



## **The Impact of Management Compensation on Earnings Management: Evidence from Pakistan Stock Exchange**

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**Abstract:** Keeping in view the increasing Complexity of businesses, this study investigates the effect of Management Compensation on Earnings management. The major objective of this research is to investigate one of the motivations that could encourage managers to manage the accounting results, namely the managerial compensation which includes fixed salary, bonuses and stock options. The sample consists of the 110 companies listed at Pakistan stock exchange from 2004-2014. The results of the study explored that there is significant positive effect of Management compensation on earning management. The study contributes to the literature regarding the effects of Management Compensation on earnings management in Pakistan.

**Keywords:** Management Compensation; Earnings Management; Stock options.

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### **1. Introduction**

Firms need to perform better in order to survive. Managers as agents of the shareholders are responsible for maximizing shareholder's wealth and for enhancing firm value. Following this postulation, many empirical researchers have predicated their analysis on premise that the granting stock options is consistent with firm value maximization. Increase in firm performance can be achieved by minimizing the conflicts of interest between principals and agents. The theory of the agency involves two issues. The first problem is that the goal of the agent (the company's financial reporter) is inconsistent with the goal of the principal (stakeholder). Second, it is not feasible for the principal to effectively assess the work of the agent [1]. On the other hand, the underperforming or undervalued firms became attractive takeover targets for the potential acquirers. Jensen (1991) [2] argue too many mergers and takeovers led to large firms, instead of enhancing performance this led to declining corporate efficiency and destroying value. This target-based performance leads to dividend distribution to shareholders, and excess bonus for employees and managements.

From the last decade, news regarding stock-based reparation, such as stock options and shares has been discussed frequently. Management compensation also remains under discussion over the last two decades. A lot of companies give big bonuses to their managements despite the credit crunch and the global financial crises followed by the economic recession. Different accounting scandals such as Enron, Tyco, Waste management, WorldCom, shook investor's confidence and trust in management and financial disclosures. As a result of these scandals, the compensation of managements was frequently discussed. Prior literature reports that managements of companies i.e. CEO's or CFO's are responsible for bad performance of a company. All the circumstances were examined through various studies which lead the managers to get in line with this opportunistic behavior [3]. Management compensation has been widely recognized, as being an important internal mechanism to align

the interests of the managements and the shareholders, thereby, reducing the agency conflicts. The importance of stock based and management compensation is evident from the fact that at the time of global financial crises in the United States, the House passed legislation. The rules and regulation were to control the bonuses for employees of financial organizations which is supported by government's financial rescue program.

Previously, many researchers worked on the relation between compensation for managers and earnings management practices adapted by these managers and report different results. Mostly these studies have been done in developed countries and a few in developing countries. However, there is lack of understanding for the effect of managerial compensation on earning management of non-financial sector of Pakistan. So, the aim of present study is to fill the gap by studying the effect of management compensation on earning management in non-financial sector of Pakistan.

The major objective of this research is to investigate one of the motivations that could encourage managers to manage the accounting results, namely the managerial compensation. The association of managerial compensation and earning management in the non-financial sector of Pakistan. As shareholders provide incentives i.e. stock and option based and bonuses in order to enhance the performance of firm and to increase shareholder value. Managers have the information asymmetry, so for presenting a rosy picture of the firm's financial position and for their personal benefits i.e. to get bonuses and incentives they get involved in earning management practices. The following are the main objectives of the study;

1. To explore the effect of management compensation on earning management.
2. To find the effect of fixed salary on earning management.
3. To explore the effect of stock option on earning management.
4. To analyze the effect of Bonuses on earning management.

## **2. Literature Review**

Firms have to perform financially in order to survive in today's competitive market. A company can construct a comprehensive performance assessment that measures the value it has created and estimates its ability to create more. At the Agency contracts, principal is usually uninformed i.e. does not possess private information when contracting, thus the asymmetry of information is one sided. Compensation may be paid to enhance the shareholder-manager remuneration. [4] argues that providing stock or option-based compensation to the managements can leads to increase in firm performance.

The literature distributes three types of management compensation agreements: fixed wages, bonuses, and stock compensation [5]. The impact of various types of compensation on fixed management behaviour (fixed wages, bonuses, stock options, limited shares, and long-term concerns). One of the first empirical study was done byshowing that there is relationship between discretionary accruals and management compensation in the form of bonuses.

Regulators and investors have raised concerns that certain management incentives could lead to earnings management (EM), reducing the informativeness of financial reporting and contributing to recent corporate scandals. Levitt, (1998)[6], also conduct study on the impact of EI on EM. They examine that managements of a company get involved in EM, when their incentives and remuneration are closely tied to the prices of stocks of company. Managements tried to manage earnings upward with the intension to boost the gains from equity incentives or bonuses that are given to the manager of the company. They also make comparative analysis and find that in those firm's discretionary accruals are more actively used to manage earnings where the CEO or managements incentives are more sensitive to the price of stock of company.

### **2.1. Management Compensation**

Corporate governance researchers have since a long time ago endeavored to comprehend a bunch of components that support official remuneration. The most standard stream of research subject to association theory suggests that the top administrative staff and execution-based inspirations are among the essential organization instruments that grant reducing sharp lead of heads and changing their inclinations to those of financial specialists (Tosi, 2000). Faulkender (2010) contextualize that over the span of the latest decade, we have seen

two achievement events that have fundamentally changed the perspective on the activity of reserve in individuals when all is said and done. The impacting of the dotcom ascend in 2000 and the accompanying corporate shames set off a fall of well - acknowledged associations realizing monstrous obliteration of financial specialist wealth similarly as mischief to various accomplices. Even more starting late, the completion of the housing bubble and the subprime disaster provoked a shutdown of the credit markets and the mistake of vulnerable money related associations[7].

These achievement scenes have pulled in thought in regards to the strange measures of legitimate compensation and to the probability that the structure of authentic compensation plans may have added to the post - 1990s air pockets, the continuous cash related crisis and various kinds of corporate blackmail. This new thought is taught by two particular points of view got while evaluating official compensation; the rent extraction approach that attributes official compensation to control rather than data sources and the capability approach that credits official compensation to inputs that the official passes on to the affiliation. The energy for the compensation of senior organization in corporate undertakings begins from a stress over the motivation of the board similarly as stresses over worth and conventionality[8].

## **2.2. Earnings Management**

The earning management is defined by different authors found in the existing literature. According to [9] as the "Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers." An additional definition bystates that earnings management is the "active manipulation of earnings toward a predetermined target, which may be set by management, a figure made by experts, or a sum that is predictable with a smoother, increasingly economical profit stream." While these definitions vary, they have some shared characteristic: they center around the mediation in the monetary revealing procedure to accomplish some private addition, which is understood of deft practices.

The definition suggests that exercises whereby director's impact announced income for individual increase are pondered profit the executives rehearses. This definition is exceptionally expansive and needs further bits of knowledge into the exact instruments and destinations of income the executives. On the contrary hand, definition is focused on explicitly on the judgment that administrators will use in financial reportage and furthermore the organizing of exchanges to change money related reports to misdirect partners. It proposes that control is inborn inside the see of income the board by expressing that judgment is utilized in fiscal reportage to delude partners. The meaning of underlines comparative control yet is increasingly explicit with respect to the rationale behind income the managements, that is the need to meet foreordained targets or investigator estimates. Further, this definition makes smoother, progressively economical profit an extra target of income the managements.

The advancement of profit the executives is situated underneath the umbrella of what has become called creative bookkeeping. Converse with innovative bookkeeping rehearses as any and each one stages taken to cooperate in forceful choice and utilization of bookkeeping standards, fraudulent cash inclusion, or profit the board. despite the fact that the meanings of income the board could infer that it's a deceptive action, profit the executives contrasts from extortion since supervisors will collaborate in profit the executives among the limits of the flexibleness managed by commonly accepted accounting principles (GAAP) while not violating these standards, creating it a legal observe. Managers may also interact in financial gain smoothing. Signs should improve the ability to measure business performance results. The government may get better information about generating company capabilities Therefore; a credible signal would reduce information asymmetry and result in more efficient contracting. Hence, with the benefits of accounting, a set of questions, such as: Revenue management; therefore, many studies use alternative accounts as direct instructions management. Wats and Zimmerman (1986)[10]found that management uses their information.[11] have proven that business leaders are in most financial difficulties Managing profits can both confirm good news and reduce the impact of bad news on your financial situation. Reicht (1999)[12]also believes that these institutions are ready to adapt to higher debt Income-generating accounting method. It shows a link between profit management and default customers. However, this research was found at least in this way association.

## **2.3. Management Compensation and Earning Management**

The role of accounting as a carrier of corporate economic realities was that all financial scandals of the 2000s were challenged. Accounting is a necessary technical arrangement for the company's government mechanism.

Failure to ensure the quality and authority of company registration, accounting and monetary. As part of this study, we will review government compensation for the quality of revenue that will affect revenue based on government mechanisms. A number of studies are ongoing to study the impact of alternative government systems on profit management. [3] measured the quality of the two outcomes based on stock market data content and profit management levels. Their results show that there is a positive and important relationship between the audit of the information content and the instructions of the Audit Committee and the audit committee of the Swiss warehouse. Research in the French context served as an external audit of government and quality management standards. In fact, profit management is very low in the presence of goals and is almost a nail in the face of a wider audience. However, due to the quality accuracy of IFRS's freedom of board and abuse, there is no impact on the company's ability to manage its profits to announce the forecast. Some studies focus on the commitment of revenue management and governance mechanisms. They need to pay attention to the convenience of leaders in choosing accounting principles [8].

These selections concerned may be a consideration of the personal profit or particular transactions. The corporations share of capital control by the leaders is negatively linked with earnings management. It ends up in the conclusion that once the share capital control by the leader is weak, it's impelled to create strategic accounting selections and act on the amount of discretionary accruals. Which aim to restrict or succeed in the written agreement constraints supported accounting figures from the agency theory. However, [11] the regional and al-Qaeda were confirmed due to the contradiction of the Danish company sample. Their results are intended to have a positive but significant impact on the scope of profit management.

The visit of those empirical studies permits U.S.A. to consolidate the thought that company governance is a superb means that by that to make sure the believability of accounting info. When the manipulation price will increase thanks to a lot of demanding company governance, in associate setting wherever social control effort absolutely influences output, the manager has stronger incentives to exert productive effort so as to avoid unfavorably high manipulation prices in monetary reportage. As a result, less financial incentive is needed within the compensation contract to inspire effort.

## **2.4. CEO Pay and Earnings Management**

The study by [13] are among the pioneering research empirically linking compensation and earnings management. Other studies have been carried out on the link between compensation and earnings management most of which have been in developed economy.

Studies conducted in the US includes that which examined the effect of managerial compensation contracts on earnings management found that earnings management intensity is related to managerial compensation contract design. The effect of the changes in compensation contracts occasioned by the enactment of Sarbanes-Oxley and its relationship with changes in earnings management behavior and found that changes in earnings management behavior is related to changes in bonus compensation structure. Also, in the US found that accruals-based measures of earnings management are higher when CEO incentives are stock-based. Management compensation in the US banking industry examining the relationship between incentives and earnings management found that management compensation using stock options are significantly and positively associated with earnings management of banks. In the UK, studies examines the relationship between equity incentives and earnings management using data from FTSE listed firms. The study found that fixed salary is positively related with earnings management using discretionary accruals, stock-based compensation has a negative relationship with discretionary accruals while bonus compensation is found to have no linear relationship with discretionary accruals.

Zhou & Zuo, (2014) [14] in an examination of the administrators pay and benefit the leading body of recorded associations in China using a case of 5806 firms from 2006 to 2010 found that organization compensation and discretionary assortments have a centrality positive association. The result shows that boss direct benefit to fabricate their compensation. In an examination of Japanese firms, anticipated investigating the association between discretionary accounting choices and the board compensation, chiefs not qualified for remuneration grasp pay reducing social occasions and wonderful things, exhibiting that assortment in connection between discretionary gatherings and the administrators reward depends on the states of the firm.

However, there is dearth of researches examining the link between management compensation and earnings management in developing countries. The only research to the best of our knowledge carried out in a developing country was done by [15] using a sample of 196 Malaysian public listed firms to investigate the inter-relationship between management compensation, earnings management and over investment. More and more,

the management government agencies of the management compensation literature. There are indications that a higher-paying package encourages managers to maximize shareholder goods, increase financial statements, and "reduce the incentive to reduce agency problems." In addition, many studies have found management compensation and company performance.

## **2.5. Earnings Management and Total Compensation**

Watts and Zimmerman (1986)[10] proposed the first assessment in their development of income management and overall compensation politics, contract theory, in which personal connections between income management and managers were established. They believe that recipients of accounting income may choose to plan bonus accounting methods to maximize the variable portion of their pay during the current period of future visits. Correct. As though parts of complete remuneration have entirely unexpected hazard and motivator profiles, observational investigation of pay execution relations ought to mull over the collaboration between the parts." also, there's developing acknowledgment of extra confused portrayals (i.e., measurements) of the character of pay contracts, proposing that simply abuse the extent of all out pay in fluctuated wide classes can neglect to catch important parts of pay as they sway social control impetuses (ongoing examples of expansions).

No investigations we tend to be mindful to evaluate profit the board inside the setting of entire business the board pay bundle, fundamentally decisions, limited stocks and semi-changeless impetus plans. Any data of the similar impact of plausibility pay on profit the board is intriguing, given late development inside the significance of the decision part of pay, and general conclusion concerning its consequences for income the executives.

## **2.6. Earnings Management and Stock Options Compensation**

The explosive growth of obtain performance, chiefly within the style of stock choices, may be a notable feature of government compensation in recent years. The economic impact of stock choices is wide mentioned within the monetary literature. Many studies have found experimental evidence supporting stock selection, the positive impact of corporate value, and the market for successful markets. However, after the financial scandal, the instability of these potential projects has been the focus of attention, which exposes this type of compensation. There is a positive correlation between accounting and stock options, which indicates that the relative relationship with pay performance can of course manage lower profit lines. The cost of their compensation[8].

Market markets also use accounting information to gain long-term perspectives. In connection with the discussion of compensation between compensation and stock selection, the results of a positive accounting approach affect inventory prices. Like it is not included in the management of results. If you receive two terms: Initially, you need an accounting profit to predict the company's price

in the money market[7]. Therefore, profit management can affect the cost of stocks. Currently, leaders will be appreciated to increase price increases. We examine whether or not the structure of government compensation, specifically stock choices relative to alternative kinds of pay, is related to opportunist use of discretionary accruals in rumored earnings. previous analysis suggests that mistreatment choices creates AN incentive to briefly depress the firm's stock value before the choice award date, thereby lowering the exercise value of the choices. we have a tendency to theories, and realize proof, that comparatively high choice compensation is related to income-decreasing discretionary step-up decisions in periods leading up to choose award dates. what is more, we discover that this association is stronger once managers are ready to in public announce earnings before the choice award date. Our results are in line with the overall implication from previous analysis that choice compensation creates opportunist incentives for managers to time the discharge of fine and dangerous news to the market[5].

Hypothetically, government stock decisions adjust supervisors' and investors' inclinations. In any case, past examinations have demonstrated that stock options could incite director investor conflicts[2] and make motivating forces for profit the executives. Along these lines, this paper analyzes the ramifications of alternative awards on income the executives. especially, we tend to address the ensuing inquiry: will stock decisions award incite motivating forces for income the board? utilizing an example of thirty-three non-money related recorded Portuguese firms-year from 2003 to 2010, we find that administrators are extra without a doubt to have connection in income the executives once they hold stock decisions. This examination proposes that stock decisions may not consistently be viable in orientating the interests of chiefs and investors. Or maybe,



government stock decisions seem to affect the instructive nature of profit contrarily, and thus cut back the norm and worth connectedness of uncovered cash data[8].

### 3. Research Methodology

This section reports an overview of methods used in this study

#### 3.1. Research Approach

Research approaches offer a well-versed and a concrete guide line which is based on different research philosophies for the overall arrangement of the research design (Saunders, et al., 2007). Based on this current study follow a quantitative/deductive approach.

#### 3.2. Research Population and Sampling

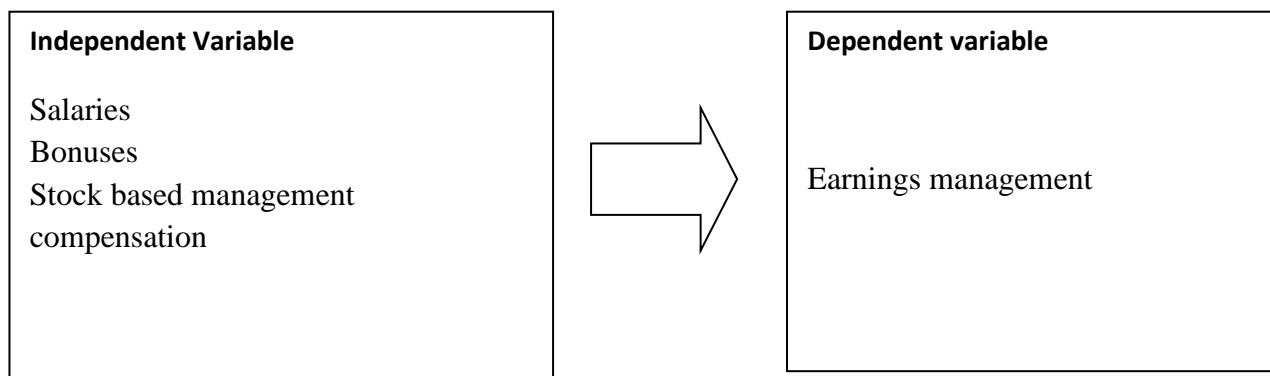
For the current research data was collected from the non-financial firms listed at Pakistan Stock Exchange. The data was selected from the period of 2004 to 2014. For the current research, non-probability sampling techniques was chosen. Sample was selected from the population through convenient sampling technique.

#### 3.3. Research Model

The study has used Multivariate Regression Model that is given below;

$$EM = \frac{NDA_{it}}{A_{it-1}} = \frac{TA_{it}}{A_{it-1}} = \alpha_1 \left[ \frac{1}{A_{it-1}} \right] + \alpha_{2i} \left[ \frac{(\Delta REV_{it} - \Delta AR_{it})}{A_{it-1}} \right] + \alpha_{3i} \left[ \frac{PPE_{it}}{A_{it-1}} \right] + \varepsilon_{it} \quad (1)$$

$$EM = \alpha + \beta_1 MC + \beta_2 Size + \beta_3 Growth + \beta_3 ROA + e \quad (2)$$



#### 3.4. Theoretical Framework

Figure 1. Theoretical framework

### 4. Analysis

#### 4.1. Descriptive Statistics

The descriptive analysis shows the central tendency. The central tendency shows the central point and the spread of the data. This kind of analysis shows that whether the data is suitable for analysis or not.

Table 4.1 reports the descriptive statistics for the variables. Earning management is the dependent variable which is represented as EM. Management compensation is independent variable which is represented as MC. Size, Growth and Profitability of the firm are control variables of the study. Size of the firm is measured by taking log of the total assets, Growth is measured by taking log of the total sales while Profitability of the firm is measured and represented by ROA.

**Table 1.**Descriptive analysis

Variable	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
EM	1.99	5.01	3.805	.659	-3.807	21.664
MC	1.70	4.72	5.88	.707	-1.404	4.881
SIZE	1.12	5.06	6.09	.915	.965	2.487
GROWTH	1.12	4.60	6.09	.913	.973	2.533
ROA	1.69	4.11	3.59	1.307	-.540	.401

The table shows the value of maximum, minimum, standard deviation, kurtosis and skewness of the variable of the study.

The minimum value for earnings management was 1.99, management compensation was 1.70, for firm size it is 1.12 and for growth and profitability the minimum values were 1.12 and 1.69 respectively. Similarly, the maximum value for earnings management was

5.015, management compensation 4.72, size is 5.06 and for growth and profitability the maximum values are 4.60 and 4.11 respectively. As the values for minimum and maximum are within the range of 1 and 5, so it shows that the data was entered correctly.

The value of skewness for earnings management was -3.807, for management compensation -1.404, for size it was 0.915 and for Growth .973 and for profitability the value was -0.540. While the value of kurtosis for earnings management was 21.664, for management compensation was 4.881.

The table shows that the value of mean for Earning management (EM) is 3.805, for Management compensation (MC) is 5.88, for Size is 6.09, for Growth is 6.09 and the value of mean for Profitability (ROA) is 3.59. As these values are above 3, it shows that the data is neutral.

Similarly, the value of standard deviation for Earnings management was .659, Management compensation is 0.707, for Size is 0.915 and for growth the value of standard deviation was 0.913. And for profitability the value is 1.307. As these values are above 0.6 these shows that the data was normally distributed.

## 4.2. Correlation Analysis

Correlation analysis was used in order to find the relationship among the variables. Where Earning management is dependent variable and Management compensation is dependent variable. This type of analysis showed the kind of relationship that exist among the variables as shown in the Table 4.2 below,

**Table 2.** Correlation analysis

Variables	EM	MC	Size	Growth	ROA
EM	1				
MC	.031	1			
Size	.116*	-0.07	1		
Growth	.116*	-0.07	1.000**	1	
ROA	.099*	0.049	-.519**	-.518**	1

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

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

The above tables represent the value of correlation coefficient that shows the relation among the variables. The value of correlation coefficient between Management Compensation (MC) and Earning Management (EM) is .031 which shows that there exists a positive weak relationship between the variables. The value of correlation coefficient between Size and Earning Management (EM) is .116 which shows that there exists a positive weak relationship between the variables. The value of correlation coefficient between Growth and Earning Management (EM) is also .116 which shows that there exists a positive weak relationship between the variables. Similarly, the value of correlation coefficient between Profitability of the firm (ROA) and Earning Management (EM) is .099 which shows that there exists a positive weak relationship between the variables.

### 4.3. Regression Results

In this study, regression analysis was also run on the data. The regression analysis shows the level of the variation that occur in one variable due to change occurring in the other variable, the following table shows the results of the analysis;

**Table 3.** Regression analysis

Model	Coefficients	t	Sig
(Constant)	.831	4.937	.000
MC	.025	1.460	.014
Size	.093	3.925	.001
Growth	.068	3.756	.001
ROA	.006	.391	.046
Adj R-Square	5.9% ; f-statistic	17.486***	

The above table shows that Adj R-Square is 5.9%, showing that unit increase in independent variable will cause 5.9% change in dependent variable. The value of f-statistics is 17.48 showing the good fitness of the model. Similarly, the values of coefficients are also shown in the table. When the value of t is higher at the level of significance ( $< .05$ ) it would show that the variable is contributing more to the dependent variable. The value of coefficient for management compensation is .025 which is significant at .014, for size is .093 which is significant at .001, for growth is .068 which is significant at .001 and for ROA is .006 which is significant at .046.

### 5. Concluding Discussion

The analysis of the current study shows that earning management is influenced by the level of management compensation. These results are in conformity with the study of [3], which also concluded that earning management



is influenced by the design of management's compensation in a firm. These results also support the theoretical assumption of agency function between management and shareholders. It postulates that agency problems can be avoided if more and more compensation is provided to the managements so that interests of shareholders and management are aligned with each other. Therefore, with higher compensations offered to the management makes the managements less opportunistic thereby have lower tendency to manage or alter the company's earnings. In this way the contract of shareholders with management is not altered in the case of agency problems or agency function. The higher management compensations also decrease the tendency of management to become opportunistic and draw more and more private benefits in the form of earning management. Firm size and firm growth both have positive effect on earnings management. It assumes that large firms are more likely to be complex and wide spread in operations and control and management of large firms are more likely to involve in manipulation of results in order to get maximum benefit. The positive effect of firm profitability on earning management shows that firms with higher profits are likely to involve in earning management activities.

This study contributes both at academic and corporate level. The empirical evidence of this thesis indicates that an increased management compensation will enhance the earning management of the firm on a general level. This means that the compensation of the management matter for the organization. Therefore companies should take care of this factor during decision making. Similarly, this study provided evidences for the researchers of management compensation and earning management and contributed to the literature.

This study can be the forerunner to guide management in minimizing the agency conflicts and agency costs by maximizing the rewards for management to avoid earning management. Further study can be carried out to include extended sample for the study by including other sectors of the Pakistan Stock Exchange. Further break up of management compensation can be made in the form total compensations and variable compensations and to show their effect on earning management. The variables of corporate governance including board independence, ownership structure and audit quality can also be added to the model to check the relevance of management compensation with earning management in the presence of corporate governance mechanism in a firm.

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