (ICQ) at a 5% error level. Also according to the results of the second hypothesis, it was found that the interaction of managerial entrenchment and the tournament incentive has a negative and significant relationship with the internal control weakness (ICQ), considering the regression coefficient (-0.115) at a 1% error level. It indicates that the positive relationship between the managerial entrenchment and the internal control weakness is (negatively) modified by the tournament incentive.

In addition, to determine the percentage of accuracy of the model predictor, the expectation- prediction evaluation for binary specification was used. The results of the analysis show that in general in 16.32 % of cases and by using the mentioned model, we can predict the internal control weakness or the lack of internal control weakness accurately using dependent variable and control variables, so that it was found that 58.16% of the studied companies had the internal control weakness during the desired period (based on year-company) and 41.84% of them did not have the internal control weakness during the desired period (based on year/company). Considering the results, it should be noted that the sensivity of the model in predicting companies having the internal control weakness is more than companies having the effective internal control.

Conclusion

The role of incentive in CEOs and the enhancement strategies as one of the issues related to decision-making and performance areas of the corporates is based on representation theory which has advanced significantly in the area of research during the recent years. One of the theories is operant conditioning behavior theory which directly affects the perceptions and performances of CEOs. According to the theory, a random voluntary behavior is associated with its consequences; so its desirable effects increase the frequency of the behavior and its undesirable effects reduce its frequency, or it may not have an effect on the environment which in this case, the response frequency is reduced.

In other words, the CEO's reinforced incentives can act as a motive and reinforce the respondent behavior, then considering the internalization in a person; it has an operant conditioning response. CEOs often try to maintain their job position and stability or the so-called managerial entrenchment in terms of their job position and their competition in taking over managerial posts, so that they can attain the desired interests in the long-term. In fact the CEOs attempt to monopolize information through means such as aligning board members with themselves, managerial ownership, etc., and in this way they can lengthen their tenure in management position. Under the condition, what is predicted is the reduction of the corporate real and transparent performances in financial disclosure and reporting.

In fact the purpose of the present research which is the study of the relationship between the managerial entrenchment and the effectiveness of the internal control system considering the moderating role of tournament incentive can partly help the better understanding of the subject. In this research a total of 95 companies listed in Tehran Stock Exchange were evaluated during the years of 2013- 2018. The results of the research showed that there is a positive and significant relationship between the managerial entrenchment and the internal control weakness. It means that the existence of entrenchment approaches in performances of the CEOs can increase the internal control weakness of the corporates due to its interest-seeking nature in which a manager tries to maintain his job position. In a lobbying process with the board, CEOs attempt to increase their power and tenure in management position and to do this, they try to reduce the effectiveness of internal controls and prevent disclosing bad news and information leading to creating emotions in decision making of the shareholders and investors.

They also try to disclose news affecting the shareholders using the internal controls as a managerial tool to keep them satisfied to remain in his management position. In fact with managerial entrenchment, the weakness of internal controls in the corporates is increased and this in turn creates a deeper gap of representation costs and earnings management between the corporate and the shareholders. The results of the present research are in consistence with the research of McNabb & Martin (1998); McMullen et al. (1996); Brickley & Van Drunen (1990). They all confirm the result of the hypothesis. According to the results of the second hypothesis, it should be noted that the tournament incentives of the CEOs cause to reduce the internal control weakness because paying compensation to CEOs for their positive performances, so that it is more tangible than the previous period can help improve the level of transparancy and information symmetry.

In addition, this creates more alignment between the audit report and the corporate financial performances by increasing the effectiveness and quality of the internal controls. This, while increasing the level of trust and confidence of the capital market, can help to strengthen the corporate's liquidity policies and the corporate financing. On the other hand, it was found that the tournament incentives can improve the positive relationship between managerial entrenchment and internal control weakness and reduce the entrenchment approaches in management due to the increased tournament incentives among the CEOs and also reduce the weakness of the corporate internal controls in disclosing financial performances. Based on the operant conditioning behavior theory, managerial incentive is considered as a stimulant for the expected management response.

It can reduce the CEO's opportunistic incentives for occupying management position and lead the manager to keep the expected interests of the shareholders. Under the condition, it is expected that the internal control weakness is improved and the effectiveness of the internal control is an important criterion in increasing the trust and confidence of the shareholders and the investors causes to increase the corporate value in the competitive market. The result of the hypothesis is in consistent with the research of Wilson & Hoy (2016) and Kale et al. (2009).

According to the results obtained from the research, it is suggested that the corporate board determine the management tenure by setting up regulatory mechanisms and defining specific criteria and recognize the successful and unsuccessful decisions affecting management in the corporate by periodic evaluations. They can ask CEOs to propose their codified programs for the future years and notify them about any deviations from the programs by their serious controls. Accordingly, the CEOs find that they must act in line with the corporate's goals and should not use tools such as lobbying to maintain their position in the corporate. Moreover, in order to strengthen the corporates' regulatory structures in the financial performances, the updated mechanisms should be used and the influence of management in this independent and active entity in the corporate structures is prevented by attracting the experienced people and serving them in the audit committees.

Also, it is recommended that the regulatory organizations try to apply the behavioral reinforcement strategies as a subset of human resources' strategies to pay attention seriously to motives such as the CEO's compensation as a stimulus and behavioral institutionalize in the areas of the corporate decision making, so that they can reduce the entrenchment approaches of the CEO and allocate more resources to the internal control infrastructures to enhance the effectiveness of the corporates' information transparency. Finally, it is recommended that to improve the controls over the corporates' performances in the capital market, the executive regulations for the CEO's tenure are reviewed in the companies, so that a capable CEO can implement his plans in the long term without any concern about the stability of his job position. The issuse due to managerial compensations can improve the corporates' control mechanisms while maintaining the CEO's incentives.

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